Before installing, note the functionality of the vehicle’s coolant system.

As a reference, the diagram to the right represents a Lotus 2ZZ-GE.
Red: Hot water air-bleed coming from the cylinder head.
Green: Coolant returning from the tank to the thermostat housing.
Blue: Radiator air-bleed and bypass when thermostat is closed.

If the Radium expansion tank is replacing a factory coolant header tank, it is possible that hoses will just need to be cut and/or extended.

The coolant tank should be mounted so that the cap is the highest point of the cooling system. Stay away from hot exhaust components as well.

Before assembling the mounting bracket to the coolant tank, use the bracket as a template to scribe marks through the bracket’s 4 outer holes. Drill the four holes and/or insert rivet nuts (not included) for either M6 or ¼” screws.

Included with the mounting bracket are 3 washers and bolts. The bracket will be secured to the coolant tank using the 3 inner slotted bolts holes. First, sandwich the 3 washers between the bracket and the tank for proper clearance for the tank’s welding bead. Then, use blue colored thread-locker, such as Loctite, to properly secure the three 4mm Allen button head fasteners.

Use four M6 or ¼” screws (not included) to secure the coolant tank mounting assembly to a flat surface such as a firewall.

If fabricating a custom mounting bracket, see the picture at the right for the mounting locations of the three M6 threaded bosses.

To properly secure, be sure to use blue colored thread-locker, such as Loctite, for your bolts or a split locking washer (not supplied).
The Radium coolant tank’s internal chambers are divided vertically down the middle for the swirl mechanism, but small passages on the top and bottom allow water to flow throughout the complete tank.

Port "A" - Swirl pot inlet: Incoming hot water

Port "B" - Drain back suction line: Typically routes just upstream of water pump or thermostat housing

Port "C" - Air bleed hose connection, or secondary drain back

Port "D" - Overflow purge. When the pressure of the coolant system exceeds the cap’s rated pressure, hot coolant is released through this barbed fitting. Attach a hose down underneath the vehicle or install an overflow tank that can be used to catch and return the excess coolant.

Find the included -6AN push-lok hose ends in the kit. Push the hose (not supplied) onto the barbs. Depending on the hose, lubrication maybe required such as a drop of engine oil.

Use a non-marring 11/16” open end wrench and carefully tighten the hose ends to the 3 coolant tank port fittings.

When filling the engine’s coolant system, unscrew any available air bleed that may be in the system.

Opening air bleed screws alleviates a potential air lock.

Fill the coolant system slowly until each bleed location spews coolant. Only fill the tank until the sight tube registers half full. Note: The level will naturally rise as the engine warms up from heat expansion.

If the optional pressure cap was not purchased, any standard 32mm “import” cap will suffice. Note: There are pressure rating variations.

Start the engine and monitor the coolant temperature. Check for leaks throughout the system. If the temperature continues to climb towards 212F (100C), there are likely trapped air bubble(s).

A quick and effective remedy is using a coolant re-filler, such as OTC P/N: 75260 (pictured).