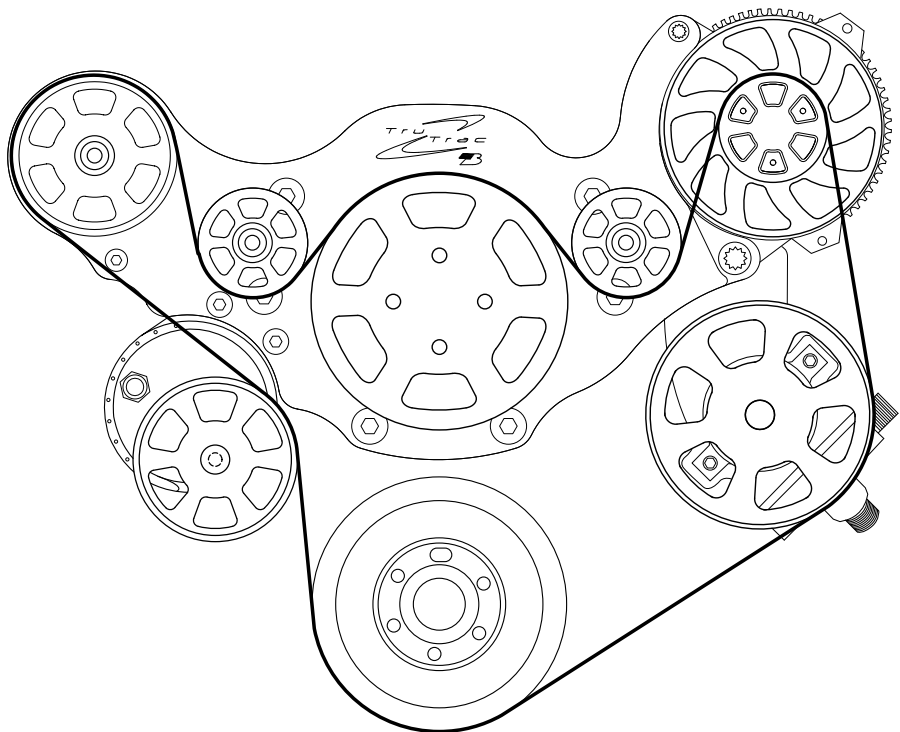




Small Block Chrysler
Installation Manual
For Systems without A/C
#13805 / #13825



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

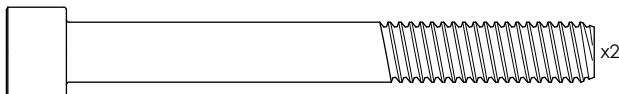
Required Tools & Materials

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

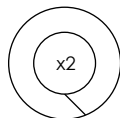
TECH TIP:

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

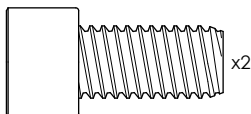
Skin Board #1 - Packaged With Power Steering Pump



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

Prepping The Block

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

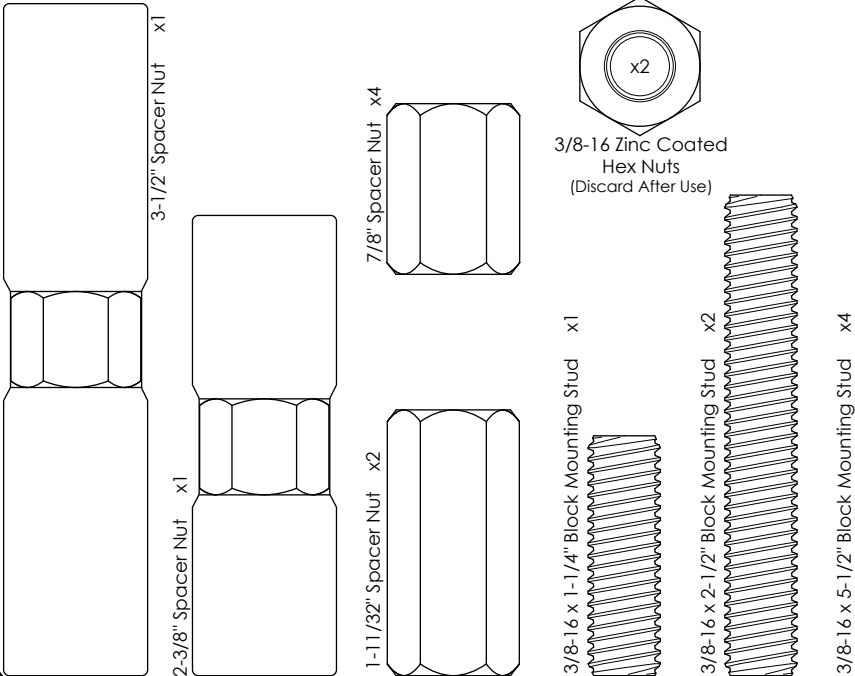
Remove water pump and mechanical fuel pump, scrape away any existing gasket material with a gasket scraper and dress surface with a Scotch Brite® pad.

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

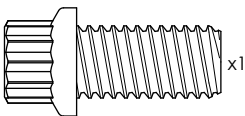
Note: If you wish to replace the timing cover gaskets and seals now is the time to do so. Fel-Pro makes a timing cover gasket set P/N TCS 6563-1 that covers all of them.

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

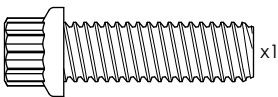
Skin Board #2 - Packaged With Water Pump



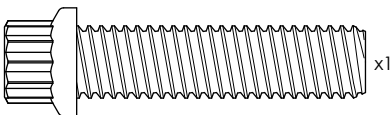
Skin Board #3 - Packaged In Main Box



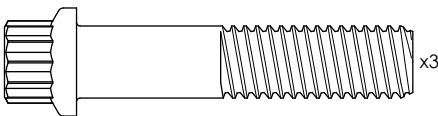
3/8-16 x 3/4" 12-Point Cap Screw
Tensioner Pulley



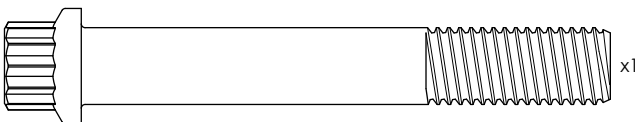
8mm-1.25 x 25mm 12-Point Cap Screw
Bridge Bracket



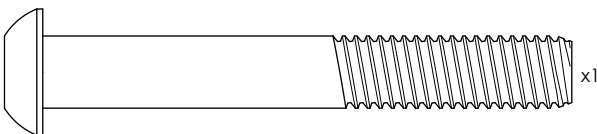
3/8-16 x 1-1/2" 12-Point Cap Screw
Water Pump To Block



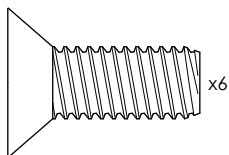
3/8-16 x 1-3/4" 12-Point Cap Screw
Idler Pulleys



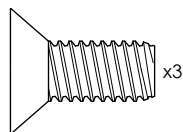
10mm-1.25 x 70mm 12-Point Cap Screw
Alternator - Lower Bolt



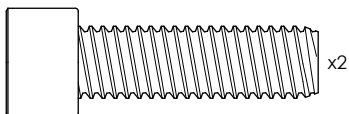
3/8-16 x 2-3/4" Button Head Cap Screw
Timing Cover To Block



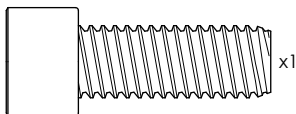
3/8-16 x 1" Flat Head Cap Screw
Thru Bridge Bracket Into Spacer Nuts



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



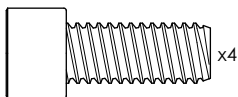
3/8-16 x 1-1/4" Socket Head Cap Screw
Tensioner Bracket Assembly



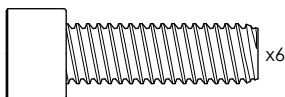
3/8-16 x 1" Socket Head Cap Screw
Thru back Of Tensioner Bracket To
Tensioner Spacer Nut



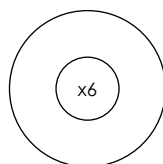
5/16-18 x 1" Socket Set Screw
Tensioner Assembly



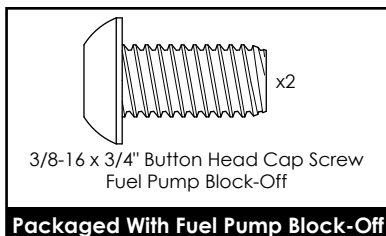
5/16-18 x 3/4" Socket Head Cap Screw
Water Pump Pulley



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



5/16" Belleville Washer



Packaged With Fuel Pump Block-Off

Serpentine Belt

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

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

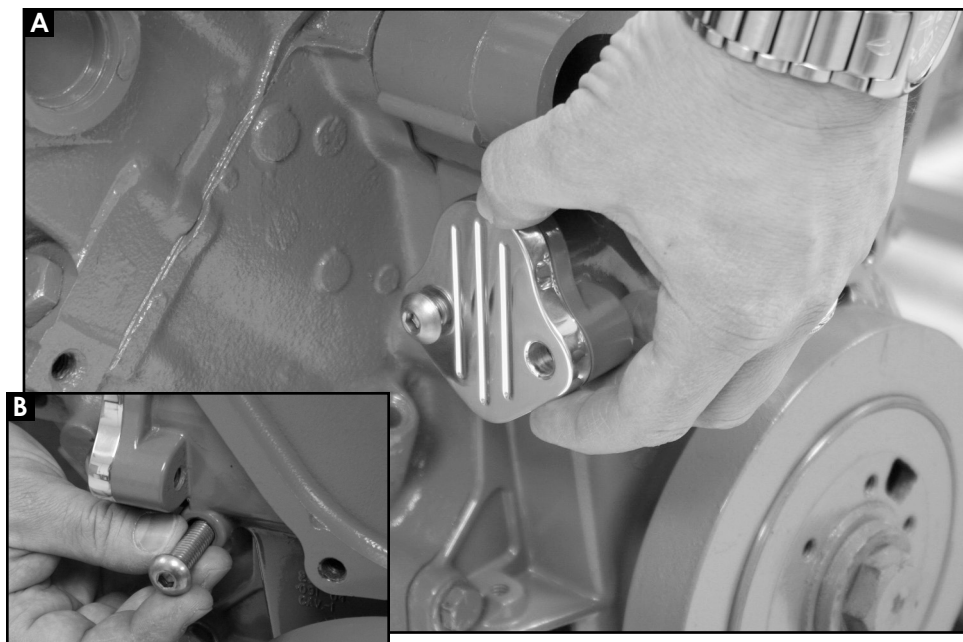
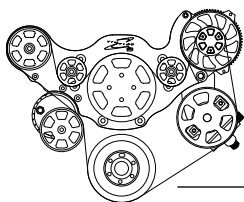


Figure 1: Install Fuel Pump Block-Off

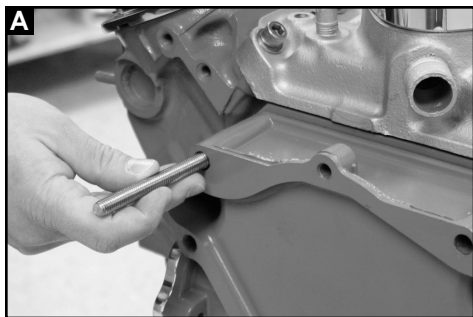
A] Sparingly apply RTV silicone to the timing cover surface and gasket. Attach the fuel pump block off with the two 3/8-16 x 3/4" button head cap screws and tighten firmly.

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.

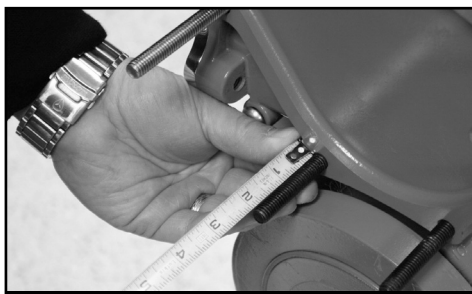


*TRU
Trac*

Billet Specialties



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.

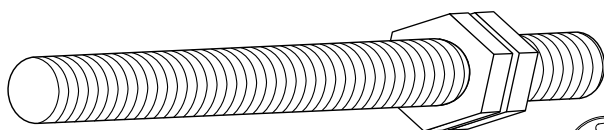
Important! Leave 2-7/16" of thread exposed from the timing cover face.

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).



*Example



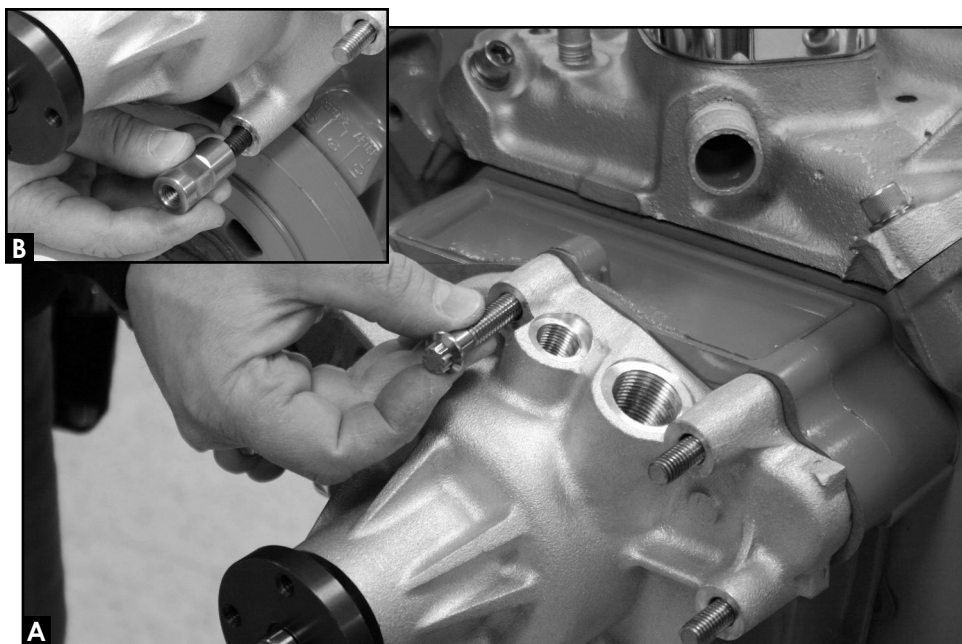


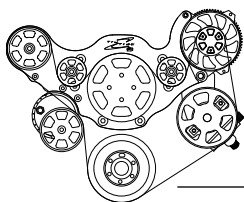
Figure 3: Install Water Pump

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.



*TRU
Trac*

Billet Specialties

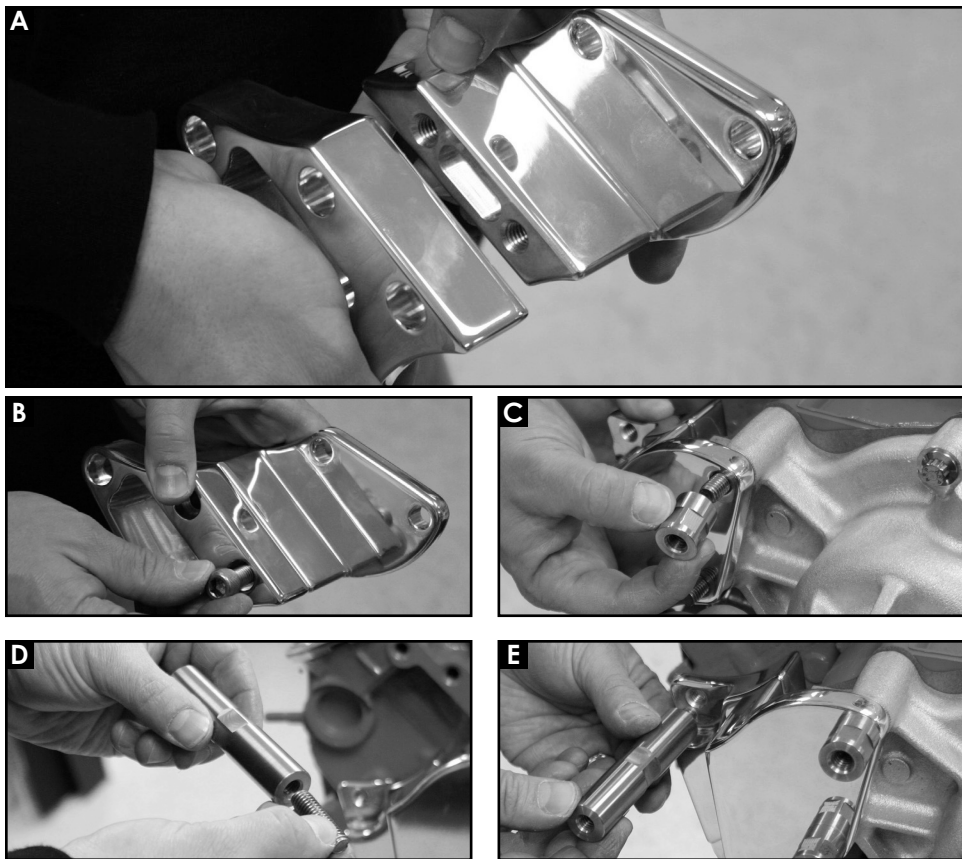


Figure 4: Install Tensioner Bracket

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.



FOR KITS WITHOUT POWER STEERING – SKIP TO STEP B

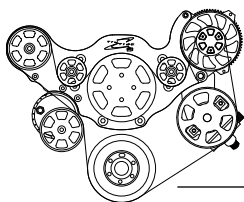
Figure 5: Install Alternator & Power Steering Bracket

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.



*TRU
Trac*

Billet Specialties

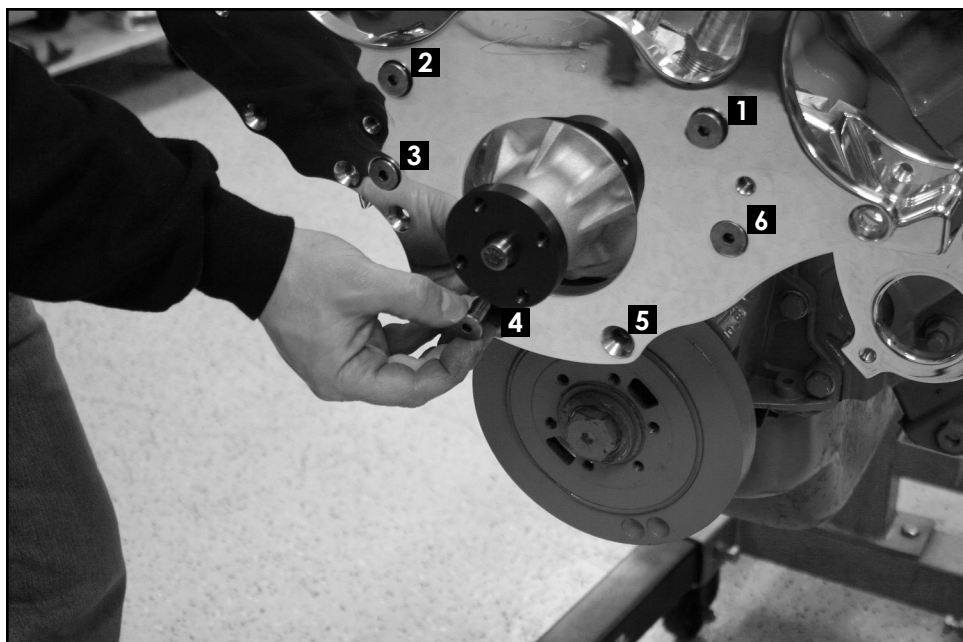


Figure 6: Install Bridge Bracket

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.

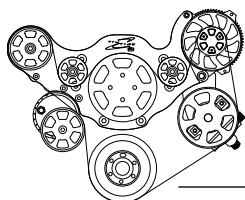




Figure 7: Install Tensioner

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.



TRU
Trac

Billet Specialties

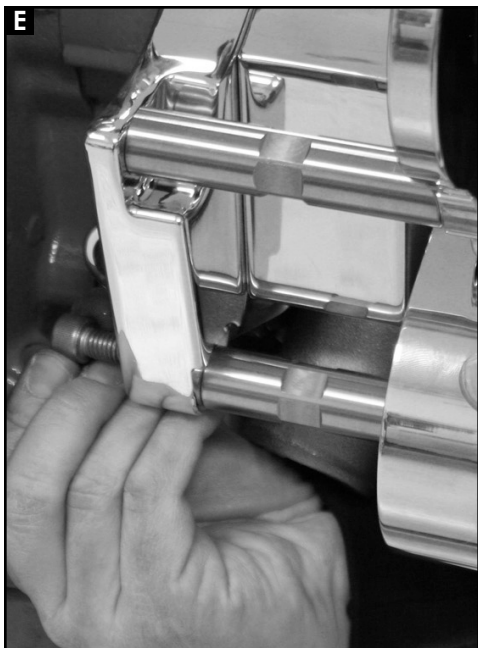
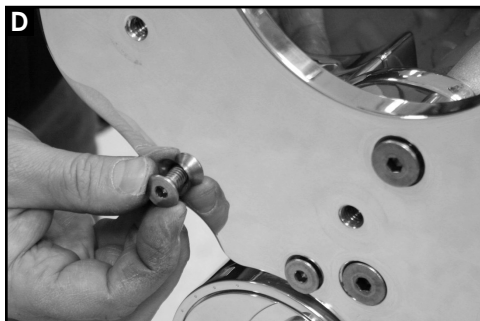
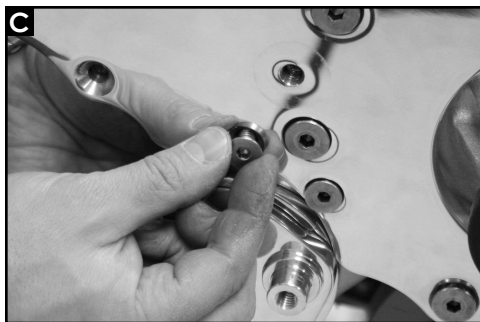


Figure 8: Install Tensioner Continued

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.

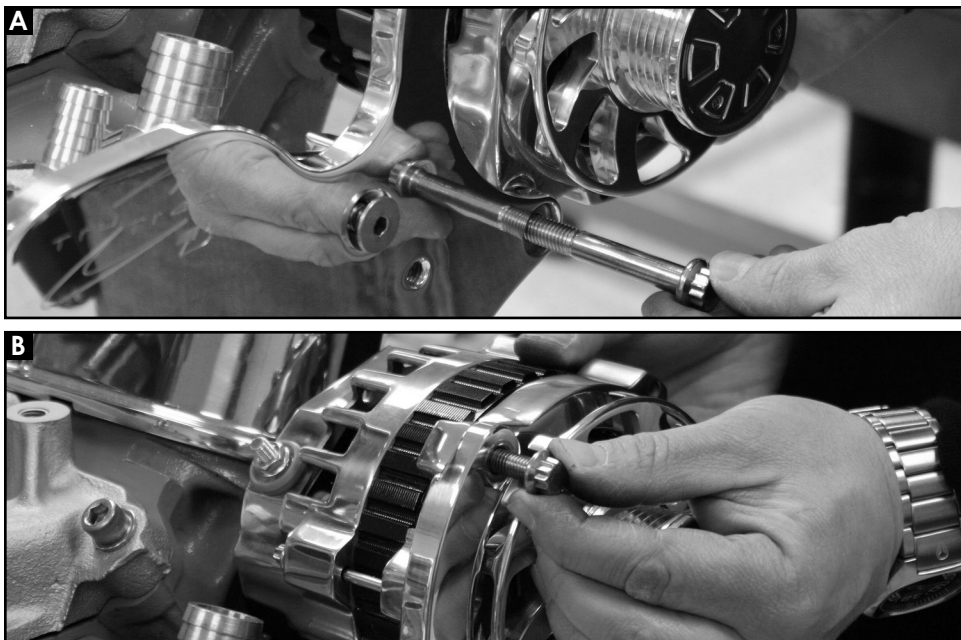


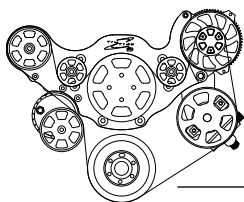
Figure 9: Install Alternator

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.

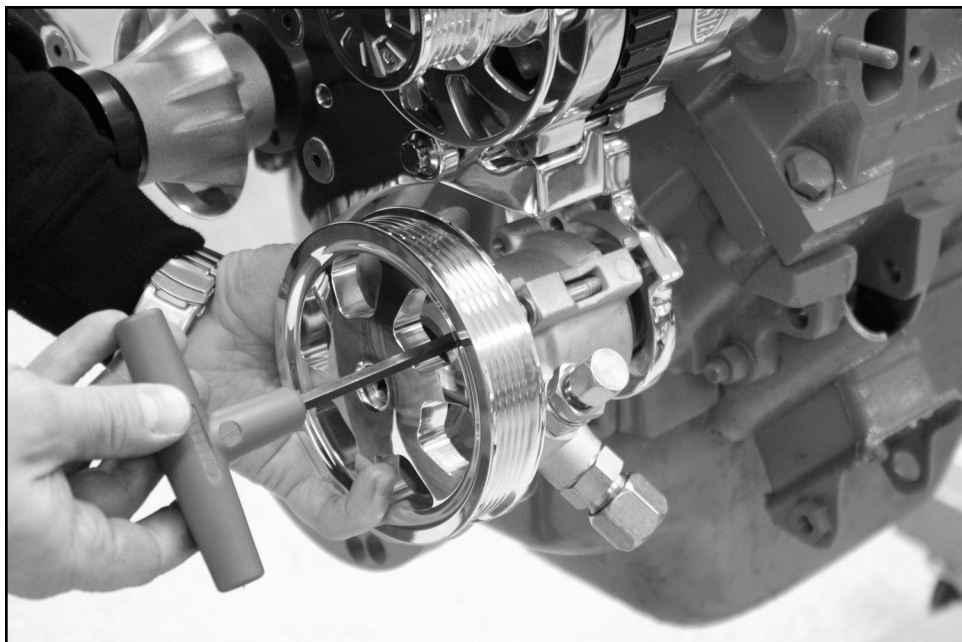
B] Thread the 8mm ARP 12-point cap screw through the bridge bracket and into the top alternator boss.

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



TRU
Trac

Billet Specialties



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.

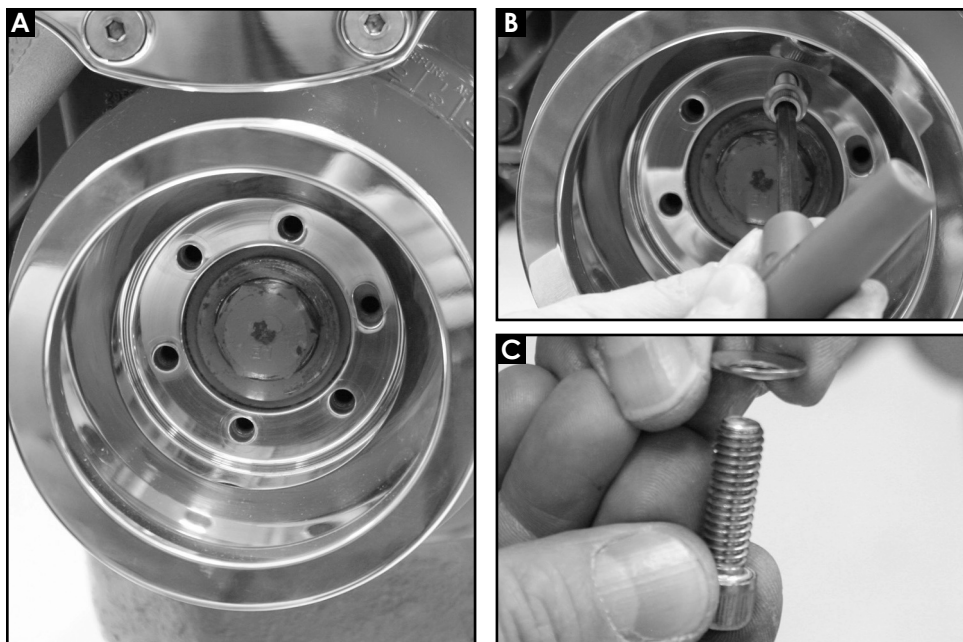
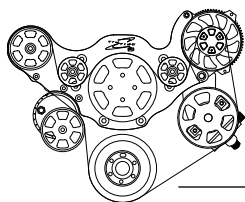


Figure 11: Install Crankshaft Pulley

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.



*TRU
Trac*

BilletSpecialties



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.

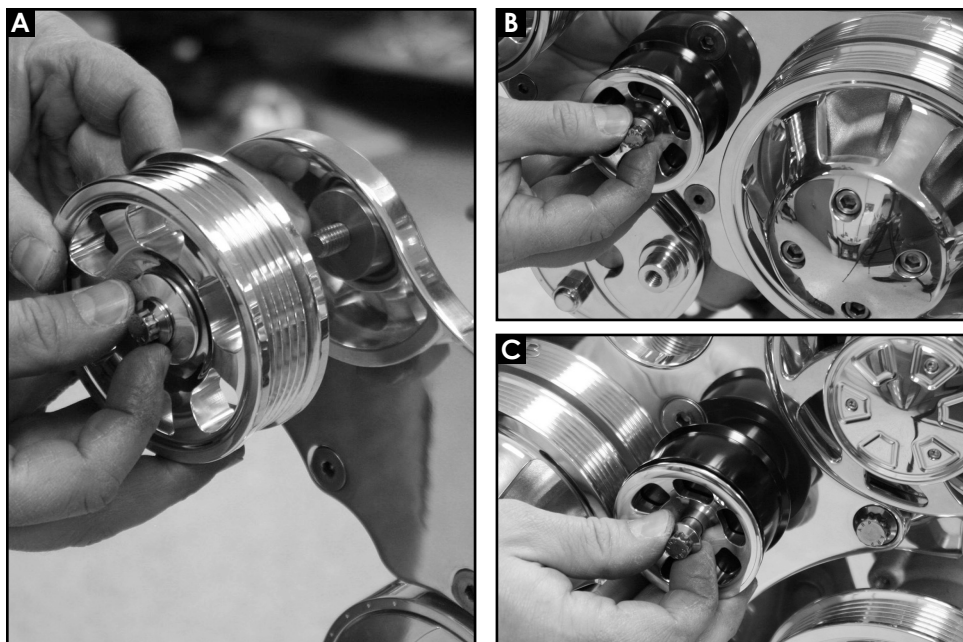
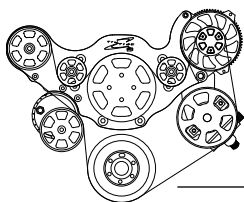


Figure 13: Install Idler Pulleys

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.



*TRU
Trac*

BilletSpecialties



Figure 15: Install Belt & Tensioner Pulley

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

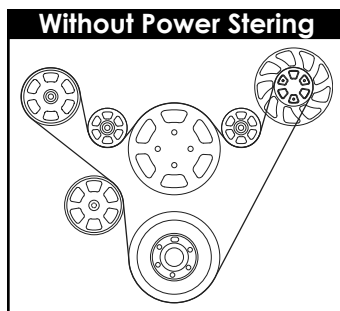
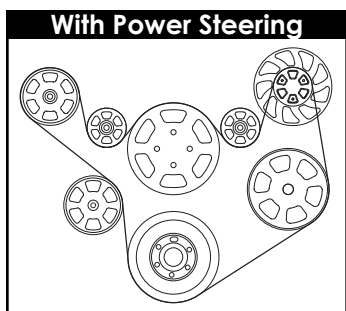
Route serpentine belt as shown below - minus tensioner pulley.

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).





Billet Specialties, Inc.
500 Shawmut Avenue
La Grange, Illinois 60526
Tech Line 708.588.0505
Fax 708.588.7181
www.billetspecialties.com

