

# INSTALLATION INSTRUCTIONS

## COOLANT TANK KIT

Nissan R35 GT-R



**radium**  
ENGINEERING

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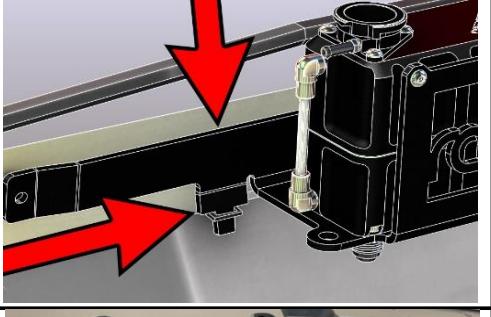
### NOTES:

- Installation to be performed on engines that are completely cooled down.
- Do NOT perform installation on a hot engine.
- It is NOT necessary to drain the coolant system before installation.

STEP	TOOLS NEEDED	INSTRUCTIONS	PHOTO
1		Wait for the engine to cool down. Unlatch, open, and prop the hood.	
		The cap shown to the left is just a simple sealed "lid". It does NOT have an internal spring and will not be replaced or changed for this kit.	
		The coolant tank cap, shown to the right, has an internal spring. Occasionally when the engine is ran hard, the coolant system may rise above 137kPa (1.37Bar). In this situation, this internal spring compresses and allows coolant to release out of the overflow hose in front of the engine and onto the ground.	
			
2		Remove the pressure cap from the OEM coolant tank to release any pressure in the system. Once pressure has equalized, reinstall the cap.	
		In the next few steps, the pictured OEM coolant tank and overflow hose will be replaced. The overflow hose (shown) can be removed now from the tank now if need be.	
		NOTE: There are 2 other hoses (upper and lower) attached to the coolant tank that will be reused.	
			
3	10mm socket	As shown, remove the innermost mounting screw that secures the coolant tank. This screw will be re-used later in the installation.	
			
4	10mm wrench	Remove the outermost mounting screw that secures the coolant tank.	
		Pro Tip: If the OEM air box is still installed, this screw can be difficult to access. Rotate and pull the coolant tank up just enough to release the center mount portion off the ledge. Rotate the coolant tank down to gain access to the bolt head. As shown a ratcheting wrench is quickest and easiest to use.	
			

5	Pliers	<p>Release the spring clamp and pull the hose off the small barb on the OEM coolant tank, as shown. Do not remove or detach this hose from the engine bay as it will be reused.</p> <p>Lift up the coolant tank to gain access to the large hose connected to the lower port. Loosen and slide down the spring hose clamp.</p>	
6		<p>This step is best performed with a helping hand.</p> <p>Disconnect the hose from the bottom coolant tank port. Be prepared to catch coolant. Quickly lift the coolant tank up and out of the vehicle.</p> <p>Pro Tip: Find a small bucket that fits below the lower coolant tank hose where the fluid will be flowing from. Have one person plug the hose with their thumb while the other person transfers the coolant into a larger bucket outside of the engine bay.</p>	
7	Bucket	<p>Transfer all coolant into a large clean bucket that has a pouring spout.</p>	
8	Pliers	<p>Find the 8AN PushLok hose end provided in the kit. Push the hose end fully onto the lower OEM coolant tank hose. Install the OEM spring clamp as shown.</p>	
9	Pliers	<p>Find the 6AN to barb hose end provided in the kit. Push the hose end fully onto the upper OEM coolant tank hose. Install the OEM spring clamp as shown.</p> <p>The engine bay is now prepped for the Radium Engineering coolant expansion tank.</p>	
10	8mm wrench PTFE thread paste	<p>Unwrap both halves of the coolant tank and clean out any residual packaging material. Grab the top half of the coolant tank (shown) and 1 of the push-to-connect NPT elbows provided in the kit.</p> <p>Apply PTFE thread paste then hand tighten the elbow fitting into the port shown. Now add an additional 1.5 to 3 turns until it faces directly downwards, as shown.</p>	

11	8mm wrench PTFE thread paste	Grab the bottom half of the coolant tank (shown) and the other push-to-connect NPT elbows provided in the kit.  Apply PTFE thread paste then hand tighten the elbow fitting into the port shown. Now add an additional 1.5 to 3 turns until it faces directly downwards, as shown. NOTE: The tapered pipe threads are preimpregnated with Teflon so no addition lubrication is required.	
		Push-in and fully insert the clear sight tubing into the elbow fitting on the bottom half of the coolant tank.	
	Anti-seize 4mm Allen wrench Torque wrench	Place the gasket between the 2 tank halves. Lineup and fully seat the opposite side of the clear sight tube into the opposing elbow.  Install the 7 socket head bolts. It is recommended to use anti-seize on the threads to prevent galling. Tighten all screws evenly until snug in a crisscross sequence, then torque to 53 in-lbs (6 Nm).	
		NOTE: After the tank is heat cycled, check the gasket for leaks and retorque if needed.	
	3mm Allen	Insert the included O-ring into the groove on top of the coolant tank.  Install the coolant tank neck in the orientation shown using the 3 included button-head screws.	
	3/8" Allen Wrench 1" Wrench 22mm Wrench Petroleum Oil	Lubricate the O-rings on the following fittings prior to installing.  Install the 10AN plug fitting into the bottom port shown.  Install the 10AN ORB to 8AN male fitting into the other bottom port.  Install the included 90 degree fitting into the side port.	
16	4mm Allen Wrench	Insert the lower coolant tank fitting into the mounting bracket hole.  Fully tighten the mounting bracket to the coolant tank using the three provided M6x1mm screws.	

17	<p>Before dropping the coolant tank into the engine bay, note that there is a double purpose tab on the mounting bracket. It aligns and holds the coolant tank. Before installing the screws, line up and insert this tab first.</p>	
18	<p>10mm Socket</p>	<p>Lineup the inner and outer mounting bracket holes with the OEM threaded bosses in the stock location. Tighten the coolant tank assembly in place using the OEM screws.</p>
19	<p>7/8" Wrench</p>	<p>Attach the lower OEM coolant 8AN hose end to the bottom 8AN coolant tank fitting. Preferably tighten using a nonmarring aluminum wrench, as shown.</p>
20	<p>9/16" Wrench</p>	<p>Attach the upper OEM coolant 6AN hose end to the front 6AN coolant tank fitting. Preferably tighten using a nonmarring aluminum wrench, as shown.</p>
21	<p>Funnel</p>	<p>As shown, remove the non-spring actuated sealed "lid" for deaerating purposes. This is the "dummy" cap in front of the engine.</p> <p>Pour the collected coolant into the tank using a funnel. Stop filling when the coolant is ready to overflow out of either openings. Add more coolant if needed.</p> <p>NOTE: The coolant system may not take all of the coolant that was collected. This is normal.</p>
22		<p>Find the 7/32" overflow hose in the kit. Install one end to the filler neck barb. Next insert the opposing end through the mounting bracket's hole shown.</p> <p>NOTE: Keep the hose away from hot areas and any moving components such as the serpentine belt, suspension, etc. If necessary, cut this hose to length.</p>

23		Install the pressure cap. Radium Engineering caps are also available with different pressure relief ranges for optimal performance.
		Start the vehicle and let the engine reach operating temperature. Check for leaks and address any that may occur. The coolant tank may need to be refilled after the thermostat has opened and all air has been discharged from the system.
		INSTALLATION COMPLETE