Cut Installation Time in Half with the Do-It-Yourself Dedicated Fuel System Wiring Harness

PART NUMBER: 12-11500-DED

The Nitrous Outlet DIY Harness is designed to simplify the wiring process associated with installing a dedicated fuel system. This Harness can be used as a stand alone harness or as an add on to any of the Nitrous Outlet premade system harnesses.

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NITROUS OUTLET

DIY Stand Alone Dedicated Fuel System Wiring Harness

PART NUMBERS: 12-11500-DED

INSTALLATION INSTRUCTIONS

This Nitrous Outlet DIY Wiring Harness is designed to simplify the wiring process associated with dedicated fuel system installs. If you need assistance with this wiring harness, call our Tech Help Line at (254) 848-4300.

Tools Needed for Installation:

• Drill • 9/16" Hole Saw • Small file • Center Punch • Marker • Hot Knife • Heat Gun • Wire Crimping Tool

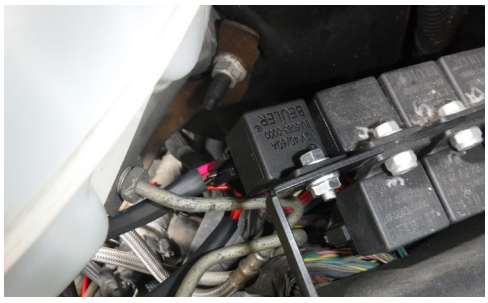
Additional Materials Needed for Installation:

• Electrical Tape

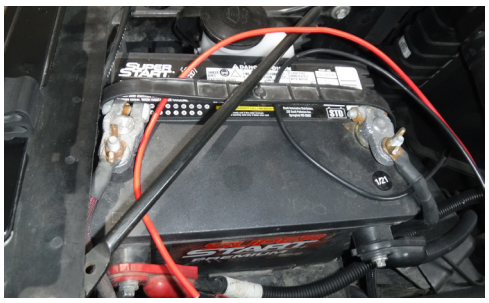
*These are the basic tools required for installation of this harness. Your vehicle may require additional tools. *

Relay Installation

• Once your dedicated fuel system is installed, open the hood and disconnect the battery by removing the cables from the negative and positive terminals.



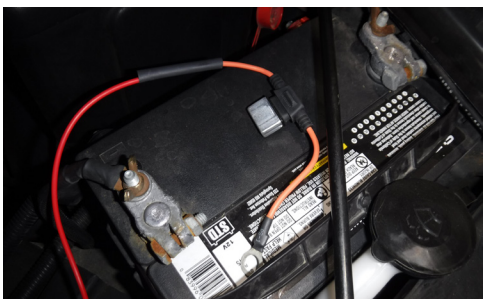
• This harness is designed for the relay to mount under the hood, close to the battery for positive and negative connections.



Routing the Harness - You have two options for connecting this harness to power and ground. Connect directly to the battery or connect to your nitrous system fuse panel.

Connecting to the Battery

• Route the 12ga red and black wires from the relay to the battery. Make certain when installing the harness it is free from any extreme heat sources or moving parts that can damage the harness.



• Install the provided inline 20 amp circuit breaker with fuse holder to the red power source wire. Do not connect to the battery at this time.

IMPORTANT: All appropriate safety equipment (gloves, tools etc.) must be used during the installation of this product(s).
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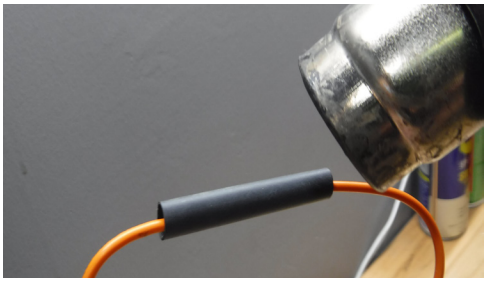
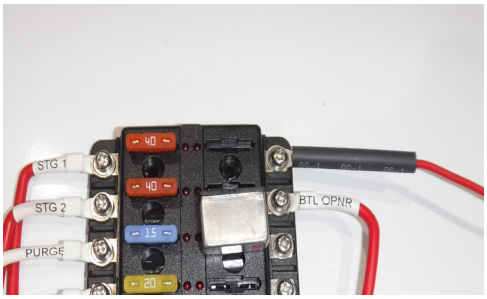
INSTALLATION INSTRUCTIONS

- Strip a small section off the end of the wire and crimp on the provided connector.



- Heat shrink the connector.



Connecting to a Fuse Panel

- Route the 12ga red wire from the relay to your existing fuse panel. Connect the red wire to an empty slot on your fuse panel. At the end of the installation, you will install the supplied 20A fuse in the empty fuse panel slot. The black 12ga wire leading out of the relay will connect to the negative battery terminal or a known good ground at the end of the installation. Make certain when installing the harness it is free from any extreme heat sources or moving parts that can damage the harness.

  NOTE - If you are adding this upgrade to a harness manufactured before 4-01-2022, you may need to upgrade the fuse panel from a 6 way panel to a 10 way panel.

- The Harness is separated into 2 main leads traveling from the relay. These leads are labeled to their specific destinations.

Interior - Switch panel - 1 - orange 16ga wire lead

Dedicated Fuel Tank Location - Fuel Pump - 2 - black & purple/orange 12ga wire leads

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INSTALLATION INSTRUCTIONS

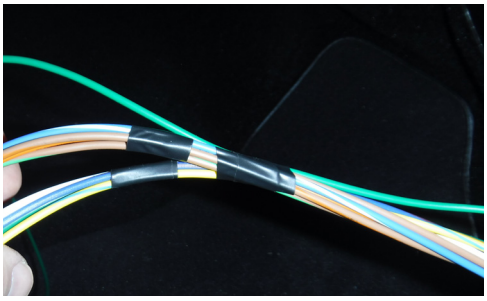
- Route the individual wires in each section to its connection point and secure them in place.

***NOTE - Do not cut any length of harness wiring at this time.**

- In the event that the harness needs to route through a drilled hole in the firewall use the supplied grommet to protect the wires from being damaged.

***NOTE - The grommet size included with your DIY harness requires a 9/16" panel hole.**

- The wires in each section of the harness will have separate component leads that terminate in different destinations. Make sure when mounting a harness lead that you are properly securing it so it is avoiding any extreme heat or any moving parts that can damage the harness.



Disclaimer - The sleeving steps are generic instructions that apply to all harness installations. Wire colors will vary.

- Once the routing and securing the harness in its permanent location you will need to mark the point of branch off with a piece of electrical tape. 1-1 ½ times around the harness is all that is necessary.

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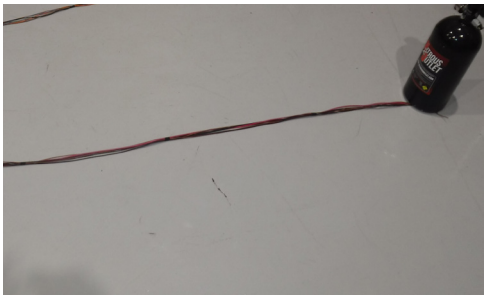
INSTALLATION INSTRUCTIONS

- You do not have to fully remove the harness from the vehicle for sleeving. You can leave the relay mounted and remove the 2 main branches if desired. With the harness out of the vehicle, stretch it to full length.

- Start at the harness branches coming from the relay and every 16-18 inches, wrap electrical tape 1-1 ½ times around the harness.



- Continue doing this for the length of the harness until you have reached the end of each lead.

- At the end of each lead, use a piece of tape to tightly group the wire ends so that the sleeving will easily slide over.

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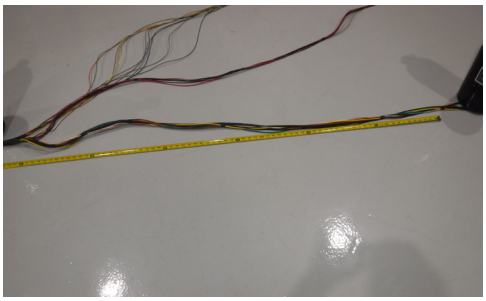
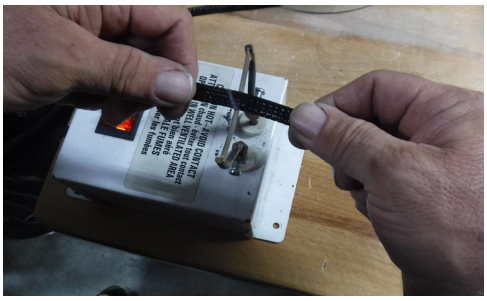
INSTALLATION INSTRUCTIONS

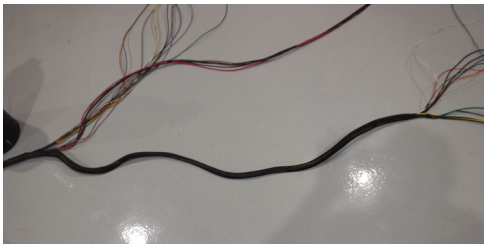


- To cut a specific length of sleeving, begin with one of the harness branches closest to the relay and measure up to the next branch. Make sure to add 6 to 8 inches to the measured length due to the fact that the sleeving will shorten as it expands over the harness.

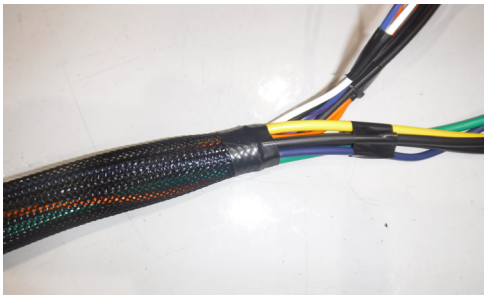


- Cut all sections of sleeving with a hot knife. This will melt the fibers of the sleeving together so that is does not unravel while installing it on the harness.

- Feed the section of sleeving from the component end of the harness toward the relay. The best procedure for this is to feed all the sleeving onto the end of the harness. It will look like a compressed spring on the harness.



- Slide the sleeving to the measured section of the harness. Evenly distribute the sleeving along this section of the harness in both directions until it has fully expanded.



- Using electrical tape, tightly anchor each end using no more than 1 ½ rounds.

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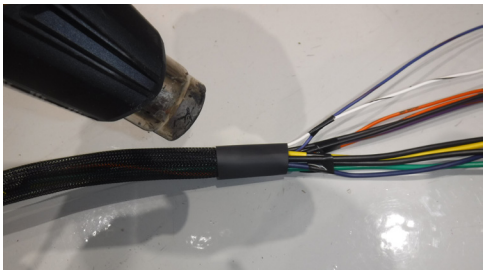
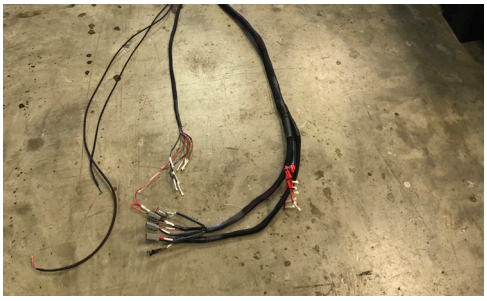


- Secure the taped ends of the sleeving to the harness with heat shrink. The heat shrink should cover the tape and a couple inches on both sides of the tape ring.

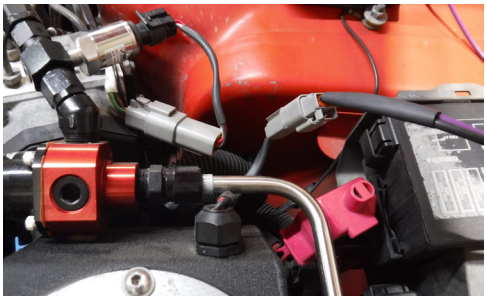
NOTE - Do not hold the heat gun too close to the sleeving, this will cause it to melt and expose the wiring. Use extra precaution with the heat gun and being aware of wires and leads that can be damaged.



- Repeat this process until you reach each component destination of the harness.

- Using heat shrink, cover the breakout or the branch off to ensure you have no exposed wires. This length will need to cover the end of the sleeving on the first section of wires to the start of the sleeving on the next section of the harness.

- After you have completed sleeving and heat shrink for each lead, reinstall the harness in its permanent mounting place.



Component Connection

- Determine how much wire you need from the harness lead to the designated component. Some components will have wire leads, such as the switch panel. Either the harness or component leads can be cut to length before the actual installation of the pins, connectors, or solder.

NOTE - Connector assembly instructions are on pages 9 & 10 at the end of these instructions.

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INSTALLATION INSTRUCTIONS

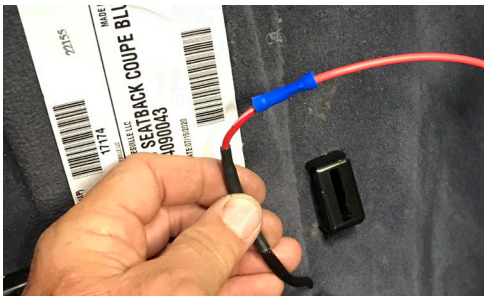
- Using a wire crimping tool, install the provided push on wire terminal to the switch panel wire.

- Heat shrink the terminal end.

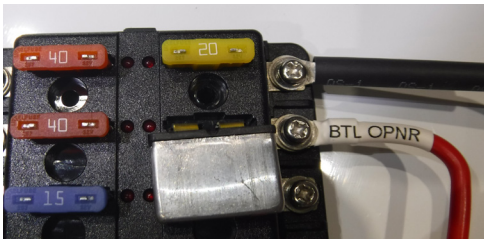
- A detailed color wire identification and connection chart and full color diagram have been provided with the harness to ensure proper connections. Follow these steps and chart to complete all component connections. The orange switch panel wire should connect to the center leg of the arm switch.

Final Checkover

Refer to the connectivity charts to ensure the proper pin location in each connector and the color and gauge size of each wire being connected.



- Double check all connections that you completed by giving a slight tug on both ends of the connection after the heat shrink is complete or the pins and connectors have been installed. The goal on installing the harness is to complete this process with a clean and secure attachment of all wiring connections, making sure they are not subject to damage due to heat or moving parts.



Connecting to a Fuse Panel

- Install the supplied 20A fuse in the empty fuse panel slot.

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INSTALLATION INSTRUCTIONS

- Connect the black 12ga wire leading out of the relay to the negative battery terminal or a known good ground.

Connecting to the Battery

- Connect the orange 12ga wire from the 20 amp circuit breaker with fuse holder to the positive battery terminal or positive voltage supply.

- Connect the black 12ga wire leading out of the relay to the negative battery terminal or a known good ground.

- Once the installation steps have been completed, test the harness for functionality. Fill the dedicated tank with fuel. When the system is armed, the fuel pump should be running.

CONCLUSION

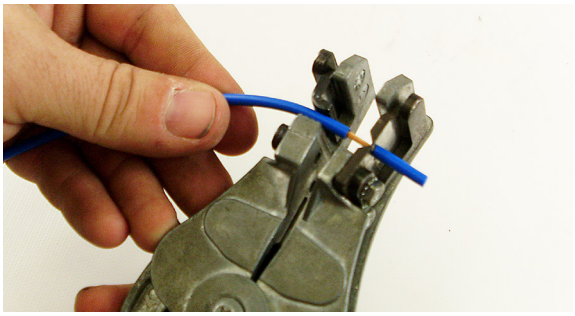
You have finished the installation of the DIY harness.

Deutsch Connector Assembly Instructions

INSTALLATION INSTRUCTIONS

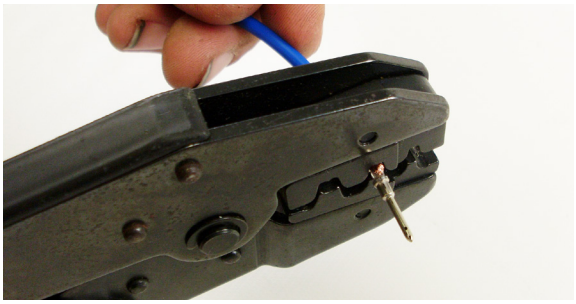
Deutsch Connector Assembly:

To assemble Deutsch terminal ends you can use a special crimper, or if done cautiously, this can be done with a pair of needle nose pliers.



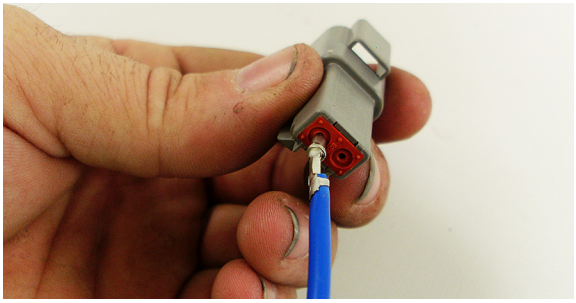
Step 1:

Strip the end of the wire you want to place the connector on about 3/8".



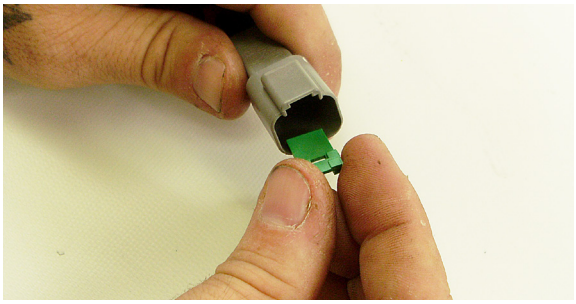
Step 2:

Using a crimp tool or needle nose pliers, crimp the connector down. First the smaller crimp and then the larger crimp, make sure the weather pack seal gets crimped with the larger side.



Step 3:

Once your sure you have a good crimp slide the pins into the connector housing being sure to match the wires correctly on each side. Push the pin in the housing until you feel a positive click and the wire cannot be pulled back out of the connector.



Step 4:

Install the provided pin retainer lock in the connector body. It simply snaps in to place.

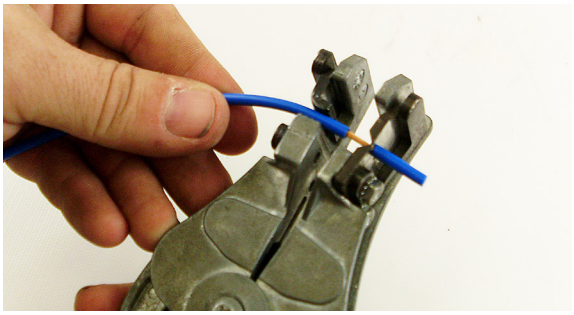
Quick Wire Disconnect Assembly Instructions

INSTALLATION INSTRUCTIONS

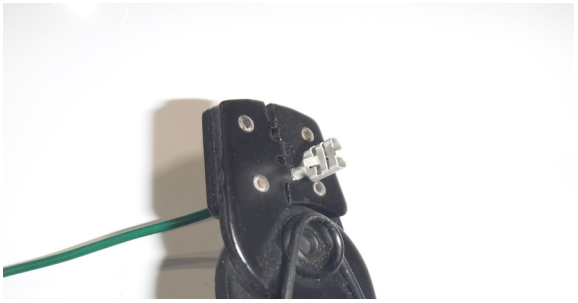
Quick Disconnect Assembly:

To assemble terminal ends you can use a standard wire crimper/cutter, or if done cautiously, this can be done with a pair of needle nose pliers.

Step 1:
Slide a piece of heat shrink on to the connecting wire.



Step 2:
Strip about 3/8” off the end of the end of the connecting wire.



Step 3:
Using a crimp tool or needle nose pliers, crimp the connector on to the end of the connecting wire.

Step 4:
Once you are sure you have a good crimp slide the piece of heat shrink over the crimped end of the connector and seal it with a heat gun.

NOTE - Do not hold the heat gun too close to the sleeving, this will cause it to melt and expose the wiring. Use extra precaution with the heat gun and being aware of wires and leads that can be damaged.

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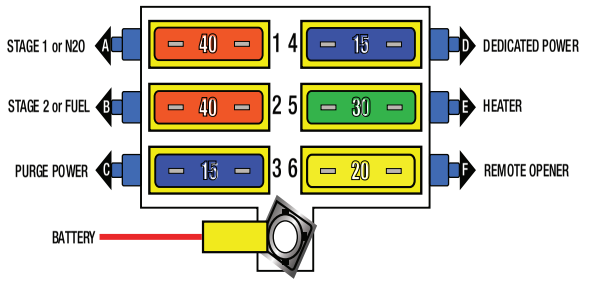
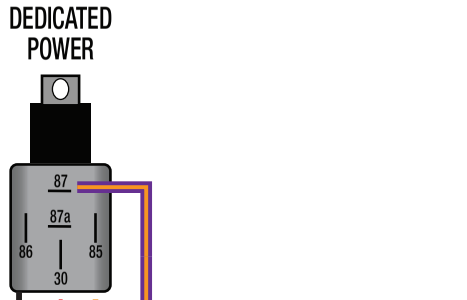
FUSE BLOCK DIAGRAM





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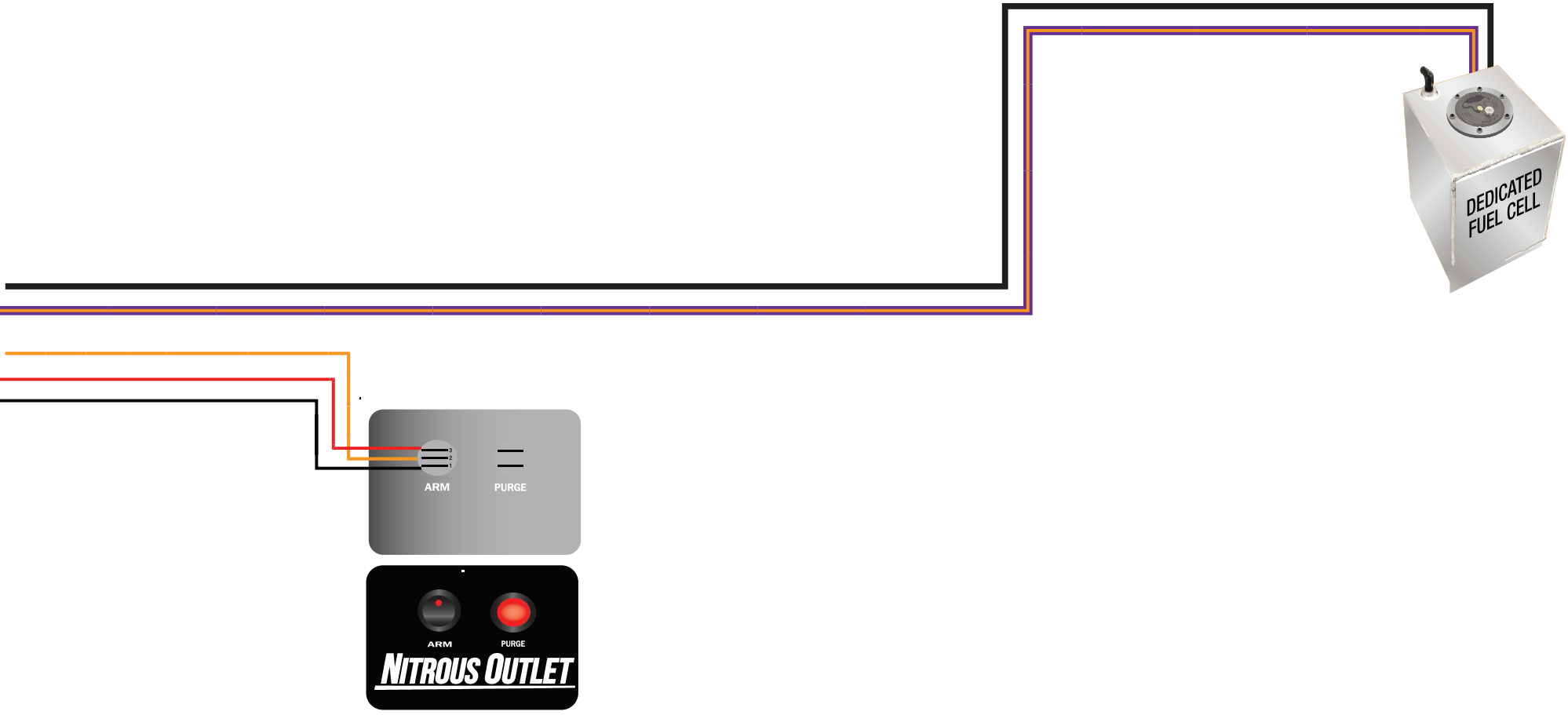

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DIY Stand Alone Dedicated Fuel System Wiring Harness Pinout Sheet
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DEDICATED RELAY		
RED	12GA	PIN 30 - BATTERY OR FUSE PANEL
BLACK	12GA	PIN 85 - BATTERY GROUND-DEDICATED TNK CONN
ORANGE	16GA	PIN 86 - ARM SWITCH OF NITOUS SYSTEM ACTIVATION
VIOLET/ORANGE	12GA	PIN 87 - DEDICATED TNK CONN
SWITCH PANEL		
ORANGE	16GA	PIN 86 - ARM SWITCH OF NITOUS SYSTEM ACTIVATION
DEDICATED TANK LOCATION		
BLACK	12GA	PIN 85 DEDICATED RELAY - BATTERY GROUND
VIOLET/ORANGE	12GA	PIN 87 - DEDICATED RELAY