

# Highly Styled, Low Cost Serpentine Drive

**Installation Instructions** 

Chevy Small Block, Early Model Corvette Kit #21170



# **Included Parts List**

Main Front Bracket I	D/N 21171	Power Steering Bracket P/N 21174	
Main Front Bracket       P/N 21171         1       21171-AMain Front Bracket Body         1       RA-1.625Rod Assembly 1.625" Lg         1       TP3850Tube Spacer 3/8" Id x .850" Lg         1       AC3-2.150Alum Bushing 3/8" Id x 2.150" Lg         2       744-AIdler Pulley Body         1       744-AIdler Pulley Body With 1.150" Bushing         1       311-AIdler Pulley Cap (with hole)         2       302-AIdler Pulley Covers         2       MM100Bolt Adjustment Sleeves		Power Steering Bracket P/N 21174  1 21174-APower Steering Bracket Body 1 21176-AAdjustment Bracket Body 1 S219	
9 S0228/32 x 3/8" 2 S2443/8" x 3/4"	SHCS	1 MM102LH Rod End 1 MM10312" Threaded Rod	
1 S256		Pulley Kit P/N 6320-208         1       7671-ACrank Pulley Body         1       6317-AWater Pump Pulley Body         1       359-AAlt Pulley Body         1       208-AAlt Fan         1       307-AAlt Pulley Cap         1       333-AWater Pump Pulley Cover         1       394-AA/C Pulley Cover	
Alternator Rear Support Brk P/N 21112		1 600-AP/S Pulley Hub 1 650-AP/S Pulley Body	
1 21112-AAlternato 1 S4535%" x .850 2 S675Paper Ga	•	3 S028	
A/C Rear Support Brk P/N 21113		3 S2963%" x 1½" Fine Thread SHCS	
1 21113-AA/C Rea 1 TP3400Tube Spa 1 S2165/16" x 2" 2 S675Paper Ga	Hex Hd Bolt	3 S520M6 x 10 x 20mm Button Hd Bolt  Accessories 1 P204Water Pump Standard Rotation 1 P310Power Steering Pump Remote 1 P412Sanden A/C Compressor 1 P417A/C Line Kit 1 P572Alternator	

# **Required Tools and Materials**

RTV Silicone Loc-Tite® Thread Locker Anti-seize Compound Gasket Scraper, Steel Wool or Sandpaper to clean gasket surfaces

3/16" Allen Head Driver 5/16" Allen Head Driver 1/4" Allen Head Driver 6mm Allen Head Driver 5/8" Combo Wrench 9/16" Combo Wrench
11/16" Combo Wrench
3/4" Combo Wrench
Socket Wrench & Extension
10mm 12pt. socket
12mm 12pt. socket

### Serpentine Belt

41.5" and 50" Belt



## Preparing to Install

- Disconnect the battery to prevent accidental engagement of starter motor.
- Drain coolant from system
- If your A/C is intact and charged it must be evacuated.
   This is best done by a professional garage with proper recycling equipment
- Remove the existing alternator, air conditioning compressor and associated brackets.

- Remove all pulleys and water pump.
- Remove all traces of old gasket and sealer with gasket scraper and steel wool pad.
- Clean threads in block by chasing with appropriate thread chasers.

### Installing the Kit

**Photo 1** Ensure the sealing face of the coolant outlets are clean, flat and free of old gasket material. Apply a small amount of RTV silicone to one end of each mounting stud to prevent coolant seepage. Install the (3)  $\frac{3}{8}$  x 3" Studs (S339) into the block leaving the lower passenger side block hole without a stud as shown .



**Photo 3** Install the provided Water Pump (P204). Sliding it over the (3) studs and then use the (2) 3" Stainless Threaded Spacers (S785) in the two upper mounting holes of the water pump. (**Note Optional Polished Water Pump Shown**)





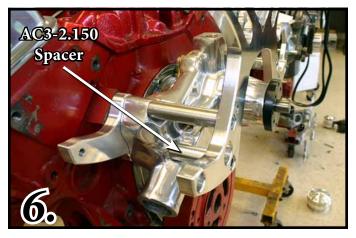
**Photo 2** Install the (2) Rear Support Brackets (21112-A) drivers side and (21113-A) passenger side. Use the (4) provided Paper Gaskets (S675) and a small amount of silicon sealant installed on the front and rear of both brackets. In the Alternator Rear Support Install the 5/8"-18 O.D. Ajustment Screw (S453) into the bracket for later ajustment.



**Photo 4** In the The lower drivers side water pump hole install the 1.850 long Threaded Spacer (S768) As Shown. Onto the 3" Stud.



**Photo 5** Installing the main plate (21171-A). Use (2)  $\frac{3}{8}$  x  $\frac{3}{4}$  "SHCS (S244) to mount the main plate to the (2) threaded studs. (do not tighten at this time)



**Photo 7** In the lower Drivers side Water Pump hole Install the Idler (744-A) with the cap (311-A) (cap with hole thru center) between the main front plate and the 1.850 Spacer as shown Note the cap will be facing the block, use a  $\frac{3}{8}$  x 2" SHCS (S256) to install.



**Photo 9** Install Alternator fan (221-A) Alternator Pulley (208-A) to the alternator shaft using the nut that comes with the alternator.

The Alternator (P572) is installed using a 3/8 x 5" SHCS (S278) thru the front of the main plate, behind the alternator lower mount place a TP3-.850 Spacer, then the RA-1.625 Rod as shown. Adjust the (S453) Ajustment Screw to take up any play between the rod end and the read Alternator Support.



**Photo 6** In the lower passenger side water pump hole install Aluminum Spacer (AC3-2.150) Between the water pump and the rear of the Main Plate. Apply thread sealant to the threads of (1)  $\frac{3}{8}$  x  $\frac{51}{2}$ " SHCS (S280) and install thru the front of the main plate, the spacer and into the water pump.

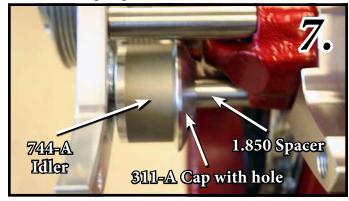
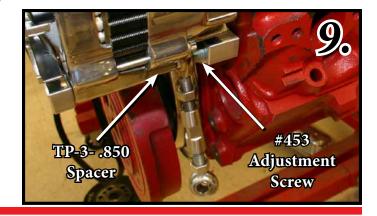


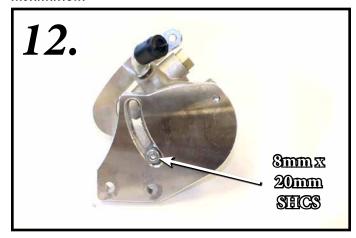
Photo 8 Installing the A/C Compressor Unit (P412) thru the front of the main bracket use a 8 mm x 20 mm SHCS (S550) in the lower hole of the main bracket making sure the A/C lines are pointing up. Thru the rear of the A/C Unit install a 5/16 x 2" (S216) hex bolt and use a 3/8" x .400 (TP3-.400) Spacer between the Rear Support Bracket and the rear A/C ear as shown into the rear support bracket. Place the compressor clutch cover (394-A) onto the compressor clutch and align. Thread the three (S520) M6 - 10 x 20mm Button Head Bolt through the cover and into the clutch and tighten. Caution – Do not over-tighten!



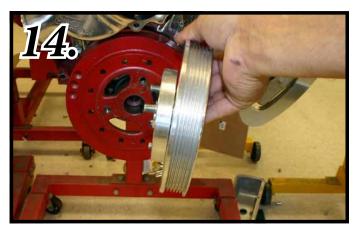




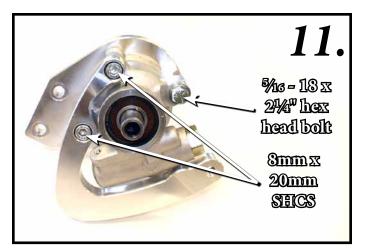
**Photo 11** This is a front view Power Steering Pump (P310), Mounting Bracket (21174-A) and Adjustment Bracket (21176-A). (*Note: Shown without pressed on hub installed, this will come pre-installed*) Use two M8 x 20 mm SHCS (S550) to attach Adjustment Bracket to front of pump. Then attach pump to mounting bracket using (1)  $\frac{5}{16}$ -18 x  $\frac{23}{4}$ " Hex Head Bolt (S219). **Do not fully tighten at this point this will be done after belt installation.** 



**Photo 13** Install the Power Steering Pump and Bracket to the engine block using (2)  $\frac{3}{8}$  x  $1\frac{1}{4}$ " SHCS (S250) and (2)  $\frac{5}{8}$ " O.D. x  $\frac{3}{8}$ " I.D. washers. Attachment of the rod end to Adjustment Bracket will be done later when belt is installed (see Photo 18)



**Photo 10** Install (S553) M8 x 1.25 x 35 mm bolt into (MM100) bushings as shown. Install one each into Alternator, and A/C units top adjustment slots. Leave loose at this time, these will be use with the belt adjustment tool later.



**Photo 12** From rear install M8 x 20 mm SHCS in adjustment slot as shown do not fully tighten at this point this will be done after belt installation.



**Photo 14** Apply Loc-Tite to the threads of the three 3/8 x 1-1/2" SHCS (S296) and mount the Crank Pulley 7671-A with the Crank Pulley Adaptor (359-A) between vibration dampner and pulley tighen firmly (50 ft/lbs)

**Photo 15** Apply Loc-Tite to the threads of the three 5/16 x 7/8" SHCS (S144) and mount Power Steering Pulley (650-A) to Hub (600-A) then tighten firmly (28 ft/lbs) Place the Water Pump Pulley (6317-A) and Pulley Cover (333-A) to the Water Pump and thread the (4)  $\frac{5}{16}$  x  $\frac{7}{8}$ " SHCS (S186) through pulley and into Water Pump pulley flange, tighten firmly (28 ft/lbs.) Install the  $\frac{41}{2}$ " belt to the rear grooves of the water pump pulley, crank pulley and power steering pulley.

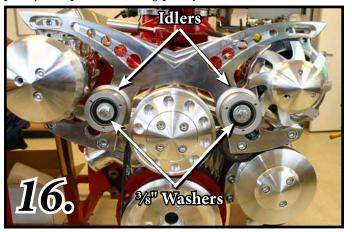
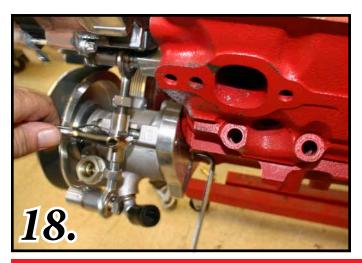
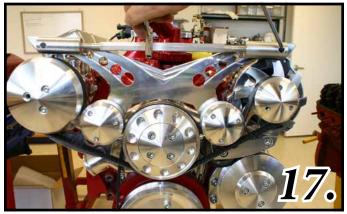


Photo 17 Mount the 50" Belt to the front serp pulleys as shown. Slip the supplied March Adjustment Tool (21106) over the two (MM100) bushings and use a wrench to turn the adjustment tool outward to tighten the serpentine belt to 100 ft. lbs. Be sure to have lower alternator and a/c compressor bolts snug but not tight to allow proper adjustment of belt. Before removing adjustment tool tighten lower alternator and A/C compressor bolts and use the holes in the adjustment tool to tighten both top 8mm socket head cap screws when correct belt tension has been achieved. Remove the adjustment tool and keep for future use. Attach idler pulley caps (302-A) with (3) %32 x 3/8" SHCS (S022). Install Alternator Pulley Cover (307-A) with (3) (S028) SHCS.





**Photo 16** Mount the (2) Idlers (744-A) to the main bracket with (2)  $\frac{3}{8}$  x 2" Hex Bolts (S323) and (2)  $\frac{3}{8}$ " Washers (S666).



**Photo18** A  $^5/_{16}$  x  $^21/_{4}$ " hex head bolt (S324) should be installed thru the adjustment rod end then the (AC3-1.250) Aluminum Bushing and threaded into Adjustment Bracket. Be careful to have a few turns of the rod ends equally into the spacer. The 8mm SHCS in the slot should be slightly loose during belt adjustment. Tighten adjustment rod pulling belt to 75 to 80 ft/lbs. then tighten rear 8mm SHCS and the  $^5/_{16}$  x  $^23/_{4}$ " hex head bolt in pump.

Check and tighten all bracket bolts, alternator and A/C lower mounting bolts, turn engine over once by hand to check for any belt rubbing and proper belt alignment. Run engine three minutes and check belt tension again.

### **Final Assembly**

If you are going to be installing your air conditioning hoses and charging the system at this time, remove the cover plate on top of the compressor body. Install the (P417) A/C adapter lines, hoses and connect clutch wire and charge system.

**Important:**If you are NOT installing hoses and charging the system at this time, leave cover plate on compressor. Do not connect the clutch wire or apply power to clutch wire without the hoses connected and the system charged – *Serious damage will occur to compressor*.



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Product ID			
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