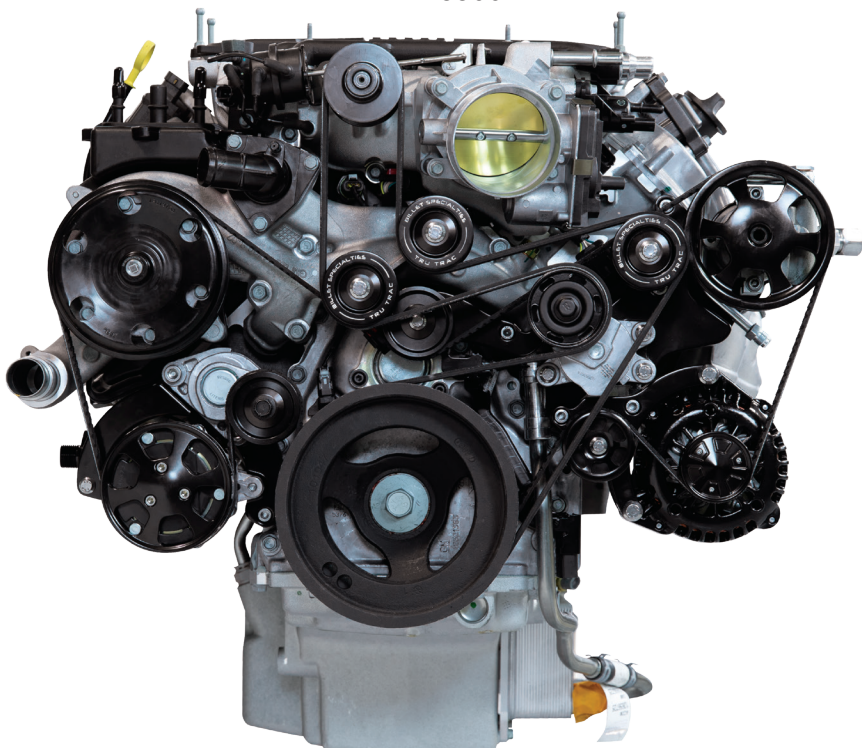


Tru Trac

LT4 TRU TRAC

Installation Manual
For Systems with AC & PS
#BLK13500



 **BilletSpecialties**

Billet Specialties, Inc.

500 Shawmut Ave. • La Grange, IL 60526
Tech (708) 588-0505 • Fax (708) 588-7181

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

Important!

This kit is engineered to fit the GM LT4 Wet Sump Crate Motors P/N19332621 & 19368622 CTSV & Camaro ZL-1. This kit will not work on a dry sump motor.

Important!

Before assembly, disconnect the battery.

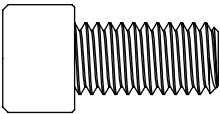
Required Tools & Materials

- ☐ 6mm Allen
- ☐ 8mm Allen
- ☐ 1/4" Allen
- ☐ 3/16" Allen
- ☐ 11/16" Open Ended Wrench
- ☐ 10mm 12pt Socket
- ☐ 12mm 12pt Socket
- ☐ 15mm Socket
- ☐ 3/8" 12pt Socket
- ☐ 7/8" Socket

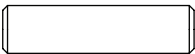
☐ Anti-Seize Compound

Included Serpentine Belt				
Accessory Drive	Continental Elite	6-Rib Poly-V Serpentine	Length: 91"	#4060910
Supercharger	Continental Extreme	8-Rib Poly-V Serpentine	Length: 77.2"	#4080722X

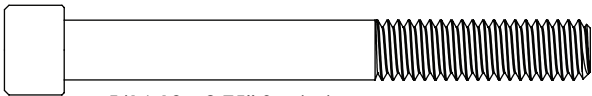
Skin Board #7 - Packaged with Power Steering Pump



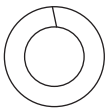
3/8-16 x 3/4" Socket Head Cap Screw - Qty. 2



1/4 x 1" Dowel Pin - Qty. 2



5/16-18 x 2.75" Socket Head Cap Screw - Qty. 2



5/16" Lock Washer - Qty. 2

Power Steering Bracket P/N13500H (not shown)

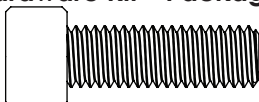
TECH TIP:

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13500FK Hardware Kit - Packaged In Main Box



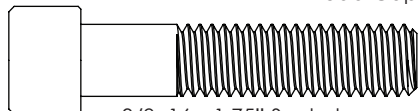
1/4-20 x 3/4" Socket
Head Cap Screw - Qty. 3



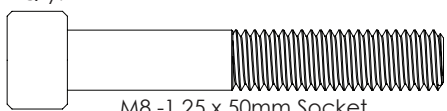
M8 - 1.25 x 25mm Socket
Head Cap Screw - Qty. 2



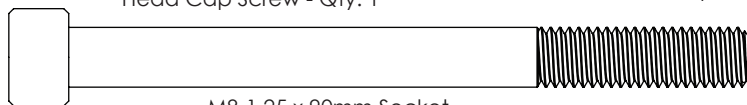
M8-1.25 x 35mm Socket
Head Cap Screw - Qty. 2



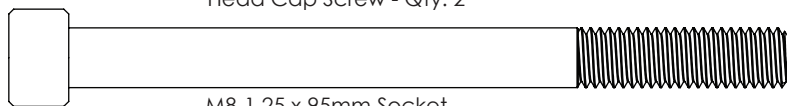
3/8-16 x 1.75" Socket
Head Cap Screw - Qty. 1



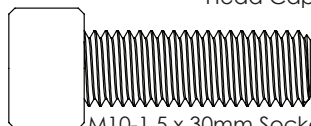
M8 - 1.25 x 50mm Socket
Head Cap Screw - Qty. 3



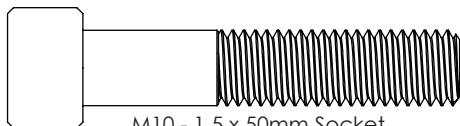
M8-1.25 x 90mm Socket
Head Cap Screw - Qty. 2



M8-1.25 x 95mm Socket
Head Cap Screw - Qty. 1



M10-1.5 x 30mm Socket
Head Cap Screw - Qty. 2



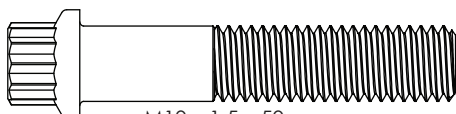
M10 - 1.5 x 50mm Socket
Head Cap Screw - Qty. 2



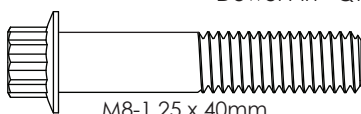
M8-1.25 x 25mm
12pt. Cap Screw - Qty. 1



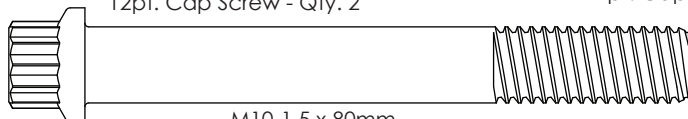
1/4 x 1"
Dowel Pin - Qty. 2



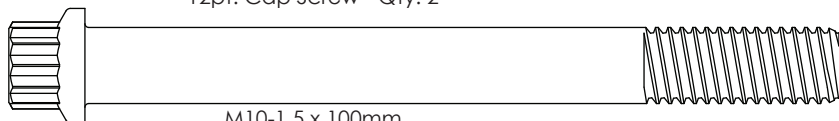
M10 x 1.5 x 50mm
12pt. Cap Screw - Qty. 2



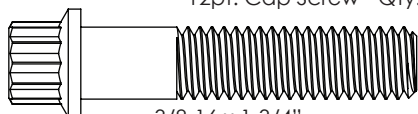
M8-1.25 x 40mm
12pt. Cap Screw - Qty. 3



M10-1.5 x 80mm
12pt. Cap Screw - Qty. 2



M10-1.5 x 100mm
12pt. Cap Screw - Qty. 1



3/8-16 x 1-3/4"
12pt. Cap Screw - Qty. 2



M8 - 1.25 x 45mm
Threaded Rod - Qty. 2

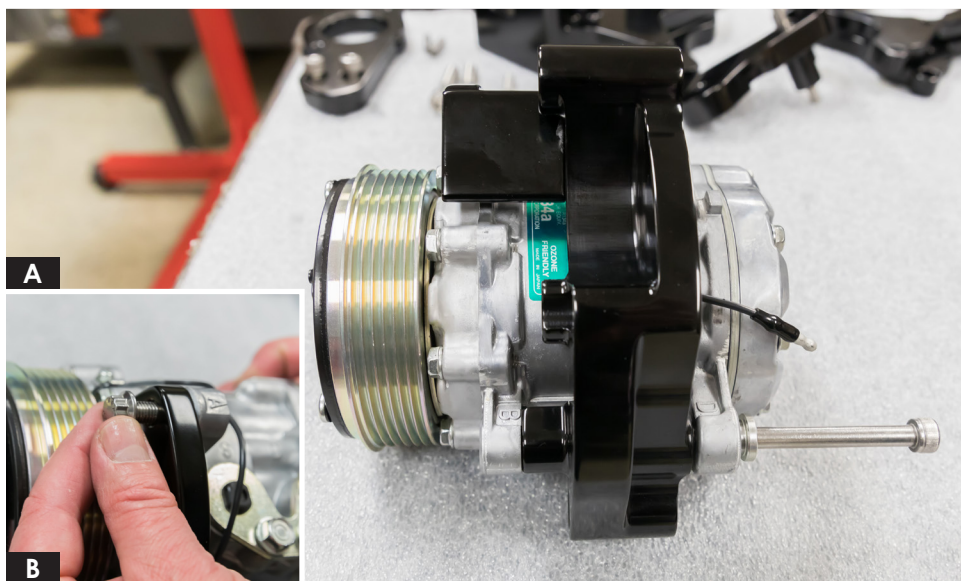


A

B

AC Compressor Bracket Assembly

(A) Install two 1/4 x 1" dowel pins into the Compressor Bracket (13500D) as shown. (B) Place the compressor bridge bracket (13500E) onto the dowel pins. (C) Secure the bracket with a 3/8-16 x 1-3/4" SHCS as shown & tighten firmly.



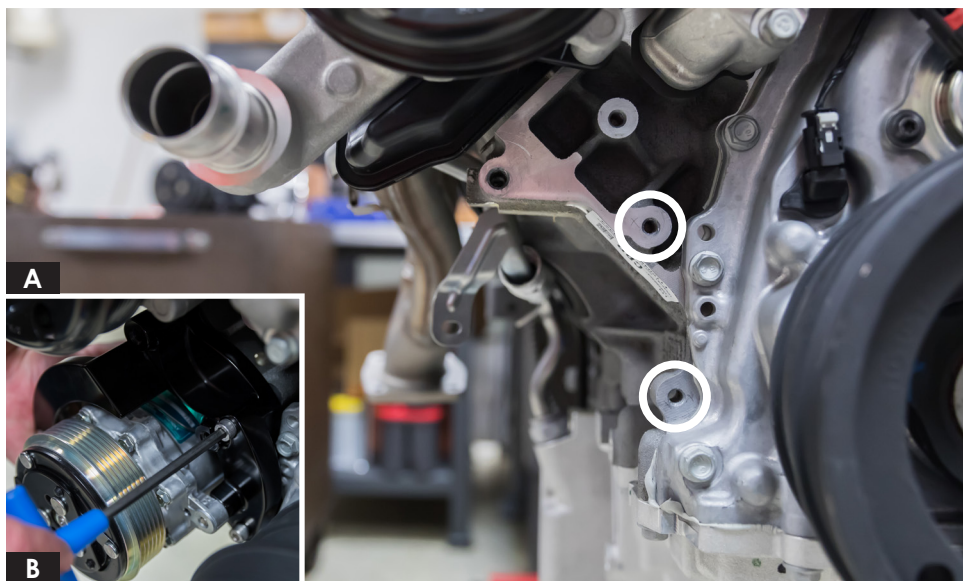
A

B

(A) Install the assembly onto the AC Compressor as shown. Install the M8-1.25 x 95mm SHCS through the bottom ears of the compressor. (leave flanged spacer installed in ear) (B) Install the ARP 12pt M8-1.25 x 25mm through the bridge bracket and into the top compressor ear. Tighten all fasteners firmly.

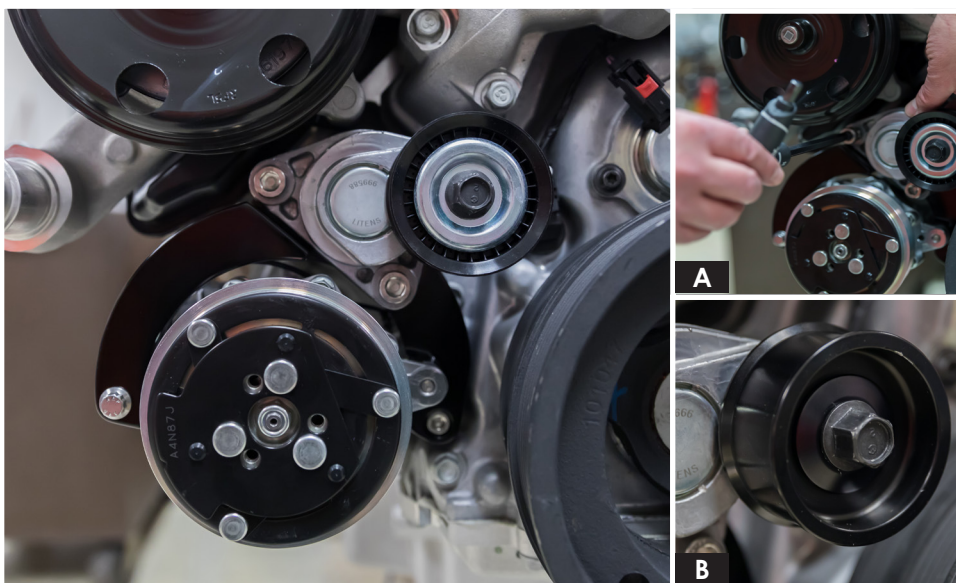
TECH TIP:

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



Mount AC Compressor Assembly to the Block

(A) Locate the mount holes as shown on the block. (B) Install the AC compressor and bracket to the engine, secure with two of the M8-1.25 x 50mm SHCS's. Tighten firmly.

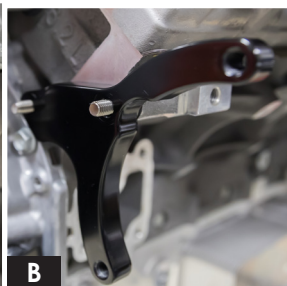
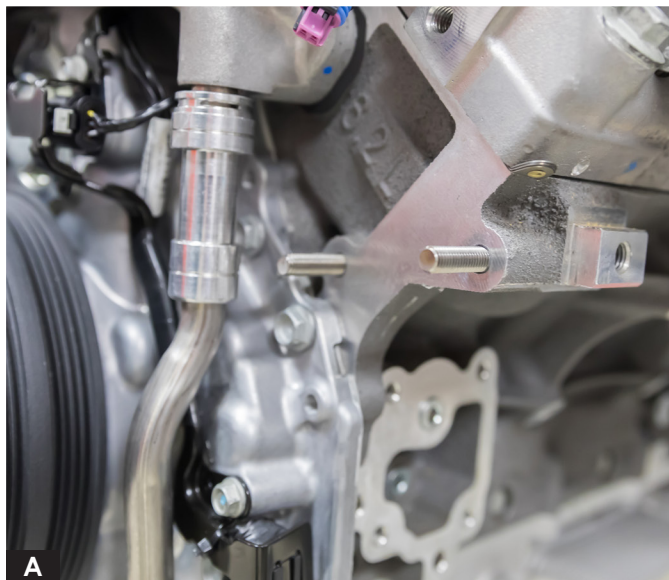


Accessory Tensioner Installation

(A) Install the accessory tensioner to the AC compressor bracket and secure with two M10-1.5 x 30mm SHCS's. Tighten firmly. (B) Replace the plastic tensioner pulley and washer with the billet aluminum pulley and washer supplied.

TECH TIP:

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Alternator Bracket Assembly

(A) Thread the two M8-1.25 x 45mm threaded studs into the block as shown. (B) Place the rear alternator bracket (13500B) onto the studs as shown. (C) Secure the bracket to the block with two M8-1.25 x 1.995" stand offs. Tighten firmly.



Attach the outer alternator bracket assembly (13500C) onto the standoffs with two M8-1.25 x 25mm SHCS and finger tighten only.

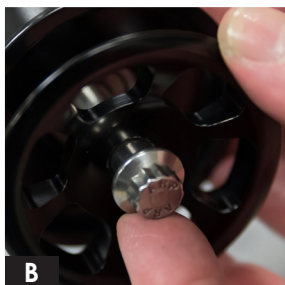
TECH TIP:

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Install Alternator

(A)(B) Finish by installing the Powermaster alternator into the bracket assembly using the two M10-1.5 x 80mm 12pt ARP bolts as shown. Tighten all fasteners firmly at this time.

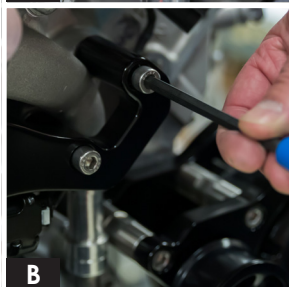


Accessory Idler Pulley for Alternator Bracket

(A) Place the boss with the thick base into the back of the idler pulley as shown. The back is identified by full view of the bearing. (B) Place the 3/8-16 x 1-3/4" 12pt ARP bolt through the idler pulley cover, pulley and boss into the outer alternator bracket and tighten firmly.

TECH TIP:

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Center Accessory Idler Bracket

(A) Remove the two bottom water pump bolts as shown. (B) Install the center accessory idler bracket (13500F) as shown and attach with two M8-1.25 x 90mm SHCS and tighten firmly.

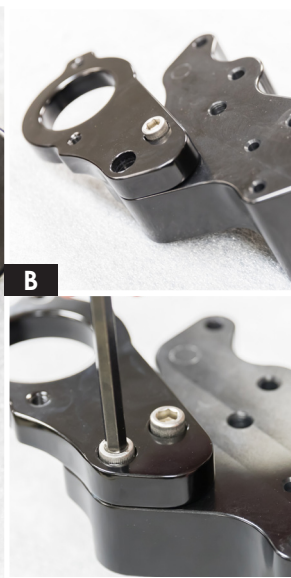


Center Accessory Idler Pulley

(A) Place the boss with the thick base into the back of the idler pulley as shown. The back is identified by full view of the bearing. Place the 3/8-16 x 1-3/4" 12pt ARP bolt through the idler pulley washer, pulley and boss into the center accessory idler bracket and tighten firmly.

TECH TIP:

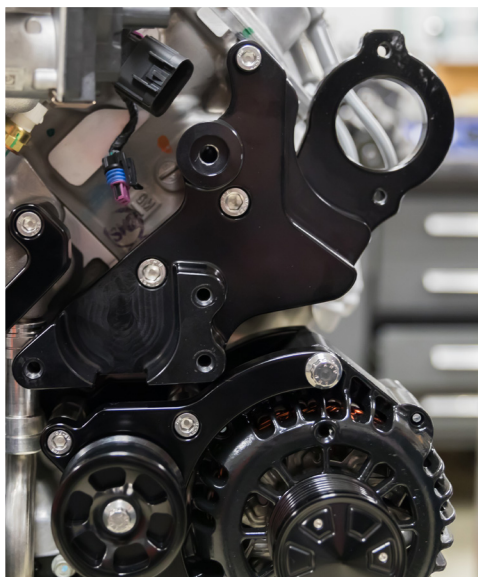
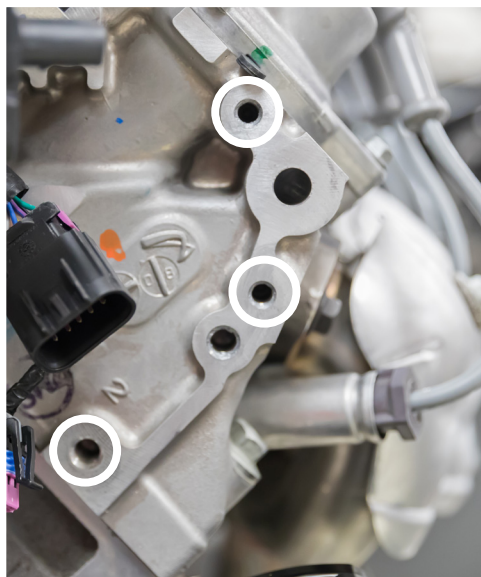
Billet Specialties recommends the use of Anti-Seize on all fasteners to prevent thread lock-up.



A

Supercharger Tensioner Bracket Assembly

(A) Install the two 1/4 x 1" dowel pins into the back of the Supercharger Tensioner Bracket (13500G) as shown. (B) Place the power steering bracket (13500H) onto the dowel pins then secure with two 3/8-16 x 3/4" SHCS. Tighten firmly.

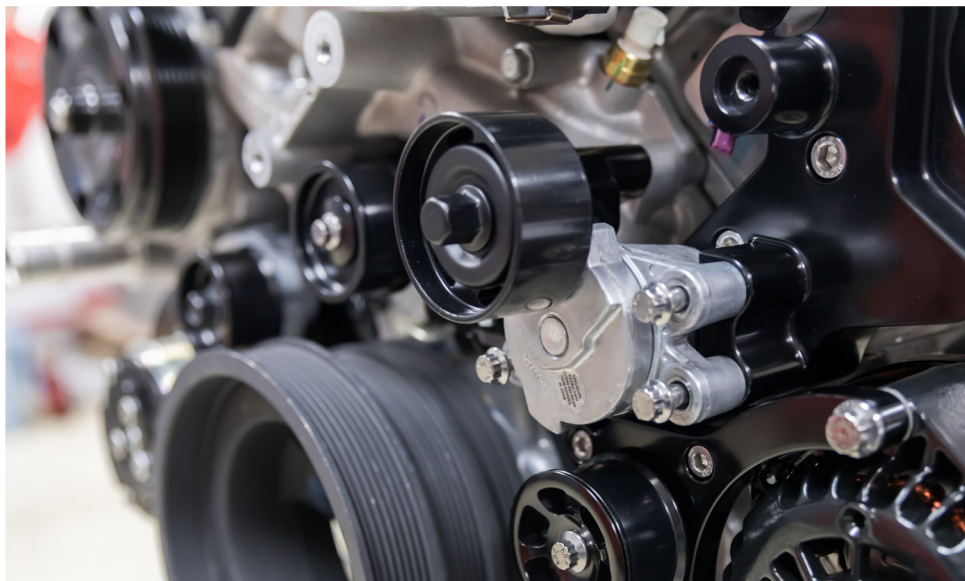


Install Supercharger Tensioner Bracket to Head

Install the assembly to the cylinder head as shown with two M10-1.5 x 50mm SHCS and one M8-1.25 x 50mm SHCS at the top as shown. Tighten firmly.

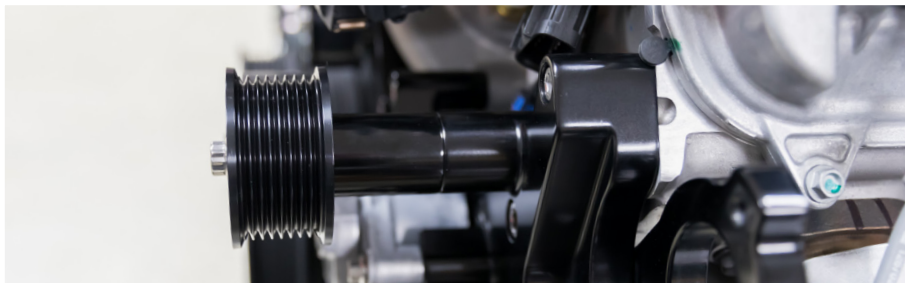
TECH TIP:

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Supercharger Tensioner Assembly

Attach the supercharger tensioner to the bracket with the three M8-1.25 x 40mm 12pt ARP bolts and tighten firmly.



Supercharger Idler Pulley Assembly

(A) Place the boss with the thin base into the back of the grooved idler pulley as shown. The back is identified by full view of the bearing. (B) Place the M10-1.5 x 100mm 12pt ARP bolt through the aluminum washer, grooved pulley, boss and aluminum standoff into the supercharger tensioner bracket as shown. Tighten firmly.

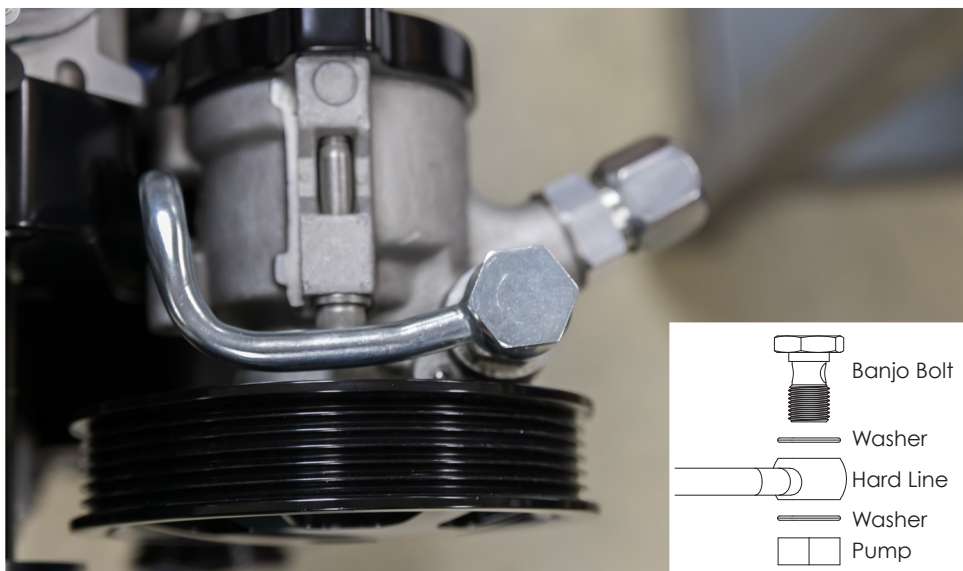
TECH TIP:

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Power Steering Pump Installation

Install the power steering pump to the bracket with two 5/16-18 x 2-3/4" SHCS and 5/16" split lock washers through the pump and into the bracket. Tighten firmly.



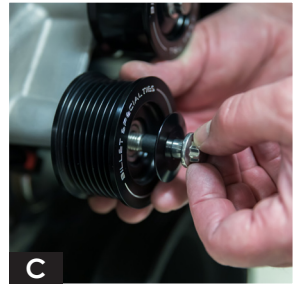
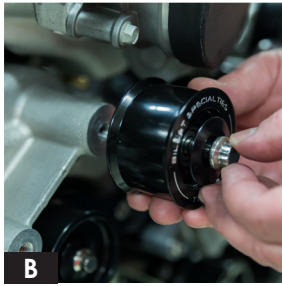
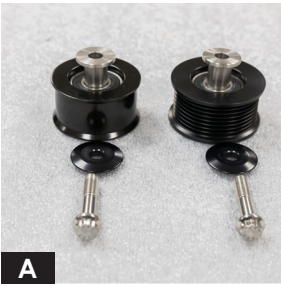
Power Steering Hardline Installation

Finish by installing the Power steering hard line to the power steering pump. You may install the power steering pressure line at this time as well.

IMPORTANT: Do not run the pump without fluid or severe damage will occur to the pump.

TECH TIP:

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Supercharger Idler Pulley Assembly

(A) Place the bosses with the thin base into the back of each idler pulley as shown (1-grooved, 1-smooth). The back is identified by full view of the bearing. Place a M10-1.5 x 50mm 12pt ARP bolt through the aluminum washers, pulleys and bosses. (B) Install the smooth pulley on top as shown and (C) the grooved pulley on the bottom as shown. Tighten both pulleys firmly.

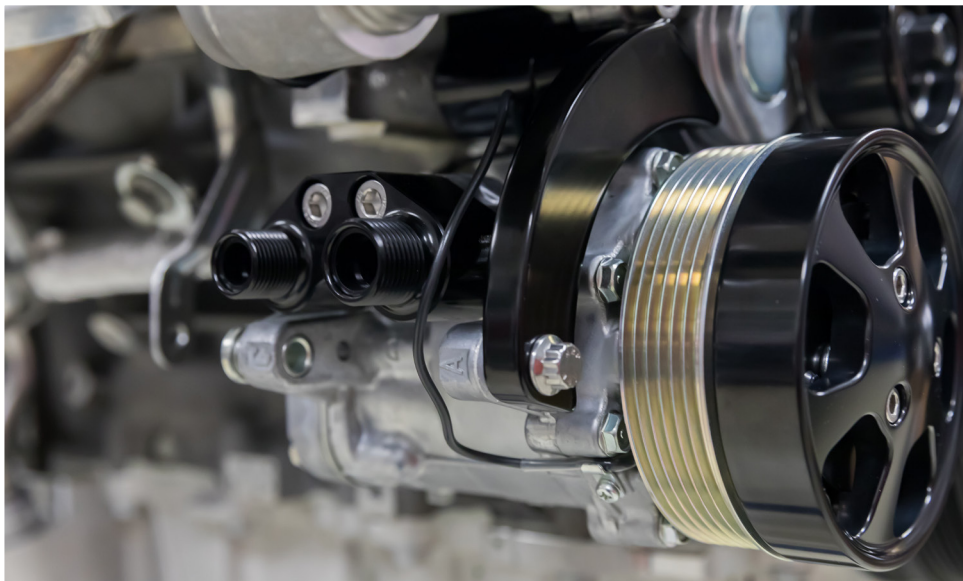


AC Compressor Cover

Place cover on clutch and thread the 1/4-20 x 3/4" socket head cap screws through the cover and into the clutch, torque to 40-45 inch/lbs. **Caution:** Over tightening these fasteners will cause damage to the compressor clutch. **Do Not Over Tighten.**

TECH TIP:

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AC Compressor Manifold Installation

Continue with this step ONLY if you are going to be installing your air conditioning hoses and charging your system at this time.

Remove the plate on top of the compressor body.

Install compressor manifold onto compressor with the two 8mm-1.25 x 35mm socket head cap screws and tighten firmly (13 ft/lbs).

Install hoses, connect clutch wire and charge system.

Important!

If you are NOT installing hoses and charging system at this time, place compressor manifold and hardware in a safe place and leave cover plate on compressor at this time.

Do not connect clutch wire or apply power to clutch wire without the hoses connected and system charged – **serious damage will occur to compressor.**

Compressor Oil

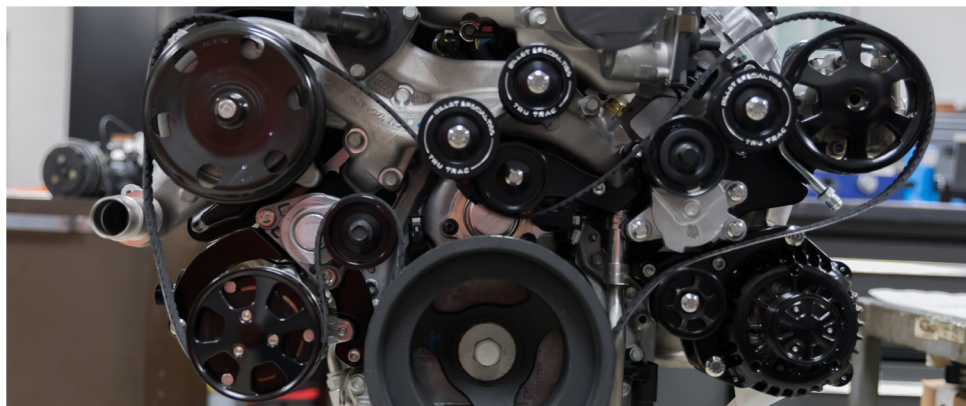
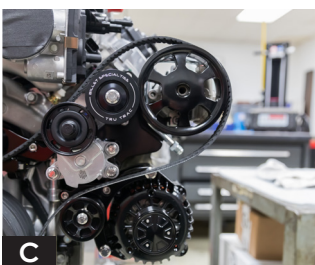
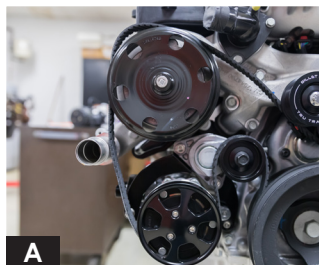
Although the compressor is supplied with oil, the level may not be correct for the entire system. Consult the instruction manual of the air conditioning unit for proper levels and system charging procedures.

This compressor is designed for use with Air Conditioning units only. Serious damage will occur to AC compressor if used for anything other than its intended purpose.

Warranty is Void if used for any non-AC application.

TECH TIP:

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Accessory Belt Routing

Route accessory 6 rib belt as shown (A) (B) & (C). Loop belt around alternator pulley last. Release tension on the tensioner and slide belt over the top as shown.

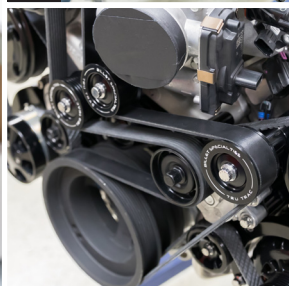
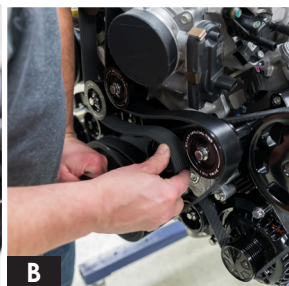
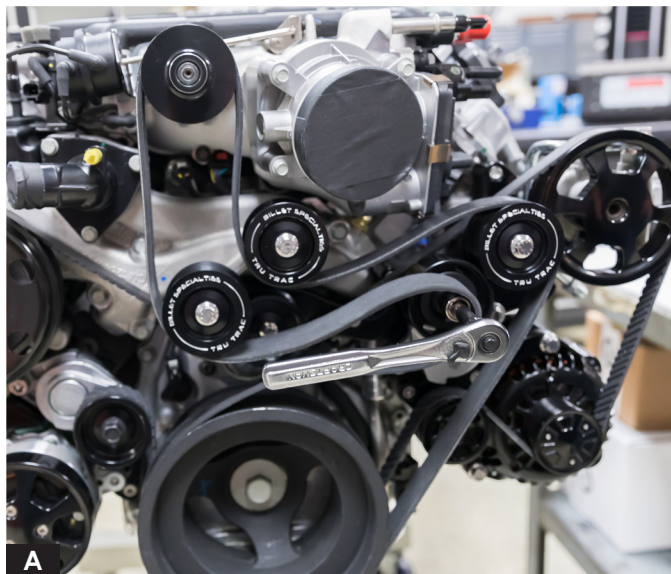


Release tension on the tensioner and slide belt over the top as shown.

Finish by Checking to make sure belt is properly seated within the pulley grooves.

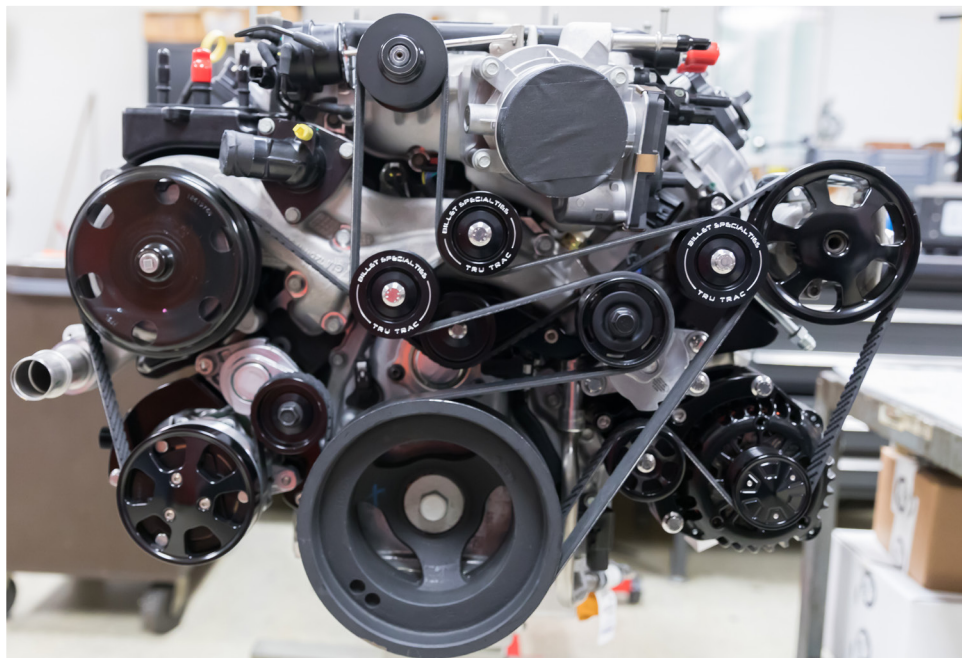
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Super Charger Belt Routing

Place the 15mm socket on the tensioner pulley bolt, then route Super Charger 8 rib belt as shown. (A) Release tension on the tensioner (B), then slip the belt over the pulley and release tension. ***Finish by Checking to make sure belt is properly seated within the pulley grooves.***



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