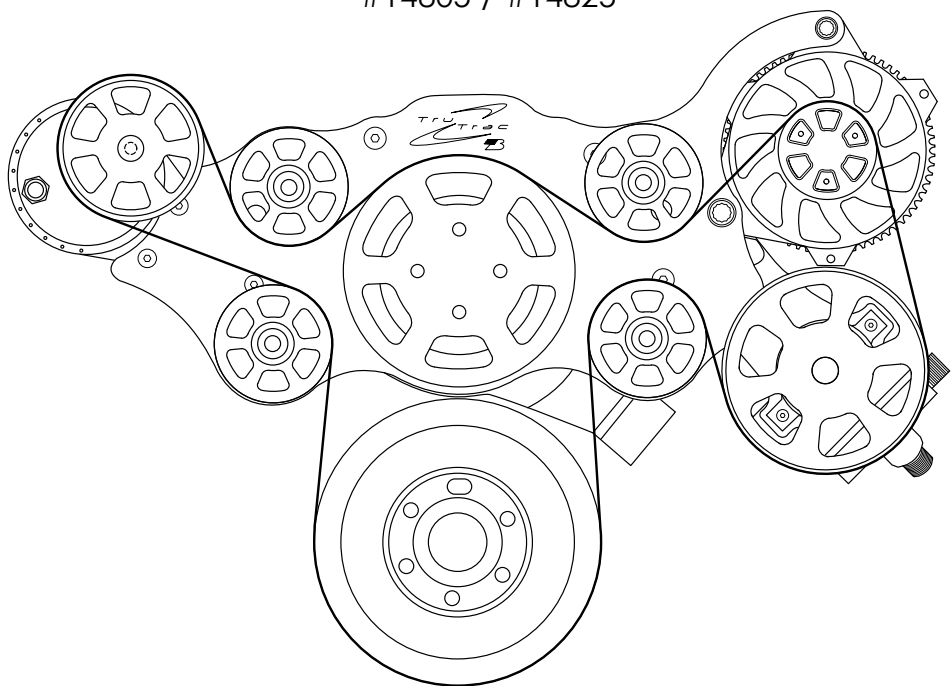




**HEMI / BB Chrysler**  
Installation Manual  
For Systems without A/C  
#14805 / #14825

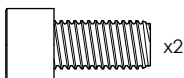


Billet Specialties, Inc.  
500 Shawmut Avenue.  
La Grange, Illinois 60526  
Tech Line (708) 588-0505  
Fax (708) 588-7181

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

**IMPORTANT:** Must use thin crank vibration damper Mopar Performance number P3830183 or similar with this kit.

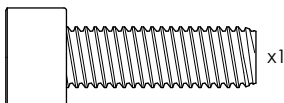
## Skin Board #1 - Packaged with Power Steering Pump



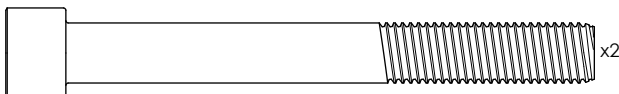
1/4-28 X 1/2" Socket Head Cap Screw  
Power Steering Support Bracket To Bridge Bracket



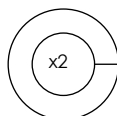
5/16-18 x 3/4" Socket Head Cap Screw  
Power Steering Bracket To Alternator Bracket



8mm-1.25 x 25mm Socket Head Cap Screw  
Power Steering Pump To Power Steering Support Bracket



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



5/16" Lock Washer

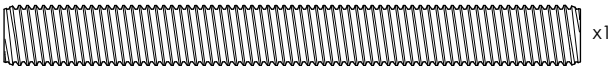
## Required Tools & Materials

- |  |  |                                      |
|--|--|--------------------------------------|
| <input type="checkbox"/> Anti-seize Compound               | <input type="checkbox"/> 5/8" Box End Wrench       | <input type="checkbox"/> 3/16" Allen |
| <input type="checkbox"/> RTV Silicone                      | <input type="checkbox"/> 9/16" Box End Wrench      | <input type="checkbox"/> 5/16" Allen |
| <input type="checkbox"/> Permatex Hylomar® gasket dressing | <input type="checkbox"/> 3/4" Box End Wrench       | <input type="checkbox"/> 1/4" Allen  |
| <input type="checkbox"/> Gasket Scraper                    | <input type="checkbox"/> 11/16" Box End Wrench     | <input type="checkbox"/> 7/32" Allen |
| <input type="checkbox"/> Scotch-Brite® Pad                 | <input type="checkbox"/> Socket Wrench & Extension | <input type="checkbox"/> 5mm Allen   |
| <input type="checkbox"/> 3/8-16 Thread Chaser* & Holder    | <input type="checkbox"/> 10mm 12pt. socket         | <input type="checkbox"/> 6mm Allen   |
- \*Thread chasers are available at your local parts store and are different from a thread cutting tap.
- ☐ 12mm 12pt. socket
- ☐ 3/8" 12pt. Socket

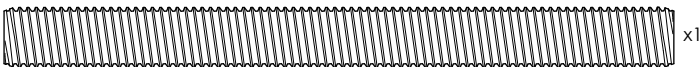
### TECH TIP:

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

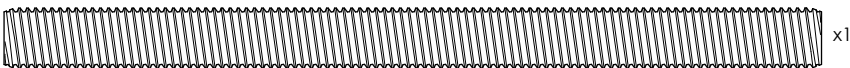
## Skin Board #2 - Packaged with Water Pump



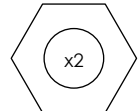
3/8-16 x 3" Block Mounting Stud



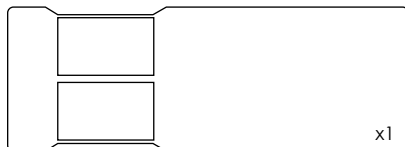
3/8-16 x 3-1/2" Block Mounting Stud



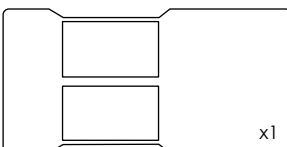
3/8-16 x 4-1/4" Block Mounting Stud



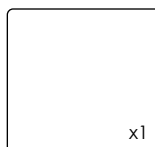
3/8-16 Zinc Coated Hex Nuts



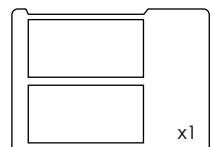
2-3/32" Spacer Nut



1-1/2" Spacer Nut



13/16" Spacer

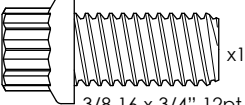


1-1/32" Spacer Nut

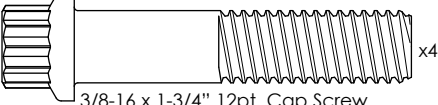
Skin Board #3 - Packaged In Main Box



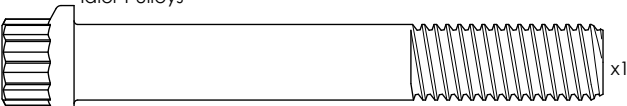
8mm-1.25 x 25mm 12pt. Cap Screw  
Bridge Bracket To Alternator



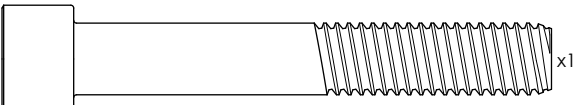
3/8-16 x 3/4" 12pt. Cap Screw  
Tensioner Pulley



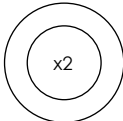
3/8-16 x 1-3/4" 12pt. Cap Screw  
Idle Pulleys



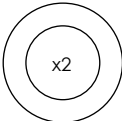
10mm-1.5 x 70mm 12pt. Cap Screw  
Bridge Bracket To Alternator



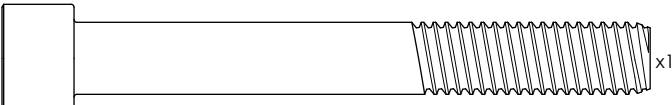
3/8-16 x 2-1/2" Socket Head Cap Screw  
Water Pump Housing To Block



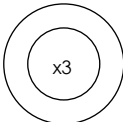
10mm x .5mm  
Shim Washer



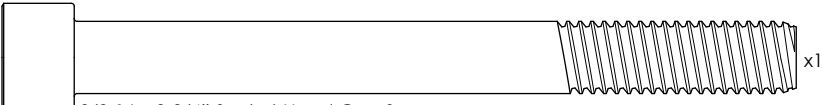
10mm x 1mm  
Shim Washer



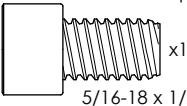
3/8-16 x 3" Socket Head Cap Screw  
Compressor Bracket To Block



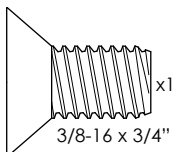
3/8" Flat Washer



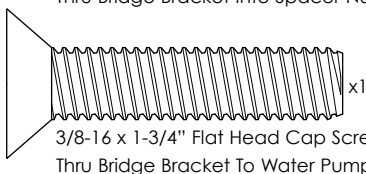
3/8-16 x 3-3/4" Socket Head Cap Screw  
Water Pump Housing To Block



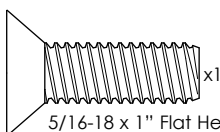
5/16-18 x 1/2" Socket Head Cap Screw  
Backside Of Tensioner Thru Bracket



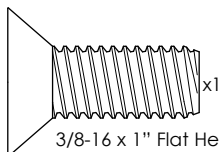
3/8-16 x 3/4" Flat Head Cap Screw  
Thru Bridge Bracket Into Spacer Nut



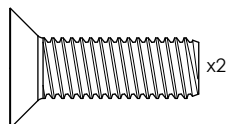
3/8-16 x 1-3/4" Flat Head Cap Screw  
Thru Bridge Bracket To Water Pump Housing



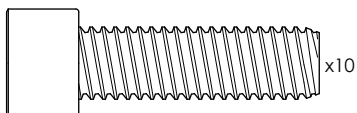
5/16-18 x 1" Flat Head Cap Screw  
Bridge Bracket To Spacer Nut &  
Tensioner To Bridge Bracket



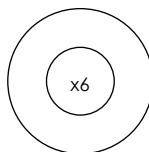
3/8-16 x 1" Flat Head Cap Screw  
Tensioner To Bridge Bracket



8mm-1.25 x 25mm Flat Head Cap Screw  
Bridge Bracket To Tensioner



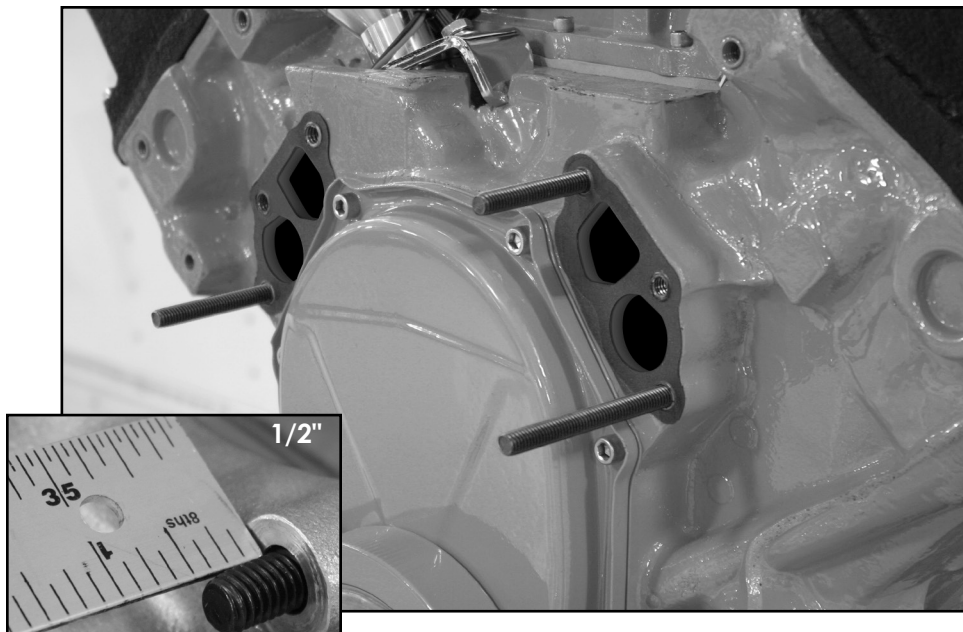
5/16-18 x 1" Socket Head Cap Screw  
Crankshaft & Water Pump Pulley



5/16" Belleville Washer  
Crank Pulley

## Other Hardware / Gaskets

Continental Elite Poly-V Serpentine Belt - 74.50" #4060745 (with power steering)  
Continental Elite Poly-V Serpentine Belt - 64.25" #4060642 (without power steering)



## Figure 1 – Prepping The Block

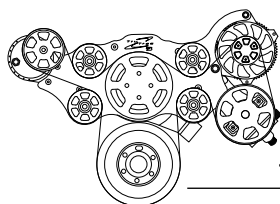
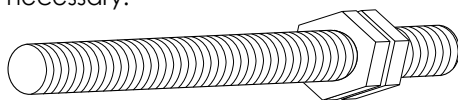
Disconnect battery; remove all existing accessory drive brackets and components from motor.

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

Clean and prep threads on engine block at water pump, use a 3/8-16 thread chaser if necessary. Thread chasers are available at your local auto parts store or tool dealer and are different from a thread cutting tool.

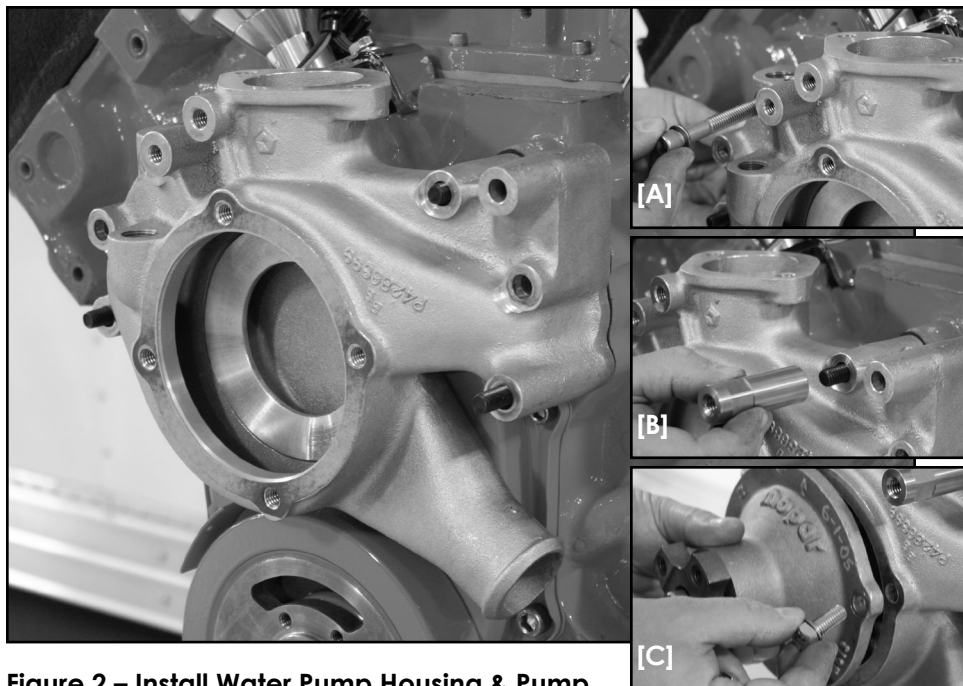
Apply RTV sealer to one end of the 3/8-16 x 3" threaded stud and thread stud into the driver side top water pump mount hole. Next apply RTV sealer to one end of the 3/8-16 x 4-1/4" stud and thread into the lower driver side mount hole and tighten. Apply RTV sealer to one end of the remaining 3/8-16 x 3-1/2" stud and thread into the bottom passenger side mount hole and tighten. The studs can easily be tightened by threading two 3/8-16 zinc coated nuts onto the stud and tighten them against each other to act as a drive nut, see example. Apply anti-seize to the exposed threads of the studs at this time. Check installed height of studs by sliding water pump housing on to the studs. There should be 1/2" of exposed threads on each stud, readjust as necessary.

Example



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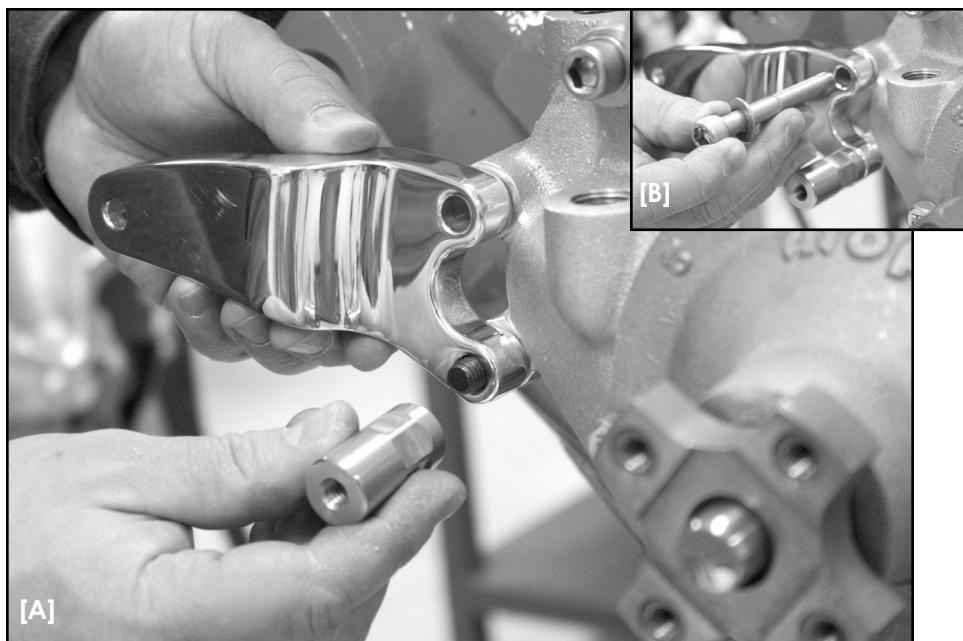
**Figure 2 – Install Water Pump Housing & Pump**

Apply Permatex Hylomar® gasket dressing to both sides of water pump housing gaskets and slip over studs on block. Install water pump housing onto studs make sure top passenger gasket is still aligned.

(A) Apply anti-seize to the 3/8-16 x 2-1/2" socket head cap screw with 3/8" washer and thread through water pump housing and into block, finger tighten.

(B) Thread the 2-3/32" long spacer nut to the driver side top stud and finger tighten.

(C) Apply gasket dressing to both sides of water pump gasket and install water pump to housing and tighten firmly. Seep hole on pump should point down.

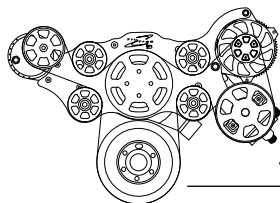


### Figure 3 - Install Tensioner Bracket

Place tensioner bracket (14827) on passenger side of water pump housing and align with the two left mount bosses.

[A] Thread the 1-1/2" long spacer nut onto the lower stud and tighten firmly.

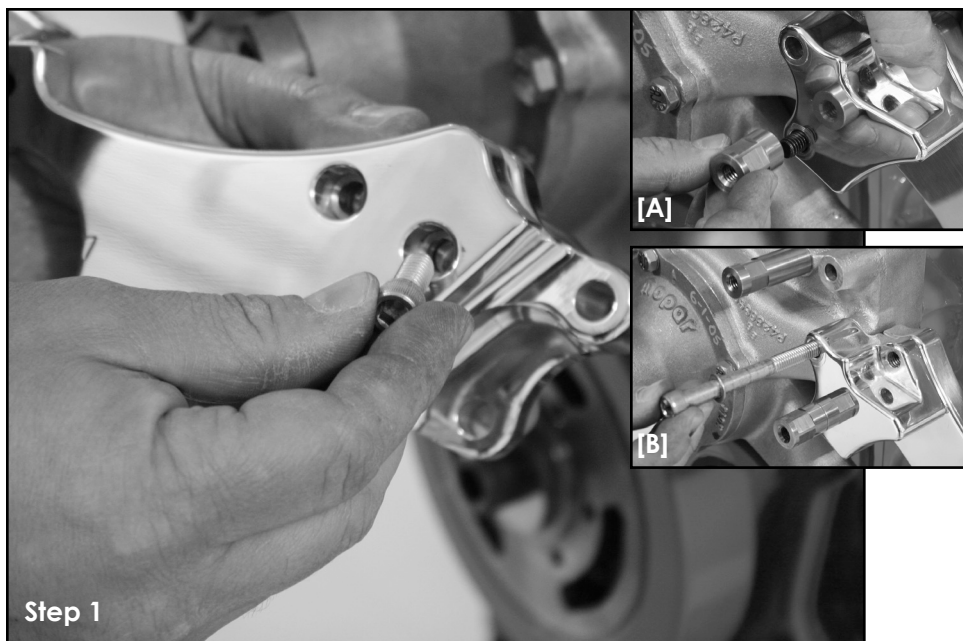
[B] Apply anti seize to the 3/8-16 x 3" socket head cap screw with 3/8" washer and thread through tensioner bracket, water pump housing and into block, tighten firmly.



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## Figure 4 - Install Alternator Bracket

*For kits without power steering proceed to Step 2.*

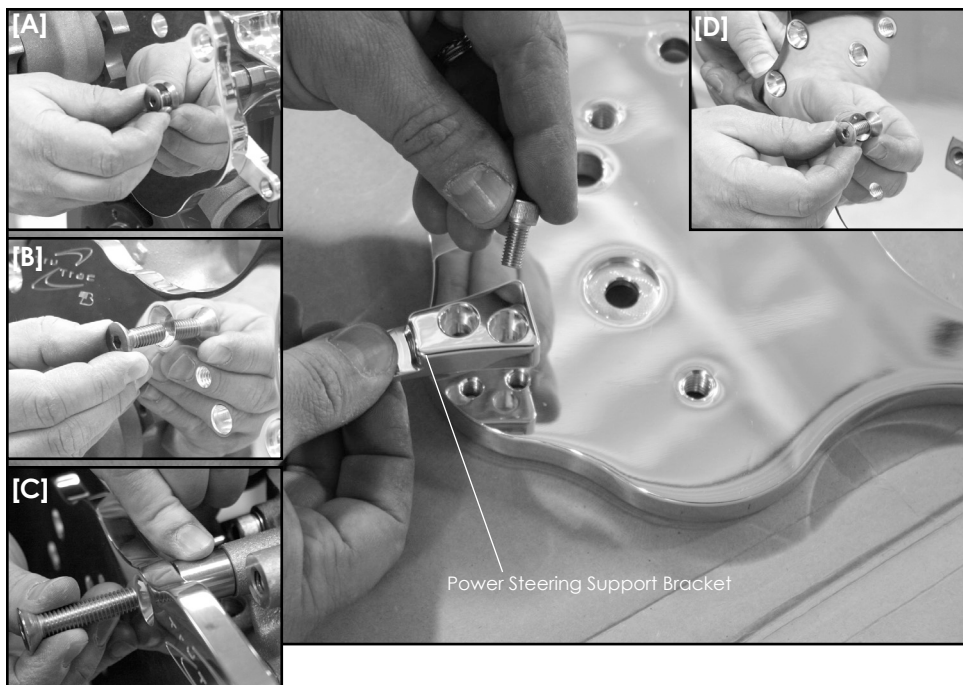
**Step 1:** Attach the power steering pump bracket to the back of the alternator bracket (14801) with three 5/16-18 x 3/4" socket head cap screws and tighten firmly.

**Step 2:** [A] Place alternator bracket on driver side of water pump and thread the 1-1/32" spacer nut onto the bottom stud and finger tighten.

[B] Apply anti-seize to the 3/8-16 x 3-3/4" socket head cap screw with 3/8" washers and thread through upper hole in bracket, water pump housing, and into block.

Tighten all fasteners at this time firmly.





**Figure 5 - Install Bridge Bracket**

**For kits with power steering:** attach the power steering support bracket to the back of the driver side bridge bracket with two 1/4-28 x 1/2" socket head cap screws and tighten firmly.

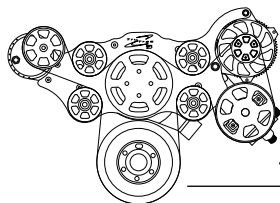
Place bridge bracket onto face of motor and align bracket mount holes with spacer nuts and water pump bosses.

[A] Apply anti seize to the 3/8-16 x 3/4" flat head cap screw and thread through the lower driver side of the bridge bracket and into the spacer nut, finger tighten.

[B] Apply anti seize to the 3/8-16 x 1" flat head cap screw and thread through the top driver side bridge bracket and into upper spacer nut, finger tighten.

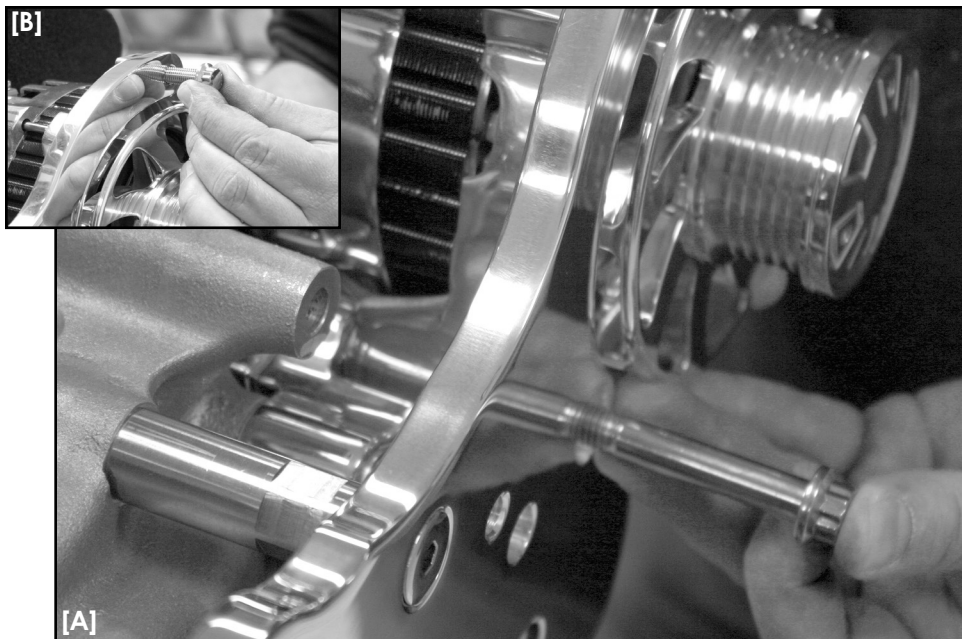
[C] Apply anti seize to the 3/8-16 x 1-3/4" flat head cap screw. Place the 13/16" stainless spacer between bridge bracket and the top of the water pump housing, thread the 3/8-16 x 1-3/4" flat head screw through the bridge bracket, spacer and into the housing, finger tighten.

[D] Apply anti-seize to the 5/16-18 x 1" flat head screw and thread through the lower passenger side of the bridge bracket into the spacer nut and finger tighten.



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**Figure 6 - Install Alternator**

Apply anti-seize to the 10mm-1.5 x 70mm ARP 12pt cap screw. Place and align the alternator between the bridge bracket and the alternator bracket with the long mounting boss at the bottom.

[A] Thread the 10mm-1.5 x 70mm ARP 12pt cap screw through the bridge bracket and alternator into the alternator bracket and finger tighten.

[B] Apply anti seize to the 8mm-1.25 x 25mm ARP 12pt cap screw, align top alternator boss with the bridge bracket and thread cap screw through bridge bracket and into alternator – finger tighten.

*The alternator mounting boss may vary in width due to the polishing process. 10mm shim washers are provided to shim the alternator if needed at the bottom.*





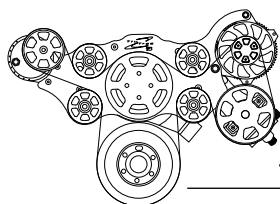
## Figure 7 – Install Tensioner

Apply anti seize to the two 8mm-1.25 x 25mm flat head screws, place tensioner body between the bridge bracket and the tensioner bracket.

[A,B] Align tensioner holes with bridge bracket and thread the two 8mm-1.25 x 25mm flat head cap screws through the bridge bracket and into the tensioner and tighten firmly.

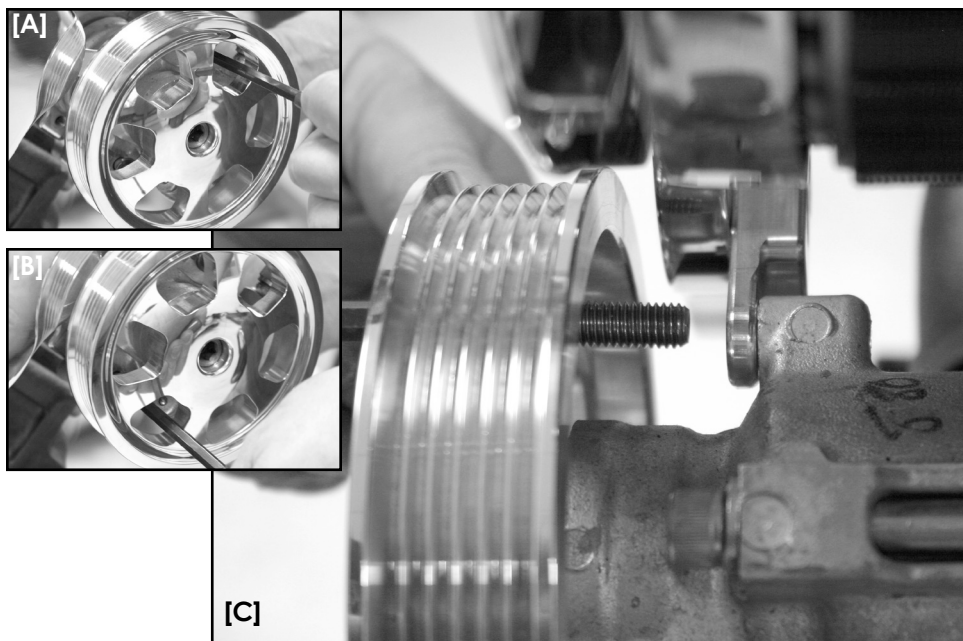
[C] Apply anti seize to the 5/16-18 x 1/2" socket head cap screw, thread the cap screw through back of tensioner bracket and into tensioner and tighten firmly.

**For kits without power steering:** Tighten all bridge bracket fasteners and accessory hardware at this time firmly - proceed to Figure 9.



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**Figure 8 – Install Power Steering Pump With Pulley**

Apply anti seize to the two 5/16-18 x 2-3/4" socket head cap screws and to the 8mm-1.25 x 25mm socket head cap screw.

Place the power steering pump between the bridge bracket and the alternator bracket aligning the pump ears with the mount holes in the power steering bracket.

[A,B] Thread the two 5/16-18 x 2-3/4" socket head cap screws with 5/16" medium split lock washers through the power steering pump and into the power steering bracket and finger tighten.

[C] Thread the 8mm-1.25 x 25mm socket head cap screw through the small support bracket into the power steering pump and tighten firmly. Tighten the two other power steering fasteners firmly at this time.

***Tighten all bridge bracket fasteners and accessory hardware at this time firmly.***



**Figure 9 - Install Crankshaft & Water Pump Pulleys**

Apply anti-seize to the ten 5/16-18 x 1" socket head cap screws.

**Crankshaft Pulley:** Place crank pulley on damper and align holes, thread six 5/16-18 x 1" socket head cap screws with 5/16" Belleville washers (cup of washer facing damper) through pulley into damper and tighten firmly (26 ft/lb).

**Water Pump Pulley:** Place water pump pulley and nose cone on shaft and attach with four 5/16-18 x 1" socket head cap screws and tighten firmly (26 ft/lb).

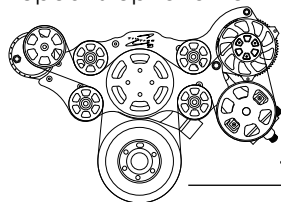


**Figure 10 - Install Idler Pulleys**

Apply anti seize to the four 3/8-16 x 1-3/4" ARP 12pt cap screws.

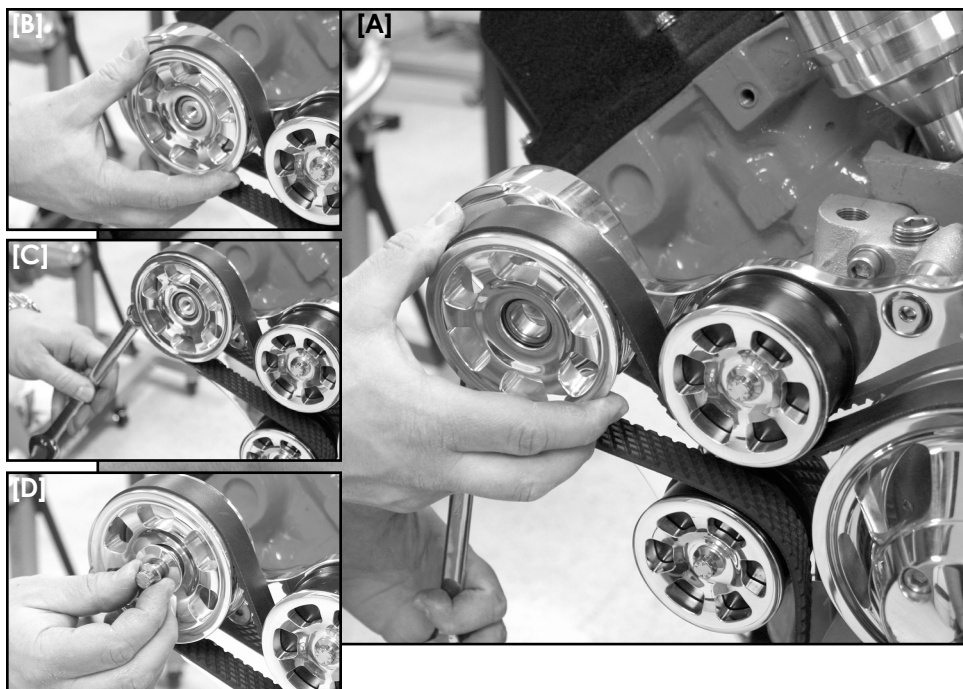
Thread the 3/8-16 x 1-3/4" ARP 12pt cap screw through the idler pulley polished cover, idler pulley and boss into the bridge bracket and tighten firmly (46 ft/lbs).

Repeat step for other three idler pulleys.



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**Figure 11 - Install Serpentine Belt & Tensioner Pulleys**

Route belt as shown in diagram below allowing belt to rest on pulley boss.

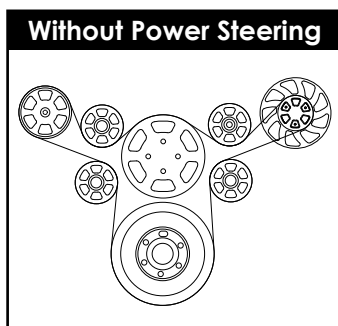
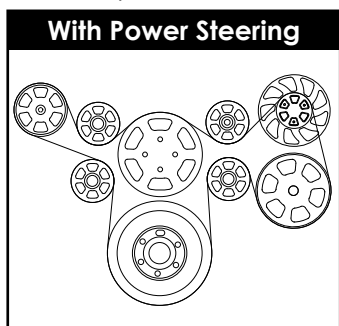
[A] Place a 5/8" box end wrench on tensioner nut and align belt onto pulley groove above tensioner boss.

[B] Pull up on wrench until tensioner pulley is able to slip onto tensioner boss.

[C] Slowly return wrench to starting position to apply tension to belt.

[D] Thread 3/8-16 x 3/4" 12pt ARP bolt and thrust washer onto tensioner pulley and tighten firmly.

Connect electrical and fluid lines, test run motor. Inspect fittings and hardware, tighten if necessary.





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