

PART NUMBER: 60-00211-5, 60-00211-7

### INSTALLATION INSTRUCTIONS

#### Features:

- Universal 5 7 Gallon Tank capacity
- 150LPM / 40 GPM At 13V DC
- Billet Aluminum Flush Mount, Screw in Lid Assembly
- Billet Aluminum Tank Vents
- 16AN Male Inlet and Exit Bungs
- Billet 8AN Drain Valve
- · Custom Internal Laser cut Ice Shelf
- Powder Coated Texture Black
- 5 Gallon Tank Dimensions: 12" Wide, 9.5" Deep, 10.5" Tall
- 7 Gallon Tank Dimensions: 15" Wide, 10.5" Deep, 10.625 Tall

#### Optional available parts:

• Flo Supply Plumbing Kit (60-00211-K)



#### Features 1

• The 5 & 7 Gallon Universal system includes a 150LPM/40GPM black powder coated circulation pump, 6" billet flush mount screw in lid, matte black texture powder coated tank, flush mount mounting tabs, and 16AN male inlet and exit bungs.



#### Features 2

• The internal ice shelf prevents large chunks of ice from clogging the water circulation pump's feed inlet or causing internal damage to the pump.



#### Features 3

• Wiring is fast and easy with the complete DIY wiring harness. The harness features a detailed colored wiring diagram, harness routing instructions and all the items needed for a complete installation.

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

Nitro Dave's LLC accepts NO responsibility for injuries or damages resulting during and/or from the installation of any product(s). All products are intended for off-road use only.

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#### Features 4

• The 8AN drain valve provides a quick and easy method for draining the melted ice water for refilling the tank with fresh ice.

#### **User Tips and Notes:**

- Intercooler ice systems use chilled water circulating through the intercooler to dramatically reduce intake air temperatures. Lower Intake air temperatures allow for more agressive tuning with a lower risk of pre detonation. Cooling the air from the supercharger or turbo can pack the intake charge with more desnse cool air for more power at a given boost pressure.
- With water flow up to around 0.7 gallons per second keeping the water between 40-70°F will allow excellent extraction of heat from the intake air charge. Any water temperatures above 70°F will start to deminish the cooling effectiveness of the intercooler.
- With this pump and tank combination the entire contents of the tank to be recirculated in 7-12 seconds (depending on size of tank and flow characteristics of the intercooler core) Keeping ice in the water box will be key to cooling the air charge throught a race.
- During a drag race senario, The pump should be turned off while waiting at the staging lanes but turned on for the burnout to clear condensation off of the intercooler fins which can cause a reduction in power off of the line. If however the pump is allowed to circulate from the time of the burnout to the finish of the pass there should be adequate cooling capacity.
- Temperature monitoring is not included with this kit however testing and monitoring temperatures of the water exiting the intercooler, as well as intake air temperatures before and after the intercooler can be a useful tuning tool.



#### Instructions:

#### Step 1:

• Determine mounting location. Using the 4 mounting tabs on the tank, mark and drill mounting holes using 3/8" drill bit.

Note: Make sure there is nothing in the path that can be damaged before drilling. When choosing a mounting location Keep in mind that condensation may form on the outside of the tank which can damage electrical components or be hazardous if water gets under the tire.



#### **Instructions:**

#### Step 2:

• Once the tank is mounted, route the feed and return hoses from the tank to the intercooler, measure and cut the hoses to length. It will be easier to install the hoses ends outside of the vehicle, however if the hoses are routed in a manner that you can not route the hoses after the hose ends are installed you can install the hose ends in the vehicle.

Note\*: Instructions on how to properly install the hose ends are available on pages 4-6.



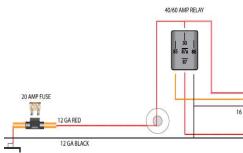
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#### Step 3:

• Once the hoses are complete use compressed air to blow out the lines. Tighten and install the hoses, fill with water to leak test the system with water circulating.



#### Step 4:

• The Easy to install DIY wiring kit comes with the ice tank. Included are all wires, relays, and connectors that will be needed for install. An easy to follow wiring diagram will be included below for single relay and switch installation. On pages 7-13 are also instructions on how to loom, route, and add connectors to the wiring harness included with the kit.



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#### **Hose Preparation and Hose-end Installation:**

#### **Tools Needed for Installation:**

- AN Wrenches
- Fine Toothed Hacksaw/Cut-off Wheel/Hose Cutting Tool
- Low-residue Tape
- Marker

- Scissors
- Wire Cutters
- Assembly Lube (non-corrosive)
- Table Vise

#### Tips for Hose End Installation:

- When cutting your hose make sure to include the length of the hose end to your overall hose length.
- Give yourself a bit of extra hose to work with to ensure there is no tension on the hose end.
- Use the correct size wrenches to avoid damage to the fitting.
- Make sure that none of the hose casing material is hanging out from the hose end. If this happens remove the hose and reseat it within the Cutter hose end. This could be a sign that the hose is not assembled properly and could pose a safety risk.

If you need any assistance during installation or if you have questions about this process, call our Tech Help Line at (254) 848-4300.



• Determine the correct length of your hose and mark the location for your cut.



• Using a low residue tape wrap the area of the hose that you want to cut and then mark your cut length on the tape.



#### Stainless Braided Hose (60-58201 & 60-58201-BLK)

• Once you have a clear mark on the tape, secure the hose in vise jaws (60-58364, 60-58365) or anywhere that you can safely use a fine toothed hacksaw or angle grinder's cutoff wheel.

**NOTE:** A clean cut will make the remaining steps go much more smoothly, so take your time to make a clean cut.



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## Nylon Covered Stainless Braided Hose

• Remove the tape on the hose. Use scissors to trim any frayed nylon on the exterior of the hose so that the hose can easily slide into the hose socket.



• Insert the hose straight into the hose end socket without fraying the outer hose material. You must screw the hose into the socket in a clockwise rotation.



• Make sure the hose liner is flush with the inside of the Cutter Hose end.



• Put a small mark on the hose at the very base of the Cutter Hose End to ensure the hose is not pushed out as you assemble the rest of the hose end.



• Secure the hose and Hose end in a vise.



 Apply a small amount of non corrosive lubricant to the beveled edge and first few threads of the Cutter Insert side of the fitting.



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• Carefully center the insert and begin to thread it in the sleeve. It may require a little force to push the fitting nipple into the hose far enough for the threads to engage.



Once you are sure that the hose is not being pushed out of the hose end, use the correct AN
wrench to tighten the two sides of the fitting together. Do not overtighten as this may push the
hose out of the hose end.



#### Conclusion

• Remove the hose and hose end from the vise and visually inspect the hose to make sure the hose has not been pushed out, that the liner is not obstructing the hose, or that you see any issues that might impact the hose. Use compressed air to blow out the hose before installation. Make sure to check for any leaks upon installation.





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This Flo Supply DIY Wiring Harness is designed to simplify the wiring process associated with Flo Supply Ice tank 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 • 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**

• Before electrical work always disconnect the battery by removing the cables from the negative and positive terminals.



#### **Routing the Harness**

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.

\*\*NOTE - Route the wires, cut to length (allowing a few inches extra), and then install wire end connectors or terminals. Steps will follow



• The switch will have the two 16 gauge signal wires routed from the relay. There is also an optional orange 16 gauge wire to illuminate the switch. Than can be pinned to terminal 85 on the relay.



• The main Red 12 gauge wires (2x) will go from the battery to the relay and then from the relay to the pump. This will also include the in-line fuse between the battery and relay. The pump's 12 gauge black wire needs to be sent back to the negative battery terminal or a known good ground.



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• When routing the individual wires in each section to its connection point and secure them in place. Looming the wires and terminating will be done once routing and length is determined.

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

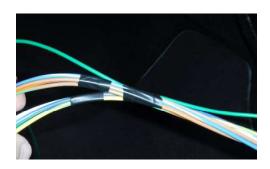


• In the event that the harness needs to route through a drilled hole in the firewall use the supplied grommet to protect the wires from being damaged.

\*\*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 several 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.



• 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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• 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.

Note\*: 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.



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



 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.



• 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.



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#### **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 8 & 9 at the end of these instructions.

#### **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.



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



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#### **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.



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#### **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 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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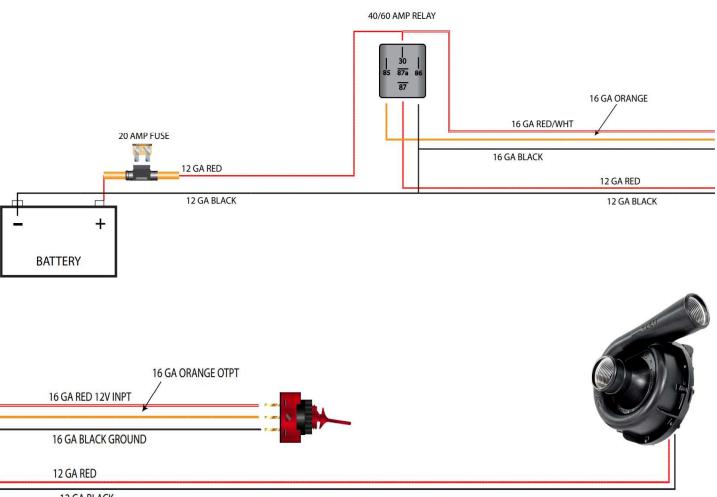
### INSTALLATION INSTRUCTIONS



• Once the installation steps have been completed, test the harness for functionality. Flip the switch to the on position, the pump should begin to circulate water. Check for leaks.

#### Wiring Diagram:

Part Number: 60-00211-Harness - This is a DIY wiring harness. The wire, relays, fuse blocks and connectors are included in the kit as well as plenty of wire to get the Flo Supply Universal Ice tank Wired into almost any car. Easy to follow wiring diagram and install procedure should have the pump up and running in no time.



12 GA BLACK