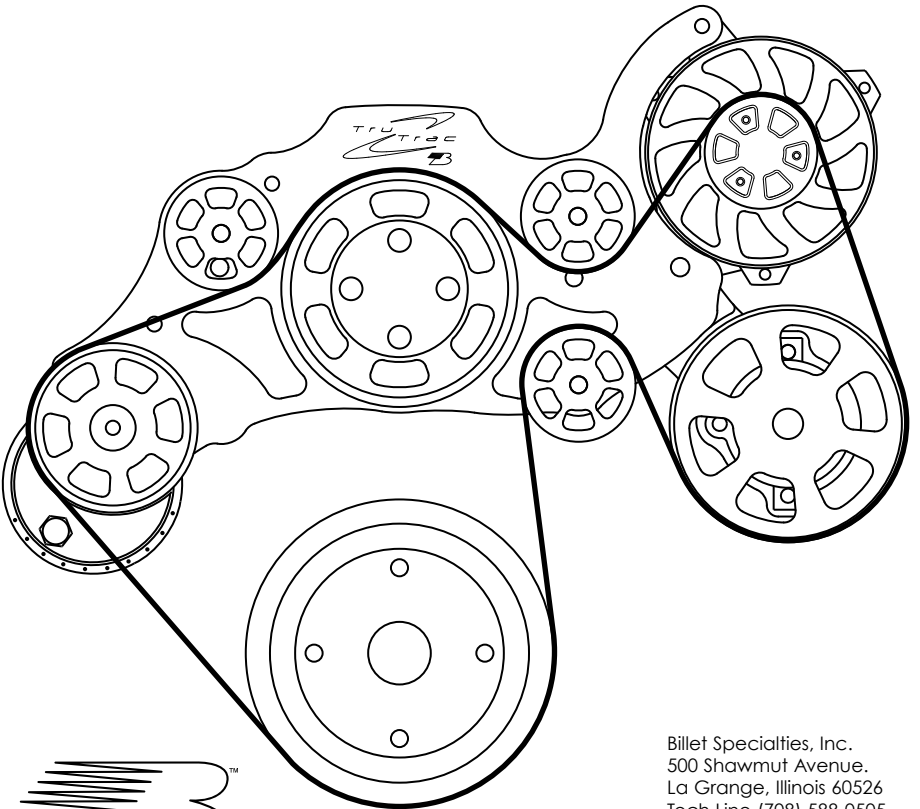


TM

Tru Trac

326/455 Pontiac
Installation Manual
For Systems Without A/C
#14905 / #14925



Billet Specialties

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

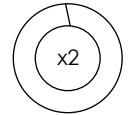
Required Tools & Materials

- | | | |
|--|--|--------------------------------------|
| <input type="checkbox"/> Anti-seize Compound | <input type="checkbox"/> 5/8" Combo Wrench | <input type="checkbox"/> 3/16" Allen |
| <input type="checkbox"/> RTV Silicone | <input type="checkbox"/> 11/16" Combo Wrench | <input type="checkbox"/> 7/32" Allen |
| <input type="checkbox"/> Permatex Hylomar® Gasket Dressing | <input type="checkbox"/> Socket Wrench & Extension | <input type="checkbox"/> 1/4" Allen |
| <input type="checkbox"/> Gasket Scraper | <input type="checkbox"/> 3/8" 12pt. socket | <input type="checkbox"/> 5/16" Allen |
| <input type="checkbox"/> Scotch-Brite® Pad | <input type="checkbox"/> 10mm 12pt. socket | |
| | <input type="checkbox"/> 12mm 12pt. socket | |

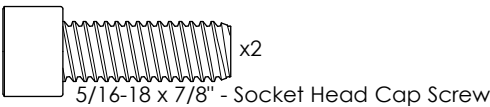
TECH TIP:

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"
Lock Washers



Prepping The Block:

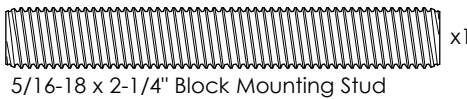
- Disconnect battery.
- Remove all existing accessory drive brackets and components from motor.
- Remove water pump and divider plate.
- Scrape away gasket material and dress surface with a Scotch Brite® pad.
- Clean and inspect timing cover surface for pitting or other issues that may cause a leak.

• Now is a good time to replace the water pump sleeves to ensure proper cooling.

Water pump sleeves are available at most auto parts stores or Pontiac specialty shops GM P/N 9796347.



Skin Board #2 - Packaged with Water Pump



5/16-18 x 2-1/4" Block Mounting Stud

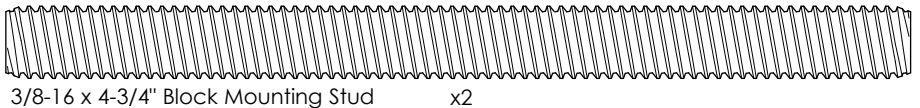


5/16-18
Hex Nut

Additional Parts
Not for Final
Assembly

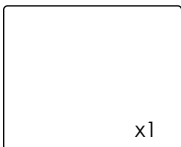


3/8-16
Hex Nut



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

x2



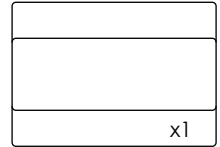
15/16" Spacer



1-15/32" Spacer

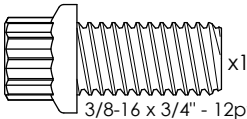


1-1/16" Stand-off

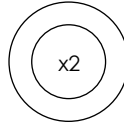


1-1/16" Duplex
Stand-off

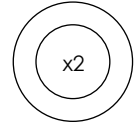
Skin Board #3 - Packaged In Main Box



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

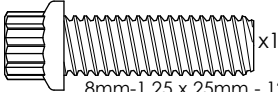


10mm x .5mm
Shim Washer



10mm x 1mm
Shim Washer

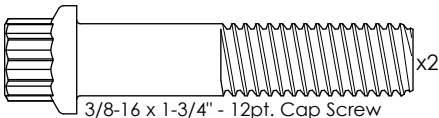
Shims for alternator, may not be needed



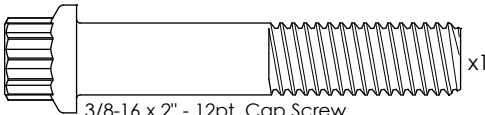
8mm-1.25 x 25mm - 12pt. Cap Screw
Alternator



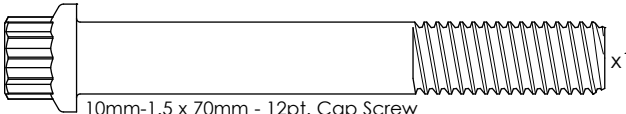
5/16-18 x 1-1/4" - 12pt. Cap Screw
Water Pump



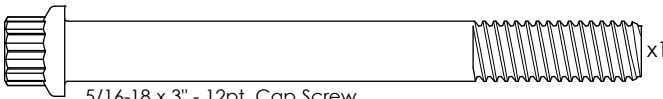
3/8-16 x 1-3/4" - 12pt. Cap Screw
Idler Pulley



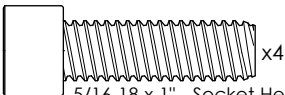
3/8-16 x 2" - 12pt. Cap Screw
Idler Pulley



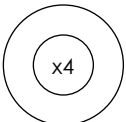
10mm-1.5 x 70mm - 12pt. Cap Screw
Alternator



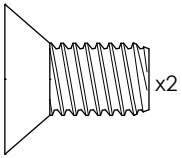
5/16-18 x 3" - 12pt. Cap Screw
Bridge Bracket



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



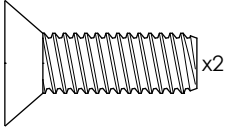
5/16"
Belleville Washer



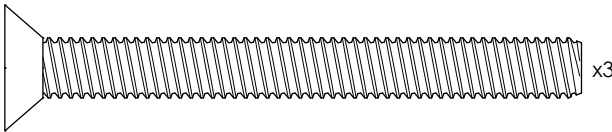
3/8-16 x 3/4" - Flat Head Cap Screw
Bridge Bracket



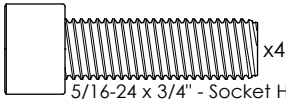
5/16-18 x 3/4" - Socket Head Cap Screw
Backside of Tensioner



5/16-18 x 1" - Flat Head Cap Screw
Bridge Bracket



5/16-18 x 3" - Flat Head Cap Screw
Bridge Bracket



5/16-24 x 3/4" - Socket Head Cap Screw
Water Pump Pulley

Other Hardware - Packaged With Power Steering Pump

Continental Elite Poly-V Serpentine Belt - 65.00" #4060650 (with power steering)

Continental Elite Poly-V Serpentine Belt - 53.75" #4060537 (without power steering)

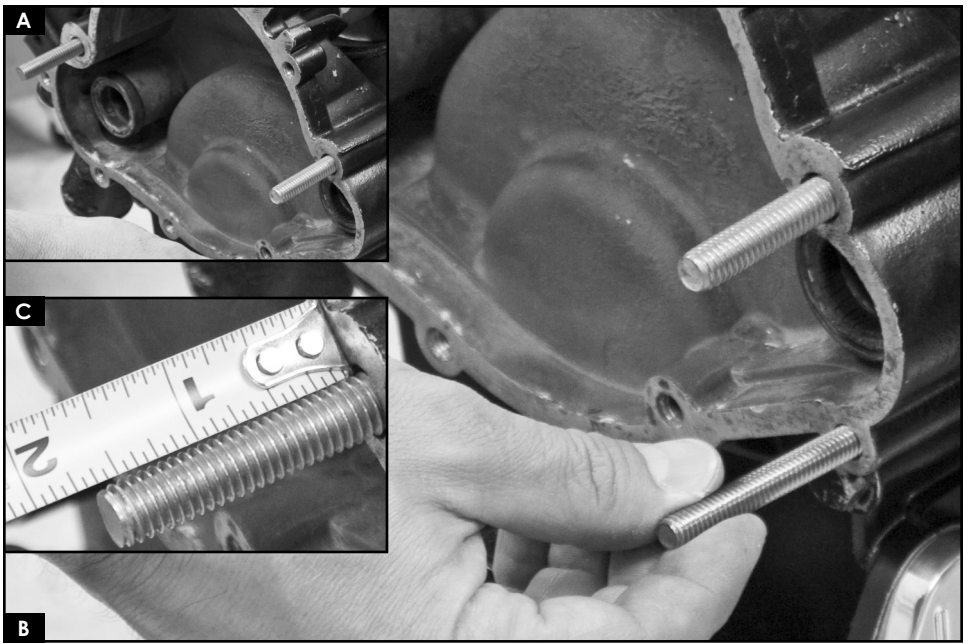


Figure 1: Prepare Timing Cover

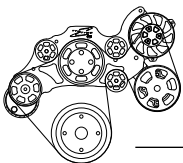
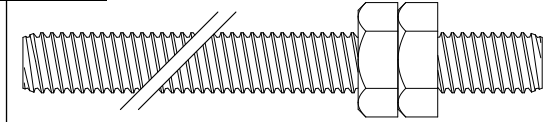
[A] Thread the two 3/8-16 x 4-3/4" block mounting studs through the timing cover and into the block as shown.

[B] Thread the single 5/16-18 x 2-1/4" block mounting stud into the timing cover as shown.

[C] Each stud should extend 1-5/8" beyond the timing cover. If the studs exceed the specified length the threads in the engine block/timing cover will need to be cleaned out until the stud can be threaded within spec. Attempts to install the Tru Trac with the studs exceeding this length will not allow critical components to align or tighten correctly.

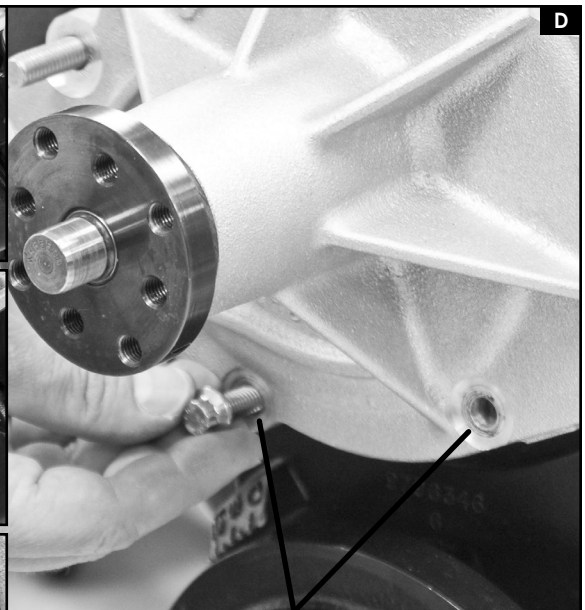
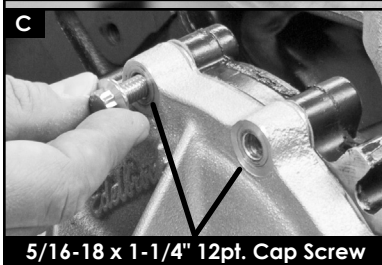
[Example] The studs can easily be tightened by threading two 3/8"-16 or 5/16"-18 zinc coated nuts onto the stud and tighten them against each other to act as a drive nut. The zinc coated nuts may be discarded after this step.

Example



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Tru Trac



5/16-18 x 1-1/4" 12pt. Cap Screw

5/16-18 x 1-1/4" 12pt. Cap Screw

Figure 2: Install Water Pump

Coat both sides of each water pump gasket with Permatex Hylomar® gasket dressing.

[A] Install water pump divider plate with a gasket on each side.

[B] Install water pump to timing cover.

Apply anti-seize to four 5/16-18 x 1-1/4" 12pt. cap screws.

[C] Thread two of the 5/16-18 x 1-1/4" 12pt. cap screws through the top two holes in the water pump and finger tighten.

[D] Follow by threading the other two 5/16-18 x 1-1/4" 12pt. cap screws in the bottom holes of the water pump and finger tighten.

Apply anti-seize to the exposed treads of the threaded studs.





Figure 3: Install Power Steering Bracket

For kits without power steering continue to Figure 4.

[A] Locate the power steering bracket and the alternator bracket. Apply anti-seize to the two 5/16-18 x 7/8" socket head cap screws. Attach the power steering bracket to the back of the alternator bracket with the two 5/16-18 x 7/8" socket head cap screws. Tighten firmly.

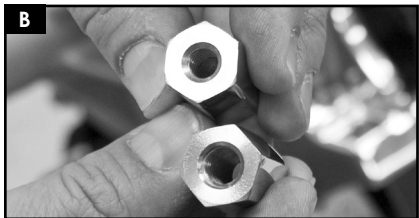


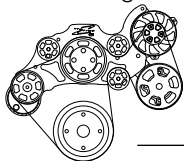
Figure 4: Install Alternator Bracket

[A] Attach alternator bracket to the right side of motor as shown using one 1-1/16" stand off on the top stud and finger tighten.

[B] Follow by installing the special 1-1/16" duplex stand off on the smaller 5/16" stud below, this standoff is identified by one large threaded hole (3/8") and a smaller hole on the other side (5/16").

[C] The larger hole will face outward, tighten both spacers firmly.

At this time tighten the four 12pt. cap screws installed previously in Figure 2 (21 ft/lbs).



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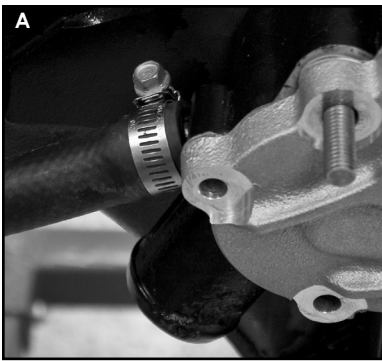


Figure 5: Install Tensioner Bracket

[A] Now is a good time to install the heater hose and clamp.

[B] Install tensioner bracket to passenger side of motor. Place tensioner bracket on motor as shown. Thread one 1-1/16" standoff onto the top 3/8" stud and finger tighten.



5/16-18 x 1" Flat Head Cap Screws

Figure 6: Install Tensioner To Bridge Bracket

[A] Apply anti-seize to two 5/16-18 x 1" flat head cap screws. Thread the two 5/16-18 x 1" flat head cap screws through the bridge bracket and into the tensioner, tighten firmly.



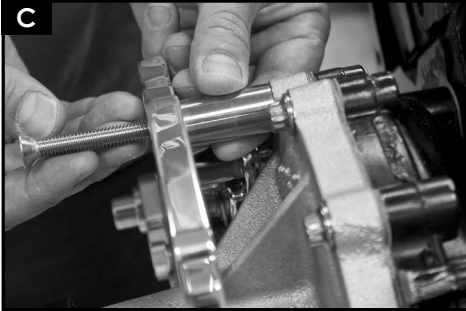
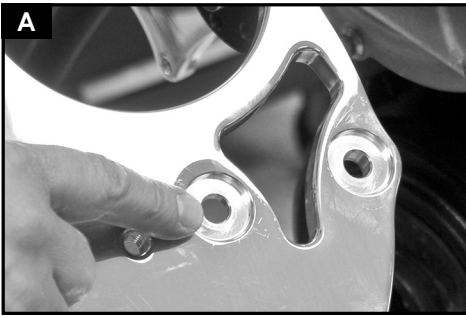
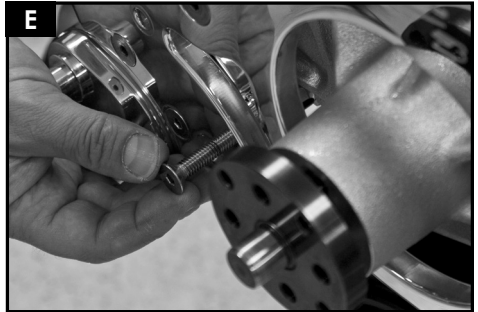


Figure 7: Install Bridge Bracket

[A] Locate recess on the back of the bridge bracket on the left and right sides. This recess fits over the top spacer nuts.

[B] Apply anti-seize to two 3/8-16 x 3/4" flat head cap screws. Place bridge bracket onto engine. Thread one of the 3/8-16 x 3/4" flat head cap screws through the bridge bracket on the passenger side and into the spacer nut, finger tighten. Follow by threading the second 3/8-16 x 3/4" flat head cap screw through the bridge bracket on the driver side and into the top spacer nut, finger tighten.



Apply anti-seize to three 5/16-18 x 3" flat head cap screws.

[C] Install the first 5/16-18 x 3" flat head cap screw on the passenger as shown by placing the 1-15/32" long spacer between the bridge bracket and water pump, then thread the fastener through the bridge bracket, spacer and water pump, finger tighten.

[D] Install the next 5/16-18 x 3" flat head cap screw on the driver side as shown by placing the 15/16" long spacer between the bridge bracket and water pump, then thread the fastener through the bridge bracket, spacer, alternator bracket and water pump, finger tighten.

[E] Install the final 5/16-18 x 3" flat head cap screw near the tensioner assembly by threading through the bridge bracket, tensioner bracket and water pump, finger tighten.

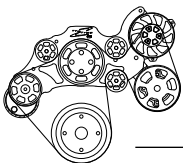




Figure 8: Complete Bridge Bracket Install

Apply anti-seize to the following fasteners:

- 5/16-18 x 3" 12pt. cap screw
- 5/16-18 x 3/4" socket head cap screw

[A] Thread the 5/16-18 x 3" 12pt. cap screw through the bridge bracket just above the tensioner as shown and finger tighten.

[B] Finalize by threading the 5/16-18 x 3/4" socket head cap screw through the back of the tensioner bracket and into the tensioner, tighten this fastener firmly.

Tighten the passenger side spacer nut followed by all the bridge bracket fasteners.

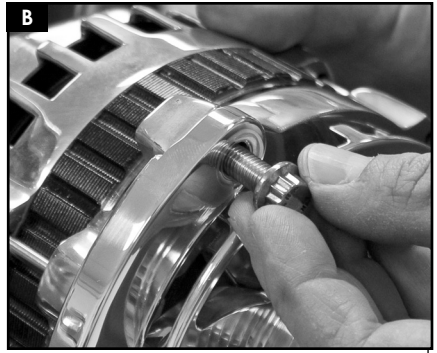


Figure 9: Install The Alternator

Apply anti-seize to the 10mm-1.5 x 70mm 12pt. cap screw and one 8mm-1.25 x 25mm 12pt. cap screw.

[A] Place alternator between the alternator bracket and the bridge bracket, align bottom holes. Thread the 10mm-1.5 x 70mm 12pt. cap screw through bridge bracket, alternator and into alternator bracket, finger tighten.

[B] Rotate alternator up to align the top alternator boss with the top bridge bracket ear. Thread the 8mm-1.25 x 25mm 12pt. cap screw through the bridge bracket and into alternator. Firmly tighten both fasteners.

NOTE: The alternator boss may vary in width due to the polishing process. Check lower alternator mount boss to see if shims are needed. Included with this kit are .5 & 1mm shim washers these shims may or may not be needed.



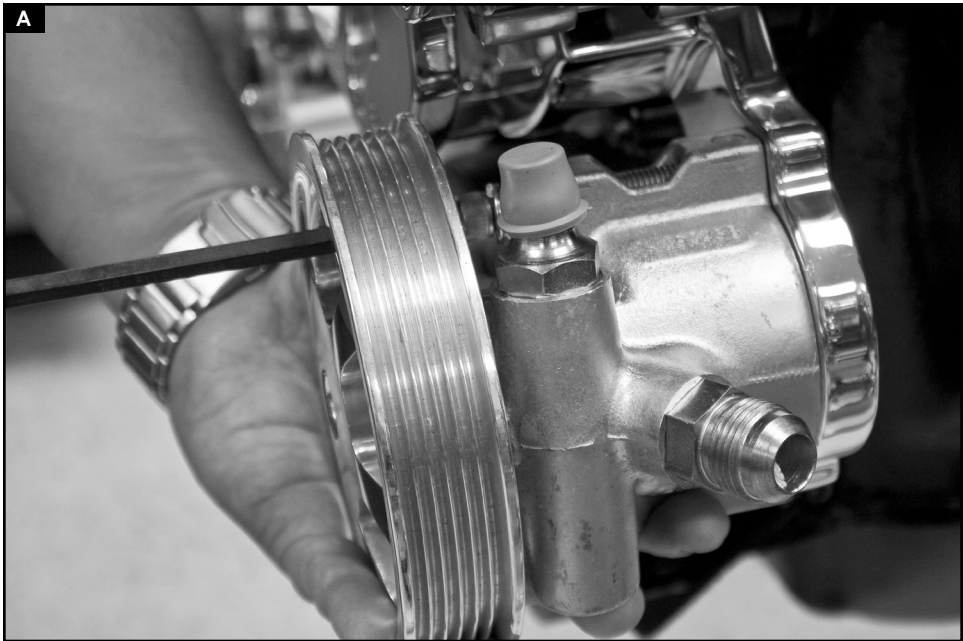
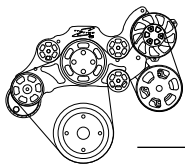


Figure 10: Install Power Steering Pump & Pulley

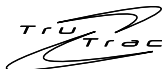
For kits without power steering continue to Figure 11.

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

[A] Place power steering pump to bracket and thread the two 5/16-18 x 2-3/4" socket head cap screws with 5/16" split washers through the power steering pump bosses and into the power steering bracket and tighten firmly (26 ft/lbs).



Bill's Speedlines

Tru Trac

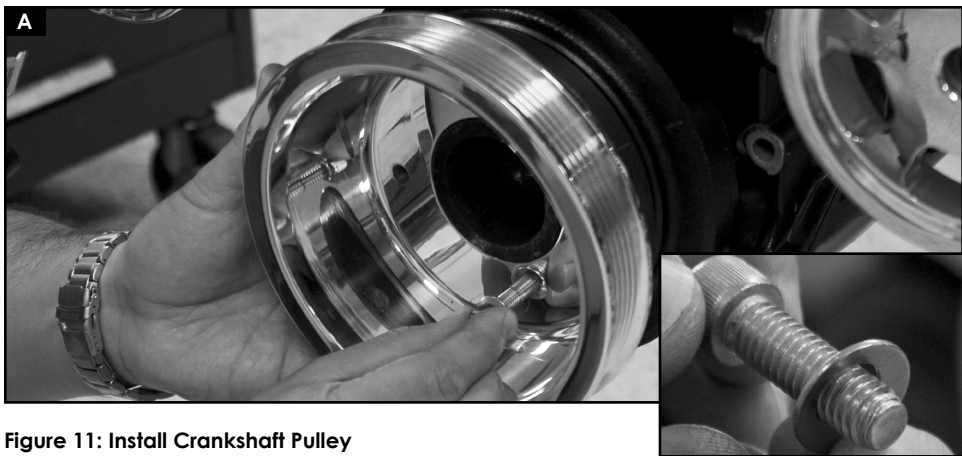


Figure 11: Install Crankshaft Pulley

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

[A] Place the crank pulley on the damper, thread the four 5/16-18 x 1" socket head cap screws with Bellville washers (cup facing pulley) through pulley and into damper, tighten firmly (46ft/lbs).



Figure 12: Install Waterpump Pulley

Apply anti-seize to the four 5/16-24 x 3/4" socket head cap screws.

[A] Place water pump pulley on water pump shaft, thread the four 5/16-24 x 3/4" socket head cap screws through the nose cone, pulley and into the water pump flange, tighten firmly (28 ft/lbs).

Figure 13: Install Idler Pulleys

Apply anti-seize to the Following:
(2) 3/8-16 x 1-3/4" 12pt. cap screws
(1) 3/8-16 x 2" 12pt. cap screw

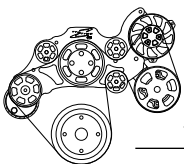
[A] Install the passenger side pulley by threading a 1-3/4" 12pt. cap screw through the pulley cover, pulley and boss into the bridge bracket as shown, tighten firmly (46 ft/lbs).



[B] Install the driver side pulley by threading a 1-3/4" 12pt. cap screw through the pulley cover, pulley and boss into the bridge bracket as shown, tighten firmly (46 ft/lbs).



[C] Install the lower driver side pulley by threading the 2" 12pt. cap screw through the pulley cover, pulley and boss into the bridge bracket as shown, tighten firmly (46 ft/lbs).



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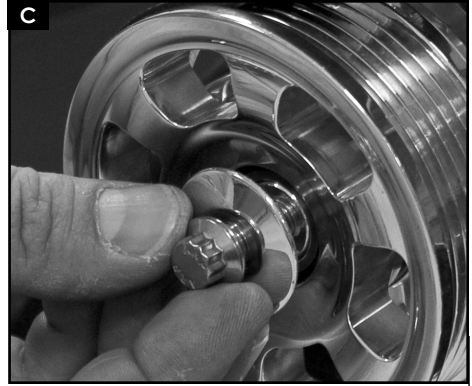
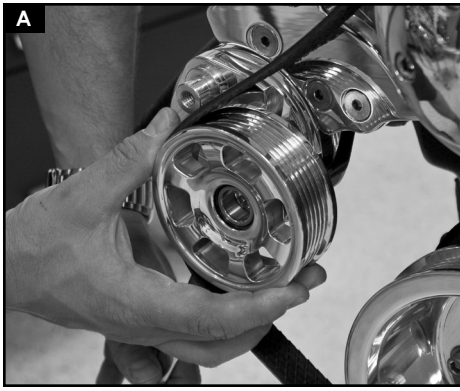


Figure 14: Install Belt & Tensioner Pulley

Apply anti-seize to the 3/8-16 x 3/4" 12pt. cap screw.

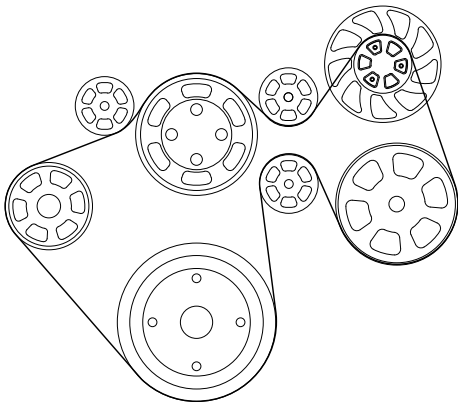
Route serpentine belt as shown below, minus tensioner.

[A] Place a 5/8" box end wrench on tensioner. Align belt onto pulley and pull up until tensioner pulley slips onto tensioner shaft.

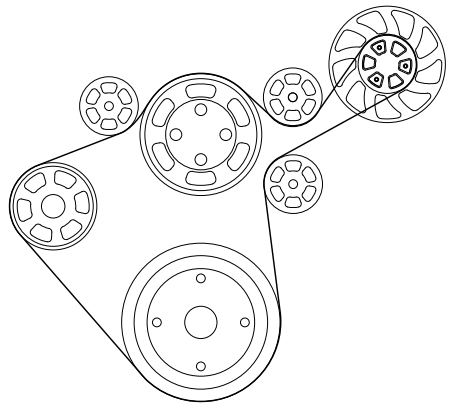
[B] Slowly return wrench to starting position to apply tension to belt.

[C] Install the 3/8-16 x 3/4" 12pt. bolt with aluminum washer and tighten firmly. (46 ft/lbs)

WITH POWER STEERING



WITHOUT POWER STEERING



#14905 / #14925



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