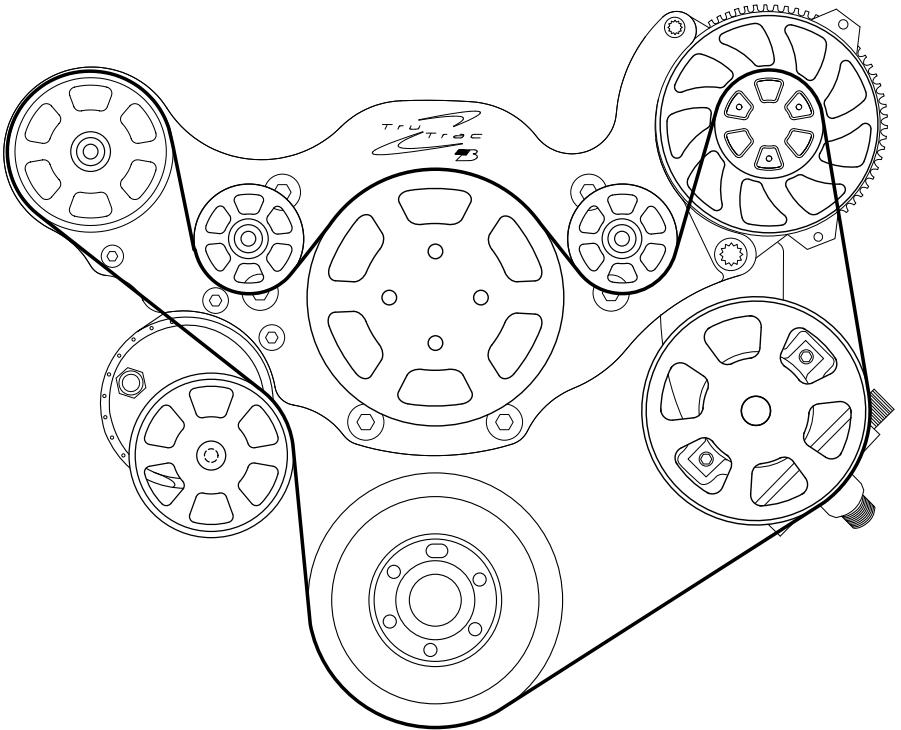


# Tru Trac™

**Small Block Chrysler**  
Installation Manual  
For Systems without A/C  
#13805 / #13825



Billet Specialties, Inc.  
500 Shawmut Avenue.  
La Grange, Illinois 60526  
Tech Line (708) 588-0505  
Fax (708) 588-7181

**PLEASE READ ALL INSTRUCTIONS BEFORE INSTALLING ANY COMPONENTS OF THE TRU TRAC SERPENTINE SYSTEM**

Tech Line: 708.588.0505  
 Fax: 708.588.7181  
 www.billetspecialties.com

**Required Tools & Materials**

- Anti-seize Compound
- RTV Silicone
- Permatex Hylomar<sup>®</sup> (Gasket Dressing)
- Gasket Scraper
- Scotch-Brite<sup>®</sup> Pad
- 3/8-16 Thread Chaser\* & Holder  
\*Thread chasers are available at your local parts store and are different from a thread cutting tap.
- 5/8" Box End Wrench
- 11/16" Box End Wrench
- 3/4" Box End Wrench
- Socket Wrench & Extension
- 3/8" 12-point socket
- 10mm 12-point socket
- 12mm 12-point Socket
- 5/32" Allen
- 7/32" Allen
- 1/4" Allen
- 5/16" Allen

**TECH TIP:**

Billet Specialties recommends the use of Anti-Seize on all fasteners to prevent thread lock-up.

**Prepping The Block**

Disconnect battery and remove all existing accessory drive brackets & components from motor.

Remove water pump and mechanical fuel pump, scrape away any existing gasket material with a gasket scraper and dress surface with a Scotch Brite<sup>®</sup> pad.

Remove the timing bolt on the passenger side of the motor just below the fuel pump.

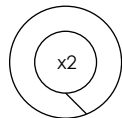
**Note:** If you wish to replace the timing cover gaskets and seals now is the time to do so. Fel-Pro makes a timing cover gasket set P/N TCS 6563-1 that covers all of them.

**THIS KIT IS NOT DESIGNED FOR USE WITH A MECHANICAL FUEL PUMP**

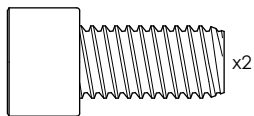
**Skin Board #1 - Packaged With Power Steering Pump**



5/16-18 x 2-3/4" Socket Head Cap Screw  
Power Steering Pump To Bracket

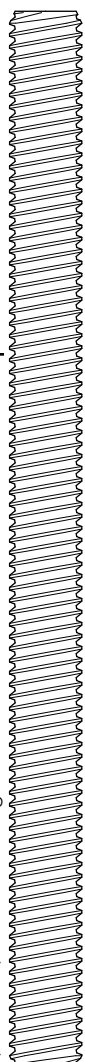
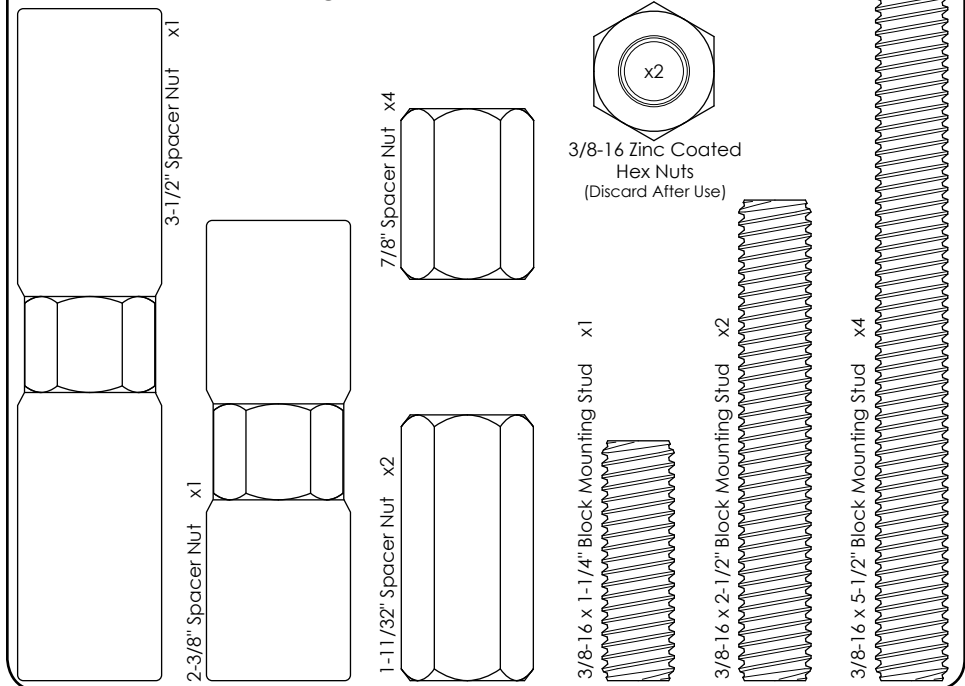


5/16" Lock Washer

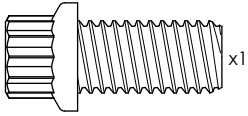


3/8-16 x 3/4" Socket Head Cap Screw  
Power Steering Bracket To Alternator Bracket

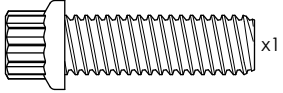
**Skin Board #2 - Packaged With Water Pump**



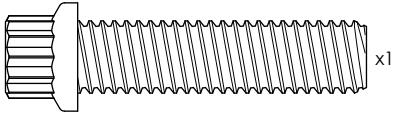
## Skin Board #3 - Packaged In Main Box



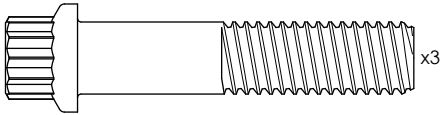
3/8-16 x 3/4" 12-Point Cap Screw  
Tensioner Pulley x1



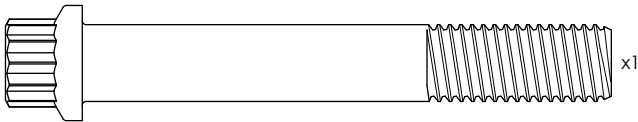
8mm-1.25 x 25mm 12-Point Cap Screw  
Bridge Bracket x1



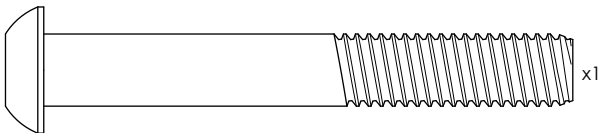
3/8-16 x 1-1/2" 12-Point Cap Screw  
Water Pump To Block x1



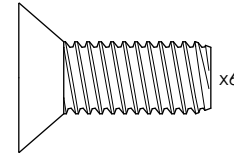
3/8-16 x 1-3/4" 12-Point Cap Screw  
Idler Pulleys x3



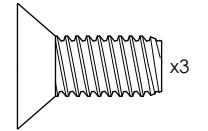
10mm-1.25 x 70mm 12-Point Cap Screw  
Alternator - Lower Bolt x1



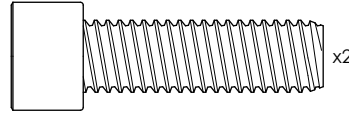
3/8-16 x 2-3/4" Button Head Cap Screw  
Timing Cover To Block x1



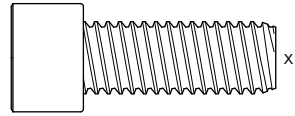
3/8-16 x 1" Flat Head Cap Screw  
Thru Bridge Bracket Into Spacer Nuts x6



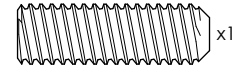
5/16-18 x 3/4" Flat Head Cap Screw  
Thru Bridge Bracket Into Tensioner x3



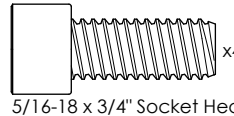
3/8-16 x 1-1/4" Socket Head Cap Screw  
Tensioner Bracket Assembly x2



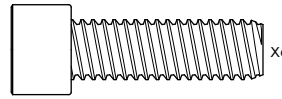
3/8-16 x 1" Socket Head Cap Screw  
Thru back Of Tensioner Bracket To  
Tensioner Spacer Nut x1



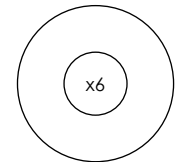
5/16-18 x 1" Socket Set Screw  
Tensioner Assembly x1



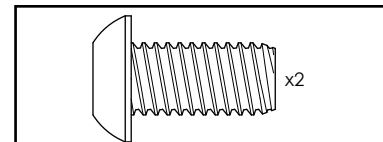
5/16-18 x 3/4" Socket Head Cap Screw  
Water Pump Pulley x4



5/16-18 x 1" Socket Head Cap Screw  
Crank Pulley x6



5/16" Belleville Washer x6



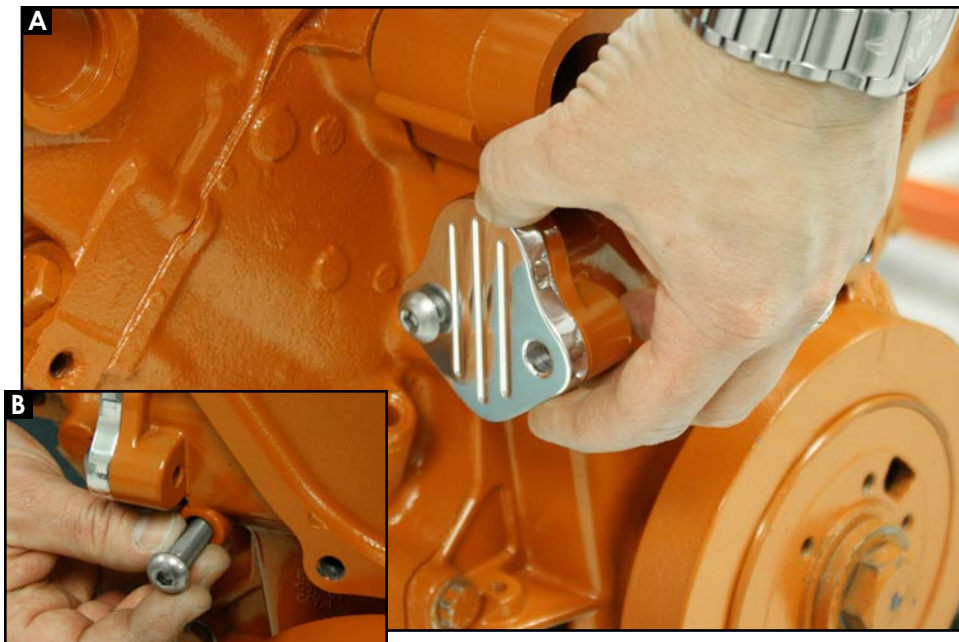
3/8-16 x 3/4" Button Head Cap Screw  
Fuel Pump Block-Off x2

**Packaged With Fuel Pump Block-Off**

## Serpentine Belt

Goodyear Poly-V 6-Rib Serpentine Belt - 66" #4060660 (with power steering)

Goodyear Poly-V 6-Rib Serpentine Belt - 63.5" #4060635 (without power steering)



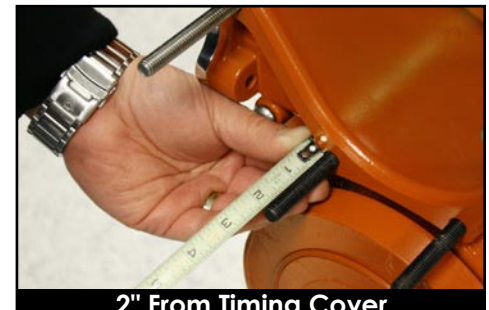
**Figure 1: Install Fuel Pump Block-Off**

**A]** Sparingly apply RTV silicone to the timing cover surface and gasket. Attach the fuel pump block off with the two 3/8-16 x 3/4" button head cap screws and tighten firmly.

**B]** Thread the 3/8-16 x 2-3/4" button head cap screw into the timing cover by the fuel pump block off and tighten firmly.



**2-7/16" From Timing Cover**



**2" From Timing Cover**

**Figure 2: Install Block Mounting Studs**

Apply RTV silicone to one end of the four 3/8-16 x 5-1/2" threaded studs and the two 3/8-16 x 2-1/2" threaded studs.

**A]** Thread the silicone side of the 5-1/2" studs into the upper four holes in the timing cover.

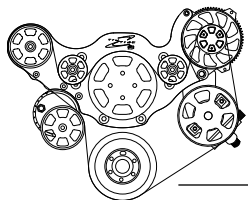
**Important!** Leave 2-7/16" of thread exposed from the timing cover face.

**B]** Thread the silicone side of the two 2-1/2" studs into the bottom two holes of the timing cover.

**Important!** Leave 2" of thread exposed.

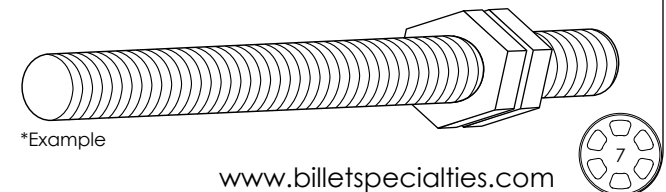
**Double-check your lengths.**

The studs can easily be tightened by threading two 3/16" zinc coated nuts (supplied) onto the stud and tighten them against each other to act as a drive nut (discard after use).



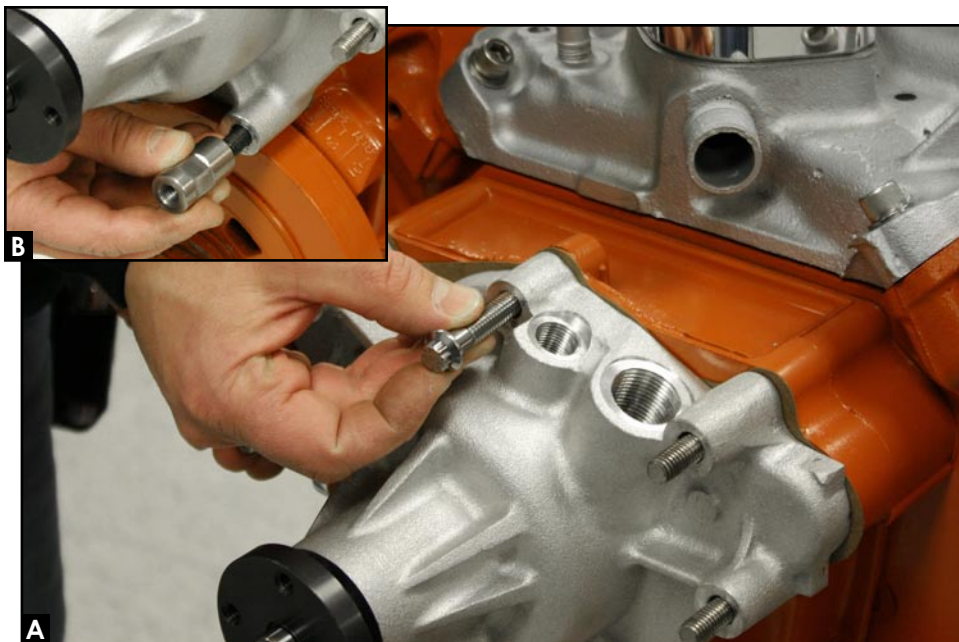
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\*Example

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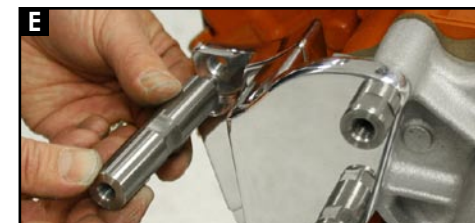
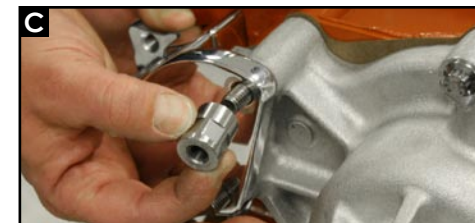
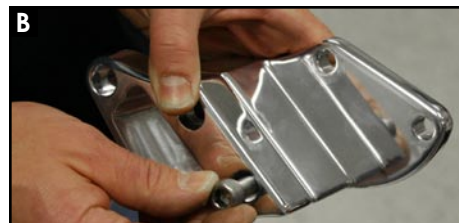
**Figure 3: Install Water Pump**

Coat both sides of water pump gasket with Permatex Hylomar gasket dressing. Install gasket over studs.

**A]** Slide the water pump over the studs and into position. Apply anti-seize to the threads of the 3/8-16 x 1-1/2" 12-point ARP cap screw and thread into top water pump hole, finger tighten.

Apply anti-seize to the exposed threads on the remaining studs.

**B]** Finish by threading the two 1-11/32" spacer nuts to the bottom two studs and finger tighten.



**Figure 4: Install Tensioner Bracket**

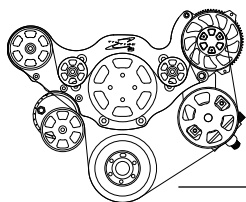
Apply anti-seize to the two 3/8-16 x 1-1/4" socket head cap screws.

**A&B]** Assemble front and rear tensioner bracket halves together with the two 3/8" cap screws and tighten firmly.

**C]** Place completed bracket on passenger-side of water pump and secure with two 7/8" spacer nuts and finger tighten.

**D]** Apply Loc-Tite to one end of the 3/8-16 x 1-1/4" threaded stud and thread it into the 3-1/2" long spacer nut until it bottoms out.

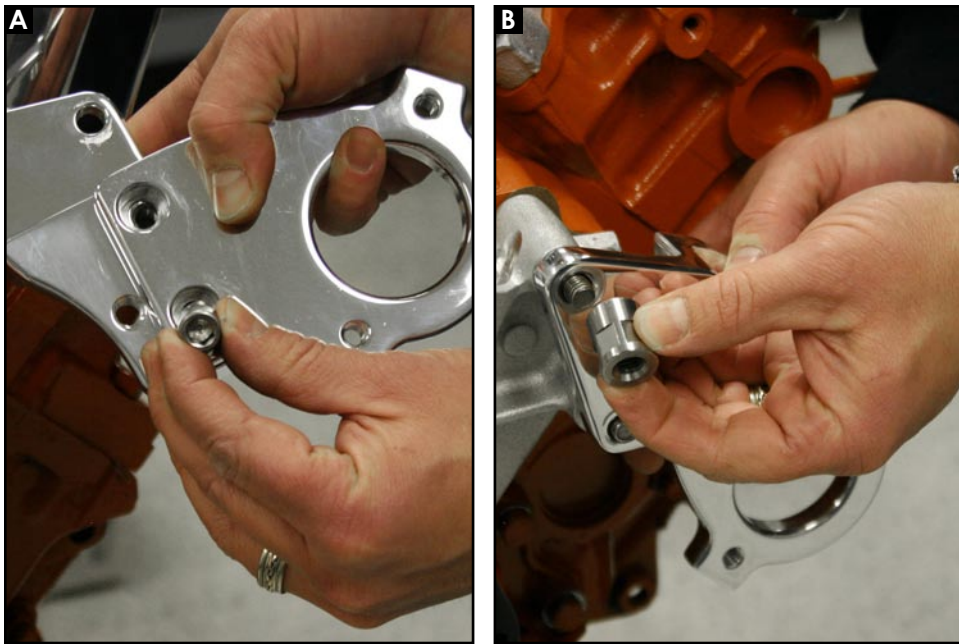
**E]** Apply anti-seize to the remaining exposed threads and install the 3-1/2" spacer nut into the tensioner bracket using the top open hole. Tighten firmly.



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FOR KITS WITHOUT POWER STEERING – SKIP TO STEP B

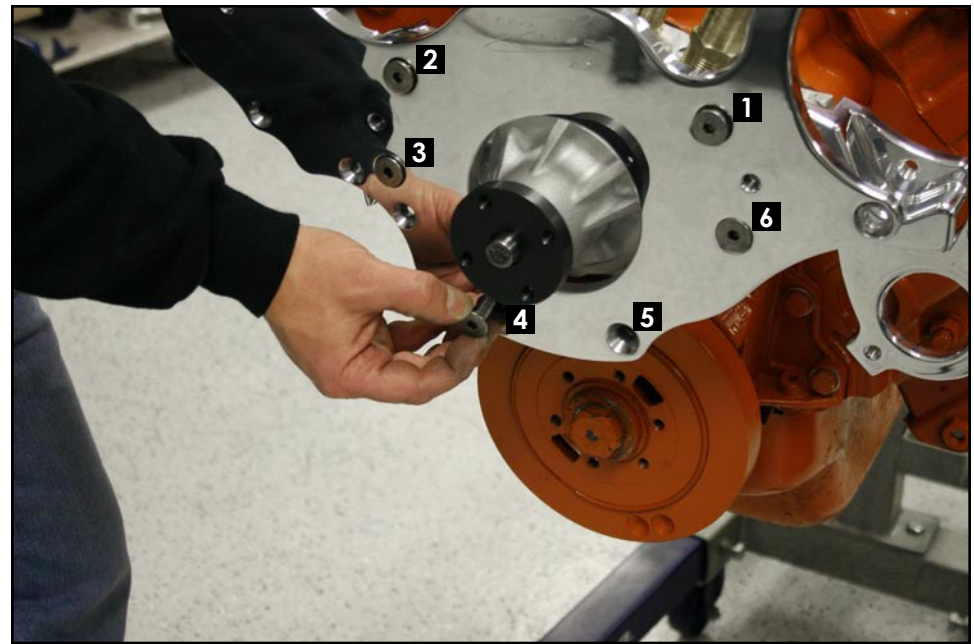
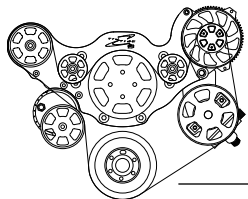
**Figure 5: Install Alternator & Power Steering Bracket**

**A]** Apply anti-seize to the two 3/8-16 x 3/4" socket head cap screws. Assemble power steering bracket to the back of the alternator bracket and tighten firmly.

**B]** Place alternator bracket on driver side water pump and secure with two 7/8" spacer nuts.

Tighten all water pump spacer nuts at this time firmly in a cross pattern, make sure bracket fasteners are also tightened firmly.

Now is a good time to install the barbed fittings in the water pump.



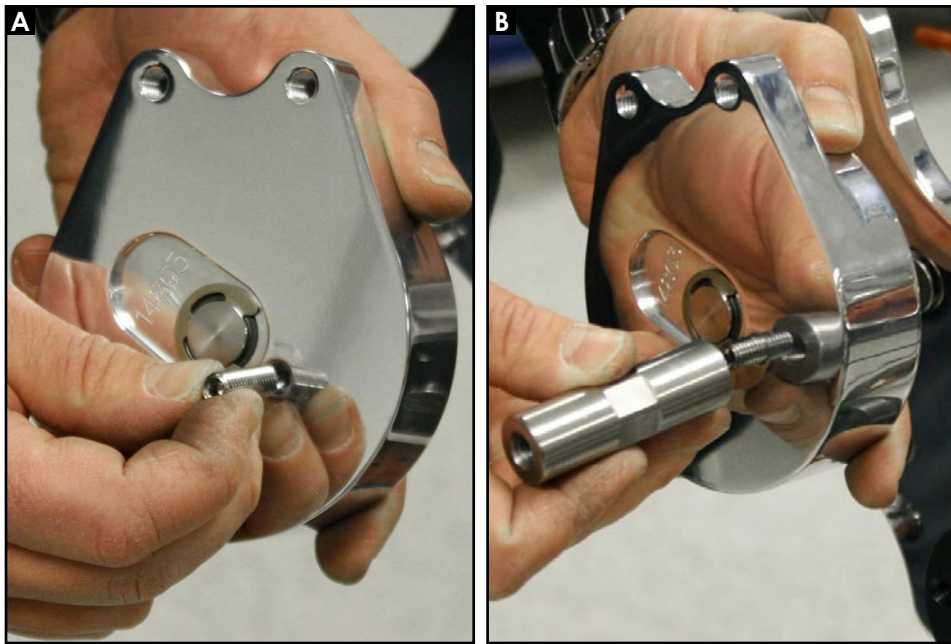
**Figure 6: Install Bridge Bracket**

Apply anti-seize to the six 3/8-16 x 1" flat head cap screws.

Place bridge bracket to motor and align mount holes with the six water pump spacer nuts.

Thread the 3/8" flat head screws through the bridge bracket and into the water pump spacer nuts, finger tighten only.

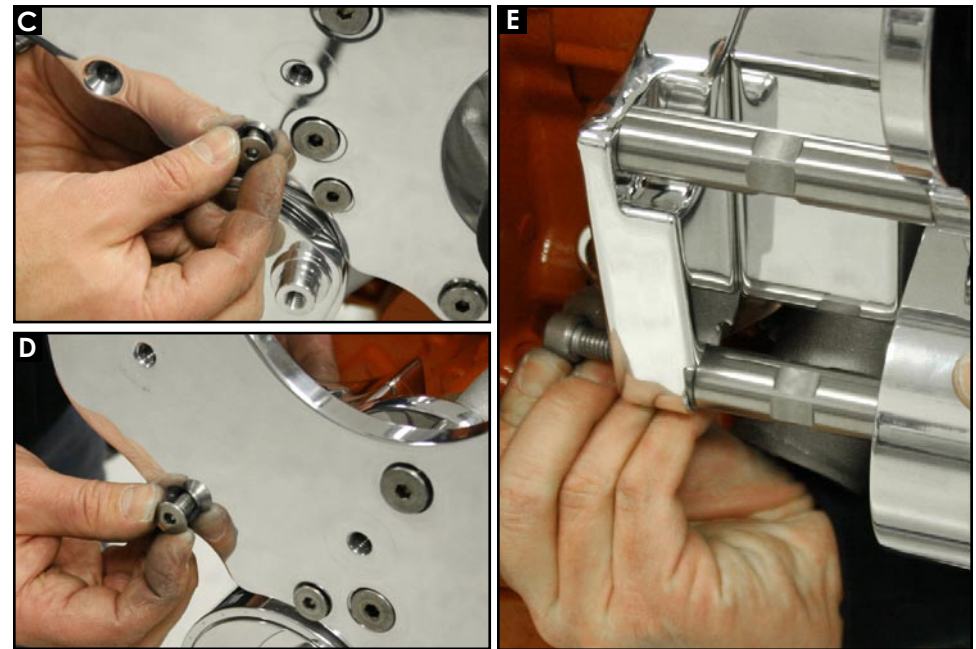




**Figure 7: Install Tensioner**

**A]** Apply Loc-Tite to one end of the 5/16-18 x 1" socket set screw and thread into the back of the tensioner body, finger tighten.

**B]** Apply anti-seize to the remaining exposed threads of the setscrew. Thread the 2-3/8" long spacer nut onto the stud and tighten firmly.

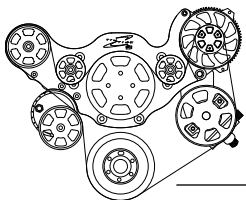


**Figure 8: Install Tensioner Continued**

Apply anti-seize to the threads of the three 5/16-18 x 3/4" flat head cap screws and the 3/8-16 x 1" socket head cap screw.

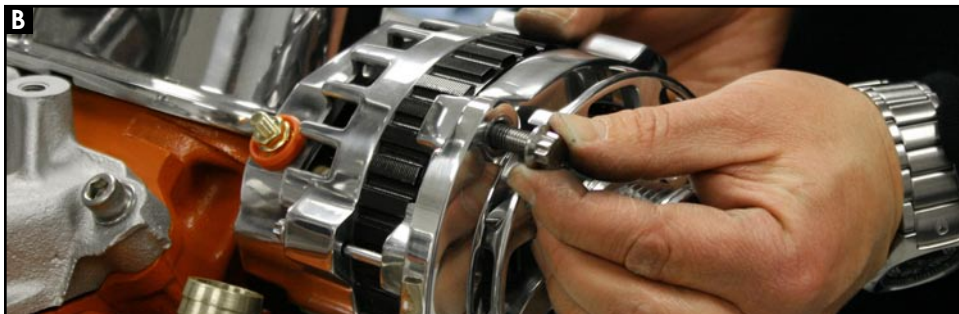
**C&D]** Place tensioner assembly between the tensioner bracket and the bridge bracket. Thread two 5/16" flathead cap screws through the bridge bracket and into the tensioner body, finger tighten. Thread the third 5/16-18 x 3/4" flat head cap screw through the bridge bracket and into the 3-1/2" spacer nut, finger tighten.

**E]** Thread the 3/8" socket head cap screw through the back of the tensioner bracket and into the tensioner spacer nut, tighten firmly.



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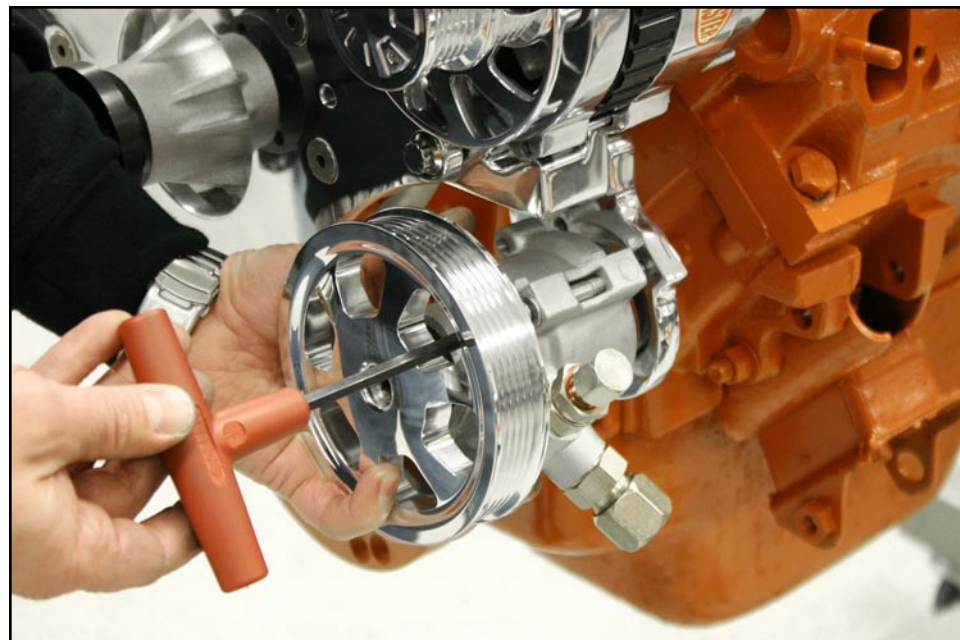
**Figure 9: Install Alternator**

Apply anti-seize to the 8mm-1.25 x 25mm ARP 12-point cap screw and the 10mm-1.25 x 70mm ARP 12-point cap screw.

**A]** Place alternator between bridge bracket and alternator bracket, align alternator bosses with the bridge bracket. Thread the 10mm ARP 12-point cap screw through the bottom bridge bracket hole and alternator into the alternator bracket, finger tighten.

**B]** Thread the 8mm ARP 12-point cap screw through the bridge bracket and into the top alternator boss.

**Tighten all fasteners firmly at this time: All ARP 12-point fasteners and flat head bridge bracket screws.**



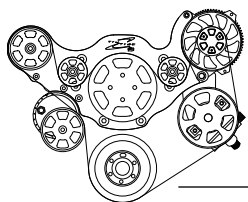
**FOR KITS WITHOUT POWER STEERING – CONTINUE TO FIGURE 11**

**Figure 10: Install Power Steering Pump With Pulley**

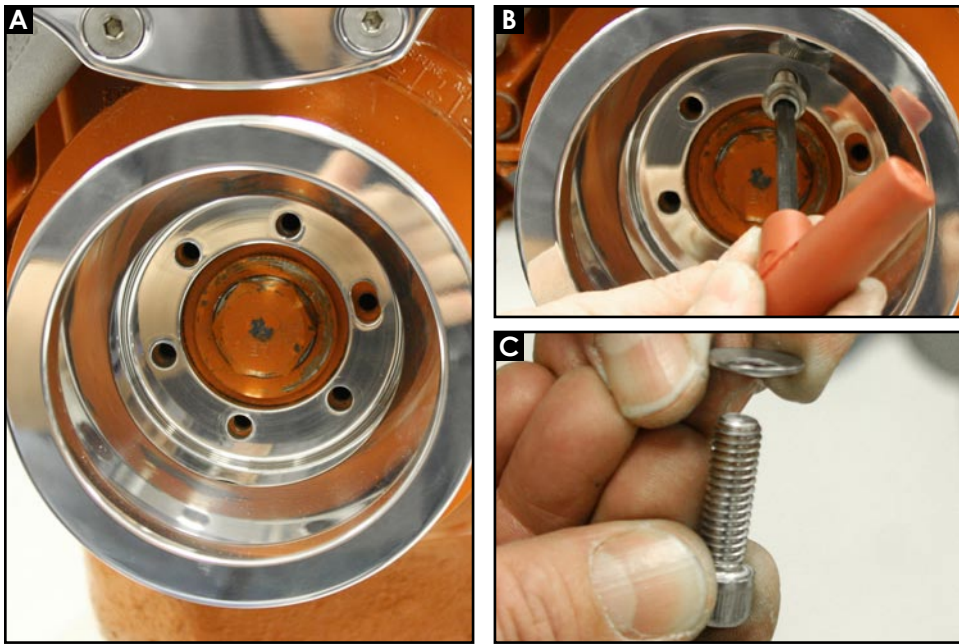
Apply anti-seize to the threads of the two 5/16-18 x 2-3/4" socket head cap screws.

Place power steering pump with pulley on bracket and align.

Thread the two 5/16-18 x 2-3/4" cap screws with 5/16" lock washers through the power steering pump mount bosses and into the power steering bracket, tighten firmly 26ft/lbs.







**Figure 11: Install Crankshaft Pulley**

Apply Loc-Tite to the threads of the six 5/16-18 x 1" socket head cap screws.

**A]** Place crankshaft pulley on damper and align holes.

**B&C]** Thread the 5/16" cap screws with a Belleville washer (cup side towards pulley) through the pulley and into the crankshaft, tighten firmly 26ft/lbs.

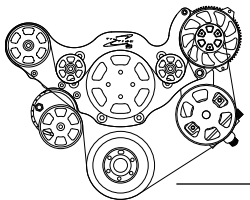


**Figure 12: Install Water Pump Pulley**

Apply Loc-Tite to the threads of the four 5/16-18 x 3/4" socket head cap screws.

Place water pump pulley on water pump and align holes.

Thread the 5/16" cap screws through the pulley and into the water pump flange, tighten firmly 26 ft/lbs.



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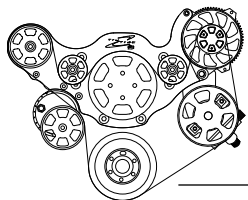


**Figure 13: Install Idler Pulleys**

Apply Loc-Tite to the threads of the three 3/8-16 x 1-3/4" ARP 12-point cap screws.

**A] AC Delete Idler Pulley:** Thread a 3/8" ARP 12-point cap screw with aluminum washer through the large idler pulley and pulley boss into the bridge bracket and tighten firmly 46ft/lb.

**B&C] Small Idler Pulleys:** Thread the second 3/8" ARP 12-point cap screw through the small idler pulley-cover, pulley and pulley boss into the bridge bracket and tighten firmly, 46ft/lb. Repeat for other side.



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**Figure 15: Install Belt & Tensioner Pulley**

**A]** Apply anti-seize to one 3/8-16 x 3/4" ARP 12-point cap screw.

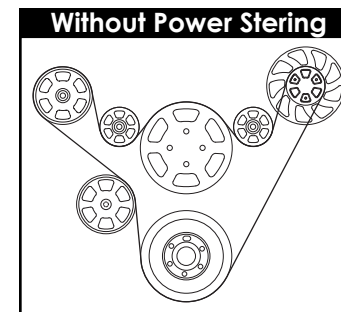
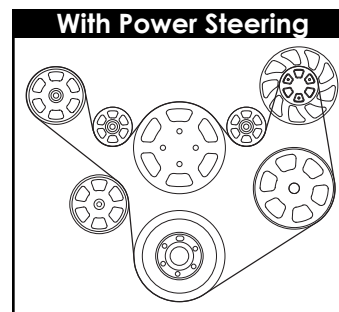
Route serpentine belt as shown below - minus tensioner pulley.

Place a 5/8" box end wrench on tensioner.

**B]** Align belt onto pulley and pull up on wrench to release tension until tensioner pulley slips onto tensioner shaft.

Slowly return wrench to starting position to apply tension to belt.

**C]** Remove wrench and install the 3/8-16 x 3/4" ARP 12-point cap screw with thrust washer onto pulley and tighten firmly (46 ft/lbs).



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