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**Procedure:**

**Installation for the ATP direct replacement high flow/high density front mounted intercooler assembly on the 2007 and newer Volvo C30 / S40 T5 Model**

*Purpose of this upgrade: This ATP FMIC upgrade features a Garrett GT spec intercooler core that is much more thermally efficient in cooling the turbo charged air than the factory FMIC. The result is a drastic reduction in charge air temp which equates to a denser charge, more power, less engine knock, and increased engine reliability.*

*Note: This unit is designed to replace the stock unit, utilizes the stock mounting point through new brackets, but it strategically placed further forward against the bumper fascia. The plastic frame around the stock intercooler under the bumper cover is removed during the install.*

**Parts Checklist (Bill Of Materials):**

- (1) Intercooler assembly
- (1) 4mm x 25mm Allen bolt (to hold stock MAP sensor to intercooler)
- (1) Short Stainless Bracket – Z Shaped (for passenger side mounting of FMIC)
- (1) Longer Stainless Bracket – S Shaped (for driver side mounting of FMIC)
- (2) 8mm Allen bolts
- (2) 8mm locknuts
- (4) 8mm washers



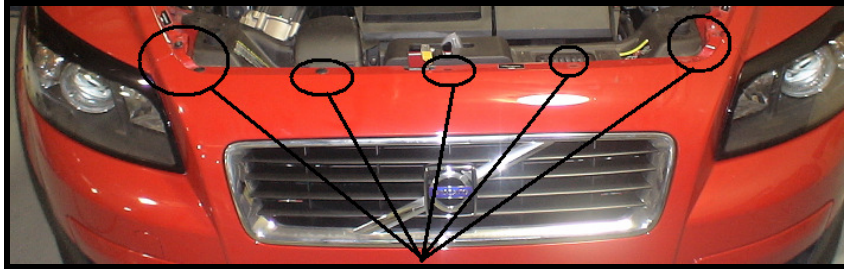
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**Preparation for this upgrade:**

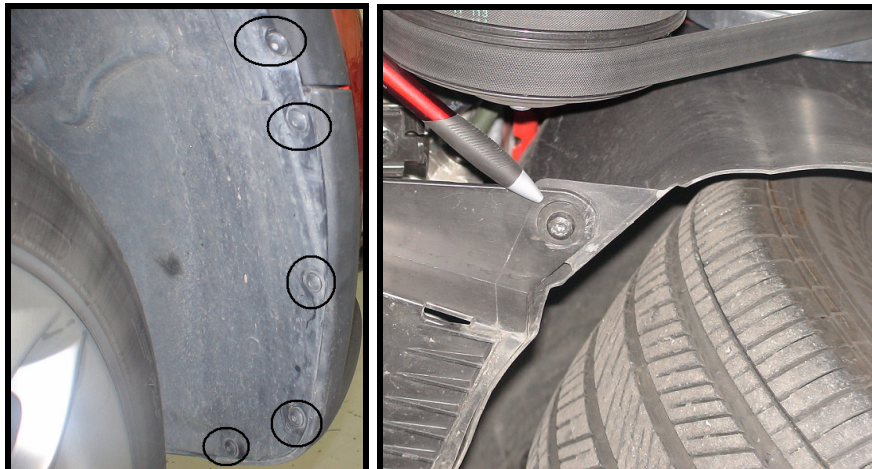
1. Basic tools required including screwdrivers and torx driver bits.
2. Ability to lift vehicle recommended either through vehicle lift or jack stands in order to access lower engine plastic covers.
- 3.

**Installation Instructions:****A. Lift the hood, identify the mounting points and remove the front bumper cover:**

1. Unbolt the two torx screws and unlock the retaining buttons at top of bumper cover:



2. Unscrew and remove the (5) screws on the inside of the passenger side fender lining then repeat on the driver side fender lining, behind the bumper cover. Turn the steering wheel to turn wheel/tire as necessary to expose the fender lining. Also, remove lower mounting bolt on each bottom side of the wheel well (as shown on bottom right)



3. Pull away on fender trim away from the front bumper cover as shown. Repeat same process on driver side fender trim.



4. Pull away on bumper cover gently and slide off the vehicle as shown:



## B. Prepare and unbolt the stock Intercooler from vehicle

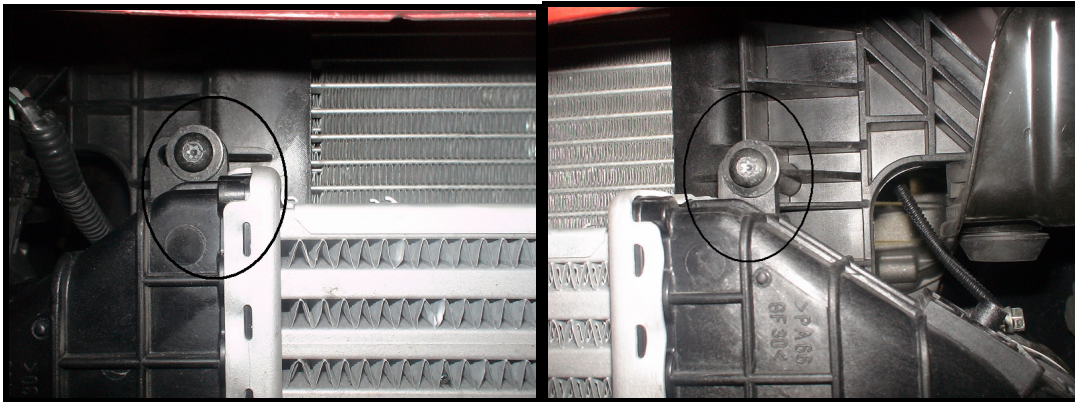
1. Disconnect the ambient air temp sensor plug (2 wire plug) and remove the plastic ducting frame from around stock intercooler.



2. Unplug the MAP sensor electrical plug and unscrew hose clamp on both sides of intercooler as shown.



3. Unbolt the (2) bolts holding intercooler to front of radiator at two bolts shown



4. Unbolt the MAP sensor from the stock intercooler and slide it into the sensor holder on the ATP intercooler and bolt down using the NEW 4mm bolt provided:

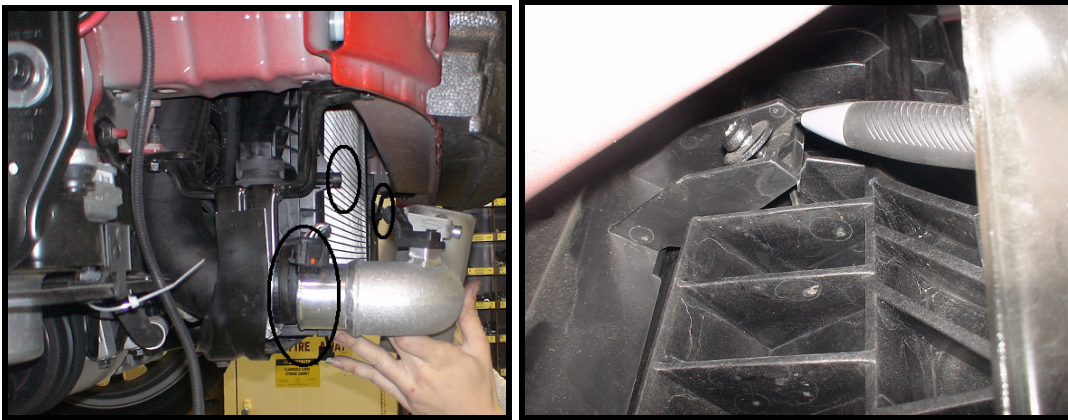


**C. Prepare the brackets and loosely bolt onto intercooler as shown:**

1. Shorter Z shaped stainless bracket on passenger side (same side as MAP sensor)
2. Longer S shaped stainless bracket on driver side

**D. Place new intercooler assembly into location of stock intercooler and attach other ends of stainless brackets to (2) original mounting points using original bolts used to mount stock intercooler, loosely attaching bolts.**

1. Slip the two factory rubber hoses into the inlet outlet of the new intercooler and tighten hose clamps.



2. Plug the electrical connector for MAP sensor back onto the MAP sensor.
3. Tighten all the mounting bolts at the mounting brackets while pushing intercooler flush against the bottom corner of bumper support beam and proper horizontal alignment.

**E. Bolt bumper cover back on using reverse process of removal.**

1. When inserting bumper cover top back on, careful to observe the following to prevent improper insertion or binding:



2. Carefully reinsert sides of the bumper cover for proper alignment:



3. Make sure bumper cover is fully re-attached and appear to be in proper alignment with headlights, fenders, fender trims, etc:



4. Observe intercooler placement to ensure it is reasonably centered. Adjust if necessary and once you determine it's fully centered, go back to the beginning of the procedure and re-install all fasteners for the bumper cover.



End of Installation procedure.