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## Ultimate Volvo P2 Charge Pipe Kit

### All versions- upper, lower, and whole kit

#### Installation Instructions.

<p><b>Equipment/tools needed:</b></p> <p>½" Drive socket set (recommended)          1/8<sup>th</sup> Drive socket with wobble extensions          7/16<sup>th</sup> deep socket for Tbolts          Impact Driver (If available though not necessary)          Metric socket set          Screw drivers          Torx driver set          Thread sealant</p> <p><b>Abbreviations:</b></p> <p>CLP – Cold Lower Pipe          DS – Drivers Side          IAT Sensor– Intake Air Temperature Sensor          IC – Intercooler          MAP Sensor – Manifold Absolute Pressure          PS – Passenger Side          TB – Throttle Body          UCP – Upper Charge Pipe</p> <p>Note: Where applicable, 01-04 vehicles use 12mm and 10mm bolts, while 05-09 vehicles have downsized spec to 8mm bolts.</p>	<p><b>Included in Kit</b></p> <p><b>Piping</b>          (1) polished 2.75" 6061 Aluminum straight pipe          (3) polished 2.5" 6061 Aluminum pipes              - upper charge pipe              - hot side 9.5" straight pipe</p> <p><b>Silicone</b>          (1) 2.5" Hump hose coupler          (1) 2.5" &gt; 2.25" 90 degree coupler          (1) 2.5" &gt; 2.25" 45 degree degree          (1) 2.75" &gt; 2.5" reducing straight coupler          (1) 3" &gt; 2.75" throttle body coupler</p> <p><b>Clamps</b>          (8) #40 ABA 316 Stainless worm clamps          (2) #44 ABA 316 Stainless worm clamps          (1) 2" oeticker worm clamps (Not with K24 V-band turbo)          (1) #48 ABA 316 Stainless worm clamp (throttle Body)</p> <p><b>Hardware</b>          (1) 1/8<sup>th</sup> NPT nut (H2O injection port plug)          (1) Blue anodized ¼ NPT x 90° hose barb fitting (03-09 late) <b>or</b>              ¼ NPT nut (01-02 early)          (1) M6x12mm bolt + washer (early, dual sensor adapter) <b>or</b>          (1) M5x20mm bolt + washer (late, combined sensor adapters)</p> <p><b>Turbo Coupler Options (Depending on Style)</b>          (1) 2.5"&gt;2" silicone coupler (Mitsubishi TD04HI Turbo) <b>or</b>          (1) 2.5"&gt;2" Silicone coupler (K24- 06 R and T5 Turbo) <b>or</b></p> <p><b>K24 V- Band Flange Adapter Setup (Extra Charge)</b>          (1) Aluminum Billet Flange Adapter          (1) 2.5 &gt; 2" Silicone Coupler          (1) (additional) Oeticker Worm Clamp          (1) Viton O Ring</p>
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**\*\* BEFORE STARTING WORK -Remove negative terminal from battery\*\***



**Jack up the front of your car.** Always use a floor jack **plus** 2 jack-stands to make sure you have three points of contact for safety in case the jack fails. You will want to place the jack-stands under the side rails of the sub frame so that they are not in the way for your installation.

**Preliminary Details -** It is recommended that you remove the hood insulation to eliminate potential rubbing on the UCP. Although not necessary for installation this will eliminate rubbing on the UCP. (See Below)

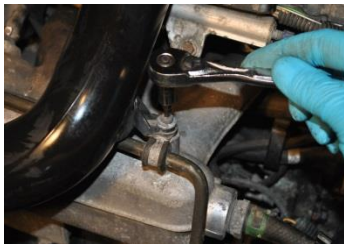


Remove (4) 13 mm strut bar mount bolts; two on each side which connect the strut bar mounting bracket to the strut tower. Remove 15 mm bolt and 18 mm nut from stabilizer bushing on engine head. Lift bar and remove from engine bay. This will give access to turbo housing and stock UCP.

**Note:** On later cars with air guide as shown in lower right picture, remove the (2) bolts securing the air guide to the underside of the cross member (see next page).



**Remove existing intercooler piping and hoses.** Remove (2) T-25 Torx screws securing factory UCP to front of intake manifold. On R cars there are (3) T-25 Torx screws with the extra one towards the rear of the engine head.



Loosen 7mm turbo coupler clamp with 1/8" drive deep socket and separate coupler from turbo outlet (below left). If turbo setup consists of a K24 Turbo outlet with V-band clamp, remove V-band with T-30 Torx Socket (Below Right).



Loosen 7mm clamp from lower side of UCP (Below Left). Lift factory UCP from engine and remove. Loosen 7mm clamp from hot (PS) of IC and remove coupler from IC (Next Page, Below Right).



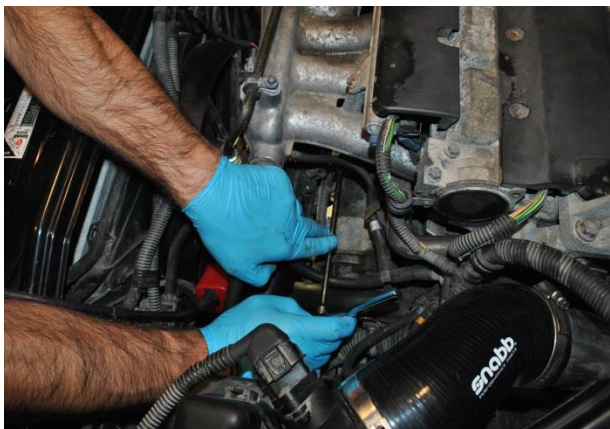


**Carefully** remove clips holding MAP and IAT sensors from factory CLP. **Note:** 01-02 vehicles have separate sensors (see below left). 03-07/09 vehicles have a combined sensor mounted near the factory IC, (see below right).



**NOTE:** For throttle body pipe removal the clamp is typically facing forward (toward the fan shroud) on a factory vehicle. We recommend using a 7mm socket to get to this. The space is tight and you have to reach under the intake manifold to get to this clamp. It is *very* helpful to have a mirror to locate the clamp head before you get started.

Some vehicles may have throttle body clamp oriented facing towards DS tire. Throttle body clamps in this situation can be accessed from the side of the intake manifold with a 1/8" drive socket and 14" extension (below left).





**Install New Piping.** Assemble TB coupler, 2.75" pipe and 2.75" > 2.5" reducing coupler with 2.88" and 3.25" clamps and ½ tighten. Install TB coupler onto TB with # 48 worm clamp and 1/2 tighten (see below).

**Note:** Use WD 40 or soapy water to lubricate pipe ends for ease of assembly.



Connect bottom of cold 45° pipe to 45° coupler with 2.88" clamp and ½ tighten (below left). Connect lower end of 45° coupler to IC with #40 ABA worm clamp and ½ tighten (below right).



Connect upper end of 45° pipe to reducing coupler with 2.88" clamp and ½ tighten (below left/right).





Install 9.5" straight pipe onto 90° coupler with 2.88" clamp and ½ tighten (below, pic 1). Install 90° silicone coupler onto hot side IC inlet with #40 ABA worm clamp (pic 2,3) and half tighten (pic 4).



(1)



(2)



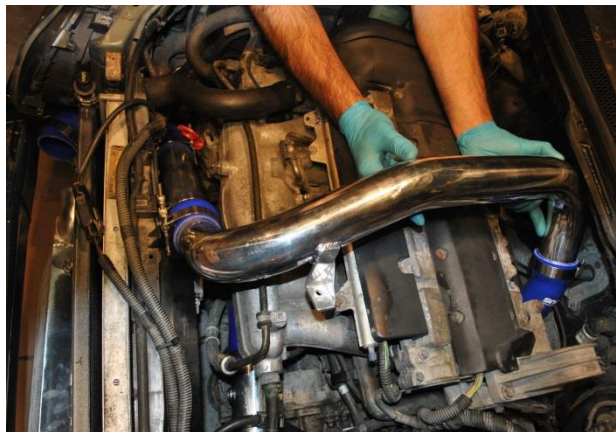
(3)



(4)

Install hump hose coupler to top of 9.5" straight pipe (below left). Install UCP to Turbo coupler with 2.88" clamps ½ tighten. Install top section of UCP to Turbo with the 2.25" clamp and bottom section to hump hose coupler with 2.88" clamp, ½ tighten (below right).

**Note:** If using K24 Turbo with V-band clamp, insert flange adapter into turbo outlet and secure with original factory V-band clamp. Then attach turbo coupler to flange adapter with Oeticker worm clamp.



Next, align UCP and re-install T-25 bolt through bracket on UCP and into mounting point on top of engine (below left).



**Note:** For 01-02 IAT & MAP sensors (early style), IAT clips in while MAP sensor is secured with M6x12 bolt and lock washer.

Re-install Strut bar, air guide and connect battery terminal

**Note:** Re- check and tighten all clamps as necessary. Check for leaks and test drive.

Thank you for your purchase and we hope you enjoy your Snabb FMIC kit!