Opel Heater Core Notes

A properly working Opel GT Heater system not only provides comfort but also safety, as it helps keep your windshield defogged on cooler and wetter days.

The Issue: A Clogged Heater Core

Now, after 50 years, many Opel GT heaters simply don't work. The primary culprit is a heater core, which is designed to be like a "small radiator." Over time it becomes corroded, leaking or clogged so solidly (*that even a backflush can't adequately clear it*). The reduced circulation is what causes inadequate heating and defrosting of the interior! Repairs can be costly, if you can even find a shop that will take the job at all.

New OGTS #11036 GT Heater Core

Opel GT Source has stepped in to reproduce the critical heater core, with a modern upgraded design. With this aluminum replacement, which incorporates all-new tubes, rows and fins into a one-piece unit (eliminating mount gaskets), purchase and installation provides an opportunity for GT owners to restore their heater system for proper operation.

Tech Notes and Related Parts

Opel GT Heater System restoration can be a fulfilling project. This installation works best when combined with new hardware, to help restore an ease of operation.

See our catalog or website to help complete your project. <u>Consider related OGTS parts</u>, including:

- #11030 Heater Control Plate,
- #11031 Heater Valve,
- #11032 Heater Control Cables,

#11024 Heater Firewall Tube Gasket and other heater parts.

Opel GT Source also provides updated "tech notes" to help you take on and complete this D.I.Y. task *(including related maintenance and lubrication).*





Original Opel GT Heater Core Like the original radiators, the cores get clogged with trapped corrosion and iron sediment



OGTS #11036 Heater Core Tech Notes

Installation of a new production aluminum Opel GT heater core helps improve heating, defrosting, and helps avoid a source of fluid leaks into your interior.

Opel GT's came with a heater system located behind the GT dashpad, so we recommend reference to OGTS tech notes on proper approaches to lowering the steering column, removing a gauge panel, dismounting the heater plate then removing the dashpad.

You can also plan to make replacement a project, including considering related part upgrades, including our replacement heater control plate, heater cables, heater valve, and other related hardware such as dash bulbs and gauge upgrades, for the same install.

Firewall Area Prep

As part of dashpad removal, the heater control plate should have been separated (by removing the 3 mount screws (4mm, 0.7 pitch).

Make notes (or photo) the remaining wire loom and routes of its 3 outputs:

(1) Two thick red wires which connect to the rear of the amp gauge

(2) A lower loom which routes through a grommet into the trans tunnel

(3) The longest loom, which routes over the top of the heater box

(including a pair of connections) and an end to the door jamb switch

Underhood Prep

The heater system needs to be drained prior to service, which can be done by draining the cooling system at the radiator into a wide pan. (Note: Wipe up any spilled fluid, as it is toxic to pets).

An alternative technique, is to use a pair of vice grips to "pinch" each of the rubber heater hoses, then removing and quickly "plugging" each of the rubber ends using a bolt (of about 1/2" thickness at its threads).

At the heater valve, separate the end of the heater cable, by pressing the retainer clip then pulling it back to separate. Carefully work the cable end off the lever (avoid breaking the end).

Slide off and remove the firewall gasket off the end of the metal tubes.

<u>Heater Box Removal</u>

Undo the top 10mm head bolt and top wire eyelet.

Undo each of the two lower nuts (take some time and do this slowly as the studs they are connected to become rusty and are prone to breaking). Place all hardware in a baggie.

Twist the vent hose ends loose, begin to pull the box back, then detach the wires from the top hater box connectors ("tag" them with masking tape for easier reassembly later).

Remove the heater box completely from the interior.





Opel GT Heater Control Plate



Opel GT Heater Box (Mount hardware)

Heater Box Service

The Opel GT Heater Box is a sturdy design, made by Sofia of France, But after 50 years, it can use some attention and help.

To do this, dedicate some time and clear a large tabletop as a place to work. As you go along, bag and tag hardware as it is removed, for easier reassembly.

Wipe down the exterior and inspect the case for cracks, and consider using epoxy if an area is chipped, cracked or broken.

<u>Cables</u>

Only the upper cable clamp has to be removed, to service the heater box. Start your work, by marking the outer cable sheaths with a pen (where they are attached with clamps) to help identify where they should go.

If you are retaining existing cables, clean exposed areas of the metal wires using scotch-brite or SOS pads, then lube with oil, and work back and forth. You can also lubricate pivot hardware at the cable ends.

You may also consider replacing both cables as part of the service. If so, understand that the (shorter) upper cable controls vent directions, while the (longer) lower cable controls temperature via a valve and internal flap (Note: Calculate cable travel at the rear of the heater control levers)

<u>Separate Heater Box Halves</u>

Undo each of the two 7mm head bolts and nuts, and set aside in a baggie.

Undo each of the 9 square clips (5 around the rear and 4 on the front), by using a thin-tipped (1/8" wide) screwdriver or pick to wedge into an indentation in the case (below each clip), then pry each of them off. *Note: These are under some pressure, so be prepared to "chase" them as they "fly" off a few feet.*

Lift heater box top off.

<u>Core</u>

After you unbolt the bracket at end of the tubes (held by a 8mm head bolt and nut), the core can just be lifted out of the box. Slide the rubber "D" shaped gasket off, to free it of the cable and wire loom.

Prepare the new heater core, by attaching foam strips: Wrap a thin foam strip all around the core, and add a 7" silicone strip over the base row in direction of the flap vent (*this helps prevent cold air from bypassing the heater core*). Install the new heater core in same alignment, verifying alignment with the metal base plate edge (at the flap).

Slide on the "D" Gasket, with wire loom and cable in center

Note: You can also add a small foam remnant where the tubes exit the box,

and "tuck" sides into edges of box opening (to help seal the area around the tube outlets).

Bracket: Reinstall with 8mm head bolt (consider pinching bracket with vice grip, if needed to re-start the nut).

Opel GT

Heater Core

Bracket



(Added) Foam Strip



Upper

Cable Clamp



Flap

<u>Service Internal Hardware</u>

Wipe down internal areas free of dust, dirt and other materials.

Clean the resistor block bolts:

At location indicated, remove one 7mm head bolt (about 1 1/4" long) at a time, clean all corrosion, then reinstall the bolt. Do the other bolt. This helps ensure proper electrical contact for motor operation.

Pivot points:

Lube all, including ends of internal springs, for easier operation of cables

Internal Valve:

Some early 1969 GT's also had an internal (round) heater valve, See factory bulletin #70-I-07 on service or replacement of that style.

Motor:

Clean fins using q-tips and WD40, to restore balance and speed Use tip of 3 in 1 oil to lube the top shaft, and consider removing the 3 bottom 8mm head bolts for access to lube the lower shaft as well. This helps ensure more years of operation, of a difficult to obtain part.

Heater Box Reassembly

Carefully align the ring around fan top, and the slot around "D" gasket. Align halves, make sure the top vent flap is in the box, and cables are free. Check all edges again to ensure no parts are caught in the way. The halves should seat easily, and "snap" audibly when angled correctly.

Start 7mm head bolts & clips that hold the box halves together Recheck cable operation (reattach cable at top clamp), work back and forth and adjust as necessary. If OK, add the rest of the clips: Use finger to align and press to snap into place

Attach red wire (of loom to motor) to 2-way clip on the top of the box. Recheck your work, then carefully tighten the 7mm head bolts.

Heater Box Reinstallation

Wipe down firewall areas, of dust and dirt Insert the cable for the heater valve through hole to firewall

Line up box with the 2 studs

Drape wire to the door jamb switch, around the front of the box Give it a hefty shove

Add nuts (or a washer and nuts) then start the nuts on the studs Connect wires to the clips at top of heater box (as shown) Add eyelet and top 10mm, bolt Twist on the hoses to vents, defroster, etc., (replacement

2 1/2" duct hoses are sold by Old Air Products as p/n #91-53)

See OGTS tech notes regarding dashpad re-installation. *Refill cooling system, with a higher concentration of anti-freeze (suggested 60% with standard Radiator, or 70% with aluminum radiator).* Vent Hoses and Ducts











Addendum: Heater Core Installation

A few additional details, on heater core preparation

Identification: Foam Strips

Included within the shipping box, are two foam strips: A longer, thinner black strip and a shorter white strip.

Installation: Black Strip

The longer black foam strip is intended to wrap around the exterior of the heater core, to help direct airflow within the heater box assembly.

It is important, to <u>not</u> stretch this strip during assembly, but to simply remove the adhesive and lay it on the edges, as shown, then trim excess material (for re-use). Make sure to tuck the foam into each step along the core when wrapping the foam to ensure no gaps between the core and adhesive.

Photos at right, show an installed view.

The "extra" length of black foam trim, will be applied near the tube outlets, for additional airflow restriction.

Installation: White (Silicone) Strip

The shorter white strip is a silicone strip, which installs across the bottom row of the fins of the core (important– in the direction of the interior "flap" within the heater box).

This helps to provide a better "seal" at the interior flap, for maximum efficiency and heat.

Installation: Coolant Mixture

Refill cooling system, with a higher concentration of standard glycol-based anti-freeze.

It is suggested you top off for a 60% mixture (anti freeze vs. water) when you have a standard brass/copper-core radiator, or a 70% mixture (when a GT is equipped with an aftermarket aluminum radiator).













<u>Silicone Strip</u>

<u>Silicone Strip</u>