

SALEEN SPEEDLAB NORMALLY ASPIRATED ENGINE UPGRADES



INSTALLATION MANUAL: 2005-08 MUSTANG 4.6 3V
MANUAL P/N: 10-8002-C15768A

SALEEN

Saleen Performance, Inc. 1225 East Maple Rd. Troy, MI 48063 248-743-4800
www.saleen.com





DO NOT INSTALL ANY AFTERMARKET CHIPS OR PROGRAMMERS, OR HAVE YOUR PCM REPROGRAMMED ANYWHERE BUT AT SALEEN FOR THE NORMALLY ASPIRATED KITS. THE 2005 MUSTANG USES AN ELECTRONIC THROTTLE CONTROL (ETC), WHICH IS CONTROLLED BY THE POWERTRAIN CONTROL MODULE (PCM) AND THE CALIBRATION INSIDE. AFTERMARKET CHIPS DO NOT PROPERLY RECALIBRATE THE ENGINE MANAGEMENT SYSTEM; THIS CREATES A DANGEROUS SITUATION THAT COULD RESULT IN A STUCK THROTTLE AND CAN LEAD TO INJURY OR DEATH. SALEEN FULLY REPROGRAMS THE PCM TO FORD STANDARDS, AND ENSURES THAT ALL ENGINE SAFETY CONTROLS ARE FULLY FUNCTIONAL.



***THE SALEEN NORMALLY ASPIRATED KITS AND
ACCOMPANYING PROGRAMMING ARE DESIGNED
AROUND THE USE OF 91 OCTANE FUEL OR
HIGHER ONLY. BEFORE YOU RUN YOUR
MUSTANG WITH THE KIT INSTALLED EVEN
ONCE, YOU MUST EITHER DRAIN THE FUEL TANK
COMPLETELY AND FILL IT UP WITH 91 OCTANE,
OR BEGIN USING 91 OCTANE IN YOUR MUSTANG
TWO COMPLETE FILLUPS BEFORE
INSTALLATION.***



***IF YOU ARE NOT EXPERIENCED IN THE
AREA OF AUTOMOTIVE MECHANICS, WE
STRONGLY URGE THAT YOU REFER THIS
INSTALLATION TO A CERTIFIED INSTALLER
OR TECHNICIAN***



Saleen Speedlab Normally Aspirated Kits Installation Guide for 2005-08 Mustang 4.6 3V

WELCOME!

Thank you for buying normally aspirated engine enhancement kits for your 2005-08 Mustang with the 4.6-liter, 3-valve motor. We appreciate your business, and we hope you enjoy your product.

For your benefit, please read the following instructions completely and thoroughly before attempting to install the kit. Many questions we have received from customers about the installation of our products could have been easily solved by information listed in the accompanying installation guide. We want you to enjoy the product in its fully functional state, and reading this tutorial is a great first step to transforming your Mustang GT into a formidable street car.

PLEASE NOTE THAT IF YOU HAVE ANY AFTERMARKET PARTS ALREADY INSTALLED ON YOUR MUSTANG, YOU MUST RETURN THE CAR TO STOCK MUSTANG STATUS – THIS INCLUDES PULLEYS, CHIPS, PROGRAMMERS, ETC. THE CAR WILL NOT FUNCTION AND PARTS MAY NOT FIT PROPERLY IF OTHER AFTERMARKET PARTS ARE INSTALLED.

With at least one read of this installation guide under your belt before you begin your installation, you should be well on your way to one hot Mustang!

FINALLY, BE SURE THAT YOU FILL OUT THE PROCESSOR QUESTIONNAIRE AND RETURN IT TO SALEEN WITH YOUR PCM! WE CANNOT FLASH THE PCM WITHOUT THAT QUESTIONNAIRE!

Again, thank you for choosing Saleen!



OBTAIN THE FOLLOWING TOOLS:

- ½ " DRIVE BREAKER BAR
- FUEL LINE DISCONNECT TOOL
- 3/8" DRIVE, 15MM SOCKET
- DUCT TAPE
- PANEL PULLER
- ½ " DRIVE IMPACT GUN
- ½ " DRIVE 24MM IMPACT SOCKET
- ½ " DRIVE BREAKER BAR
- 3/8" DRIVE RATCHET
- 3/8" DRIVE 13MM DEEP SOCKET
- 3/8" DRIVE FT.-LB. TORQUE WRENCH
- ¼ " DRIVE RATCHET
- ¼ " DRIVE 10MM DEEP SOCKET
- ¼ " DRIVE INCH-POUND TORQUE WRENCH
- RED LOCTITE
- HOSE CLAMP PLIERS

i Removing the Processor

1. You must remove the processor and send it to Saleen so that the processor can be reprogrammed. Your car will run poorly with the supercharger installed if the processor is not properly reprogrammed.
2. With an 8mm wrench, disconnect the battery ground terminal. (**FIGURE 1**)
3. Disconnect the battery positive terminal. (**FIGURE 2**)
4. Find the PCM; it is located adjacent to the black fuse box, and just a few inches from the rear outboard corner of the front shroud on the passenger side.
5. Grab the grey tabs that hold the multi-pin connectors onto the PCM. Lift the grey tabs toward the front of the car until the wire connectors pop out of place (**FIGURE 3**).
6. Using a 10mm socket with 1/4" drive ratchet, remove the two processor mounting bolts (one at the top of the bracket, one at the bottom).
7. Pull the processor towards the front of the car and wiggle it out of the bracket. (**FIGURE 4**).
8. Fill out the questionnaire on the following page, and send the questionnaire in with the processor to Saleen, *attention PCM Programming*. Our address is on the cover page of this manual.



Figure 1

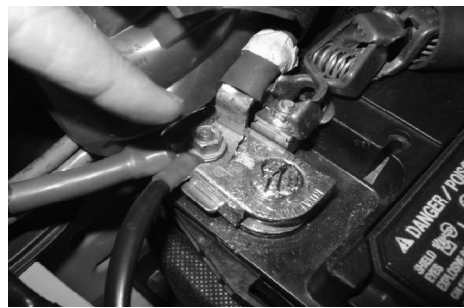


Figure 2

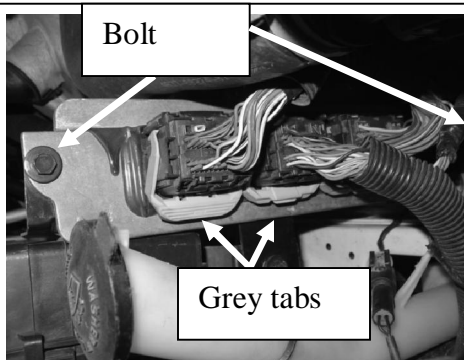


Figure 3



Figure 4

TODAYS DATE: / /



PROCESSOR QUESTIONNAIRE

2005 - 2009 MUSTANG

SHIP TO ADDRESS FOR PCM (PLEASE NO P.O. BOXES)

CONTACT NAME:		DEALER NAME:	
SHIPPING ADDRESS:		PHONE NUMBER:	
CITY:	STATE:	ZIP:	EMAIL:
CUSTOMERS NAME:		TECH SUPPORT <small>(IF ONE WAS GIVEN)</small>	
VIN: <input type="text"/>		SALEEN REPORT#:	
VEHICLE YEAR:	VEHICLE MODEL:	VEHICLE BUMPER#:	VEHICLE MILEAGE:
TIRE MANUFACTURER:		REAR TIRE SIZE:	
TRANSMISSION> AUTO <input type="checkbox"/> MANUAL <input type="checkbox"/> 5 SPEED <input type="checkbox"/> 6 SPEED <input type="checkbox"/>		ENGINE SIZE:	REAR GEAR RATIO: <small>(please look at vehicle)</small>

SELECT THE SALEEN PERFORMANCE LEVEL THAT IS INSTALLED ON YOUR VEHICLE

S281 3V	S281 SC BLACK INJ. 435 HP	S281 SC BLUE INJ. 465 HP	S281 SC AMERICAN FLAG	S281 SC RED FLAG	S281 SC DAN GURNEY	S281 SC SLEEPER
S281 EXTREME 550 HP	S281 EXTREME 575 HP	S281 EXTREME 600 HP	S302 3V PARNELLI JONES	S302 SC EXTREME	S302 SC 25TH STERLING	
H281 3V	H302 3V	H302 SC	SUPERCHARGE KIT 475 HP	OTHER NOT LISTED		

SALEEN AIR INTAKE MODIFICATION INFORMATION

SHAPE OF INTAKE TUBE AT AIRBOX: ROUND ☐ OVAL ☐

OTHER MODIFICATION / AFTERMARKET PARTS INSTALLED - NON SALEEN

e.g. HEADERS, INTAKES, AIR OR FUEL MANAGEMENT, EXHAUST, OTHER CAL. 'TUNERS'

PLEASE LIST
ALL ITEMS:

REASON FOR PROGRAMMING --- DO NOT LEAVE BLANK

PLEASE
EXPLAIN:

SHIP PCM TO > "SEND PCM" "OVERNIGHT"	SALEEN - PCM PROGRAMMING 1225 E. MAPLE RD TROY, MI 48083	SALEEN USE ONLY		SHIP (N) (G) SL (Y) (N) TAG
		REC <input type="text"/>	OLD <input type="text"/>	
		SENT <input type="text"/>	NEW <input type="text"/>	

CONTACT NUMBERS: DIRECT: 1.800.888.8945 ext 36241 FAX: 1.248.743.6479

9/22/2008

**** PLEASE INCLUDE THIS WITH THE PCM YOU ARE SHIPPING ****

**Tools needed:**

- Phillip's #1 screwdriver
- Flathead screwdriver
- Dremel tool or grinder
- 15mm, 10mm, deep sockets, 3/8" drive
- 1/2" Drive breaker bar, 24" long
- Jaw style crank pulley puller
- 1/4" drive air ratchet
- 1/2" impact gun with
- 18mm deep socket, 1/2" drive
- 14mm wrench
- Spline socket
- 15" plumbers (monkey) wrench

Part Number:**Qty**

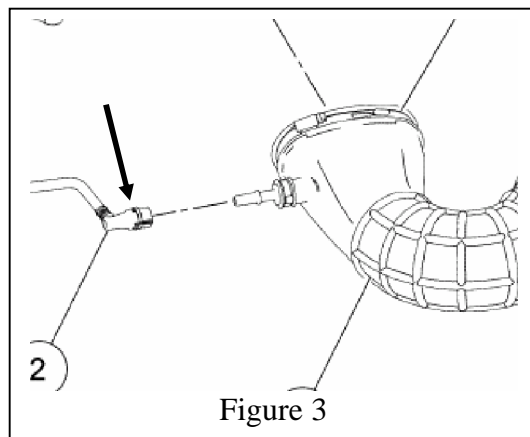
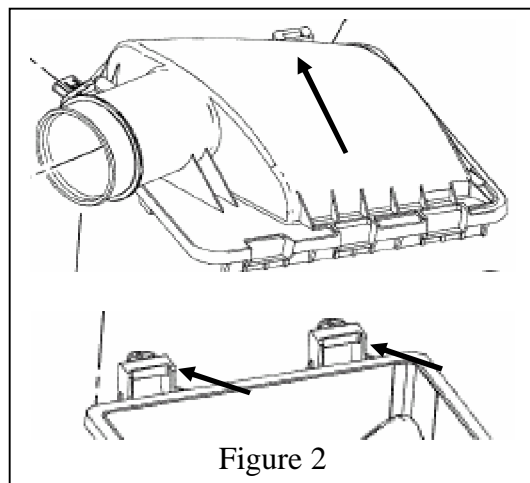
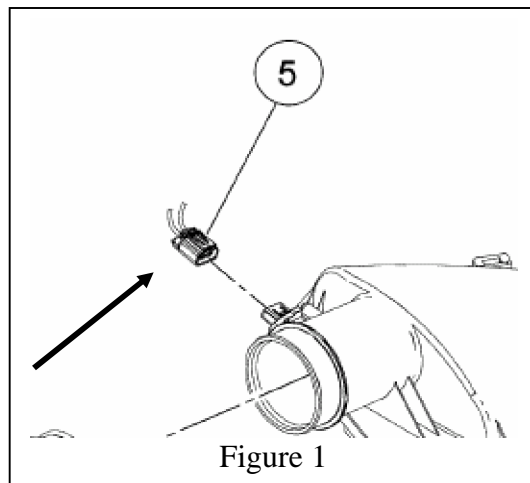
- | | |
|-------------------|---|
| • 10-1602-B14619* | 1 |
| • 00-1602-C13944* | 1 |
| • 06-1602-C13093A | 1 |
| • 00-9001-C13829* | 2 |

Air Inlet Assembly

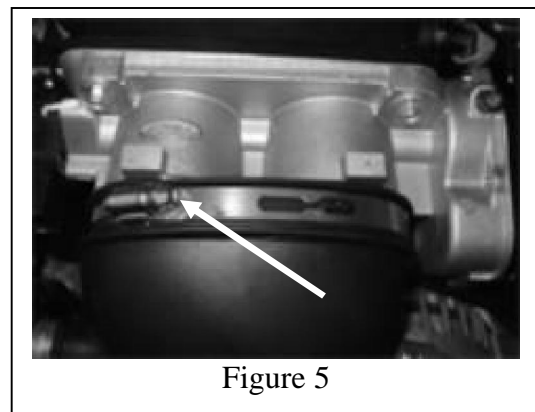
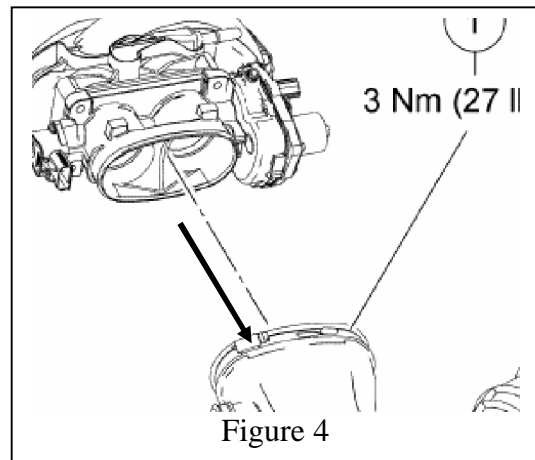
ORDER OF OPERATIONS:

(NOTE: REMOVE ALL ENGINE-RELATED AFTERMARKET PARTS FROM CAR, INCLUDING CHIPS AND PULLEYS, AS THEY WILL INTERFERE WITH FIT AND OPERATION OF THIS KIT).

- 1 Pull back on the locking tab and remove the mass airflow sensor connector from the air cleaner cover, as shown in **FIGURE 1**.
- 2 Remove air cleaner cover from filter box by pulling the two rear clips towards the front of the car. (**FIGURE 2**)
- 3 Remove the crankcase vent tube from the air cleaner outlet pipe. (**FIGURE 3**)



- 4 Loosen clamp connecting the air cleaner outlet pipe to the throttle body and remove the air cleaner outlet pipe. This will be replaced by the Saleen air inlet tube. (**FIGURE 4**)
- 5 Remove the two hose clamps from the ends of the stock air inlet tube (one shown in **FIGURE 5**).



6. Place the hose clamps on the ends of the air inlet duct (10-1602-B14619*) and slip the inlet duct over the throttle body as shown in **FIGURES 6 & 7**. Tighten the hose clamp using an 8mm socket & ratchet.
7. Attach the PCV vacuum line onto the air inlet duct as indicated by the arrow in **FIGURE 8**.



Figure 6



Figure 7



Figure 8

8. Install the inlet duct over the air box top (06-1602-C13093A) as shown in **FIGURE 20**. Tighten the hose clamp using an 8mm socket and ratchet.
9. Take the lower portion of the stock Mustang air box out of the car, and cut out the bottom of the box as shown in **FIGURES 21 & 22**.
10. After making the cut shown (**FIGURE 22**), use a file to deburr roughness and remove loose material left after cut.
11. Replace the airbox bottom into the car, ensuring the air filter is inside, and secure the airbox top onto the base.

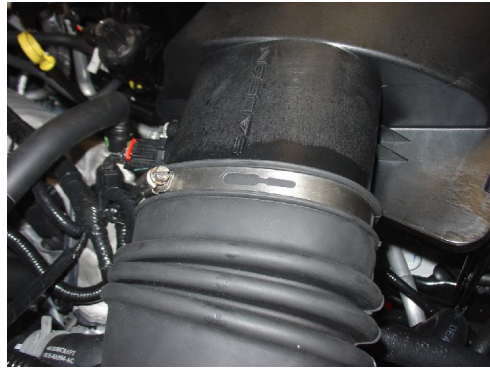


Figure 9

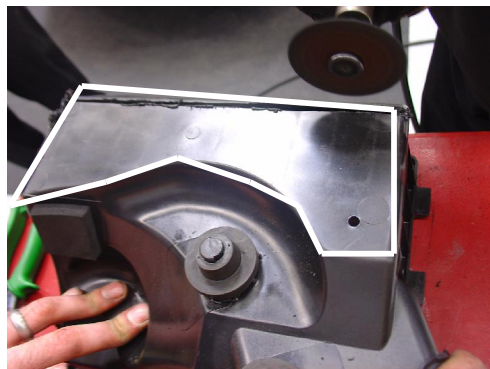


Figure 10



Figure 11

12. Remove mass air sensor from stock air box top, using a T20 Torx driver (**FIGURES 12 & 13**)
13. Install new mass air meter into slot shown on Saleen air box top. (**FIGURE 14**) note that the arrow on the mass air flow sensor (**FIGURES 15 & 16**) points in the direction of air flow in the inlet tube.



Figure 12



Figure 13

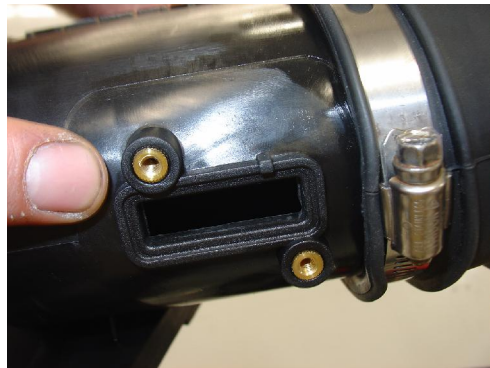


Figure 14



Figure 15



Figure 16

14. Install 2 phillips head screws (**FIGURE 17**) (00-9001-C13829*) to secure the mass air flow meter with a phillips screwdriver. Tighten hand tight.
15. Snap mass air sensor wire into new mass air sensor. (**FIGURE 18**)



Figure 17



Figure 18



Underdrive Pullies

Tools needed:

- 3/8" Drive Impact gun
- 8mm, 17mm, 24mm shallow socket, 3/8" drive
- 15mm, 10mm, deep sockets, 3/8" drive
- 1/2" Drive breaker bar, 24" long
- Jaw style crank pulley puller
- 1/4" drive air ratchet
- 1/2" impact gun with
- 18mm deep socket, 1/2" drive
- 14mm wrench
- Spline socket
- 15" plumbers (monkey) wrench

Part Number:	Qty
• 06-1604-C09725D	1
• 00-9003-C10261*	1
• 00-9004-C11146*	1
• 06-1604-C09869B	1
• 00-9001-C10665*	2
• 06-1604-C10152C	1

1. Using the ¼" air ratchet, with the 8mm socket, remove five bolts from top of radiator fan – this includes those attaching radiator fluid and power steering fluid reservoirs. One bolt is towards the top of the fan on the right side, facing towards the rear of the car. Another on the left side is blocked by the radiator fluid reservoir. (**Figure 1**). Keep all bolts; they will be

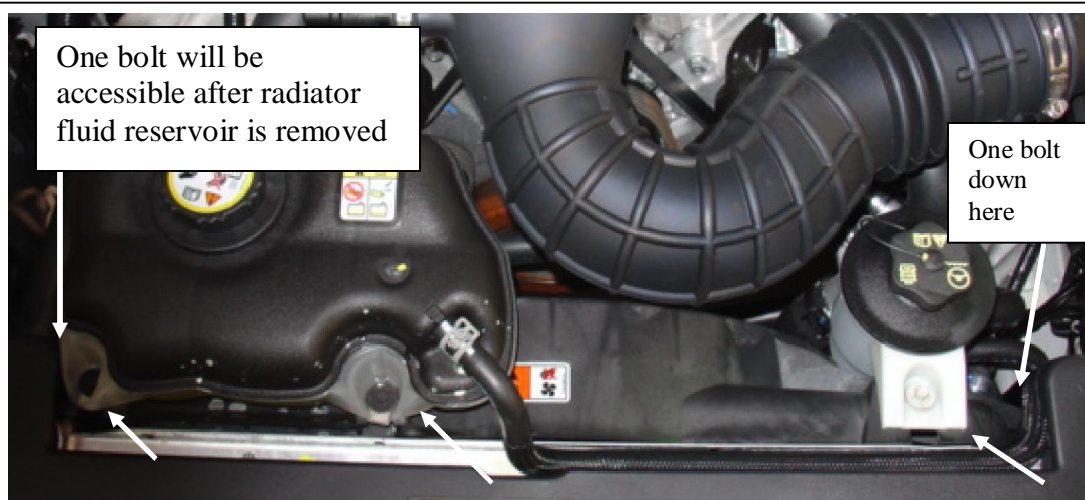


Figure 1

2. Place the two detached fluid reservoirs out of the way. Disconnect the wiring harness for the fan, located on the passenger side of the car (plugs are shown in the white square in Figure 2, with the harness just above the square). Pull the radiator fan out.
3. Remove air inlet tube.
4. With a 1/2" breaker bar release the tensioner to remove the belt.
5. Put the 17mm socket into the 3/8" gun, and remove the bolt for the alternator pulley. Remove alternator pulley and place in appropriate bin (**Figure 3**).
6. With a 3/8" impact gun and a 15 mm socket, remove the two exposed nuts from the bottom of the alternator. Using a 1/4" air ratchet and a 5 mm socket remove the studs. These studs will not be reused.



Figure 2



Figure 3

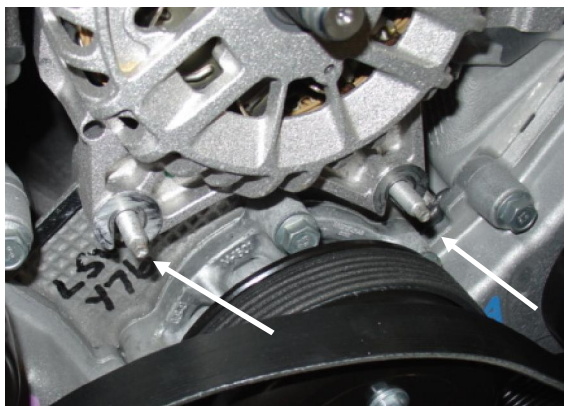


Figure 4

7. Remove black water pump pulley cover. With the 10mm socket on the 3/8" gun, remove the four bolts that hold the water pump pulley in place; (**Figure 5**). Keep all the bolts; they'll be reused.
8. With the half-inch impact gun and 18mm deep socket, remove the single bolt for the crank pulley (**Figure 6**). Keep the bolt; it will be reused.
9. Insert the jaw plate crank pulley puller (white box in **Figure 7**) into the opening where the bolt was in the crank pulley. With the 3/8" impact gun and a 24 mm socket on forward, pull crank pulley off (**Figure 7**).



Figure 5



Figure 6

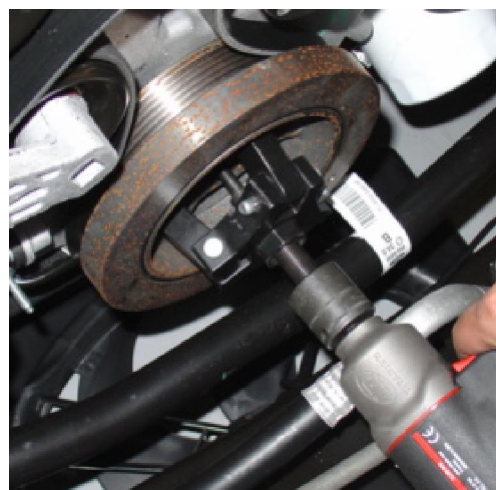


Figure 7

10. Leave the belt attached, but pull loose section out of the way and rest it on top of the engine. Grab a new alternator pulley. Apply Loctite to the nut and bolt, and fasten down alternator pulley with washer and nut. (**Figure 8**).
11. Tighten the nut on the alternator pulley with the 3/8" gun and 24 mm socket (**Figure 9**).
12. Apply Loctite 271 to the two screws that go on the bottom of the alternator (these are the same screws that held the originally held the alternator in place). Insert the two screws by hand, tighten with 3/8" air ratchet gun with a 12mm socket (**Figure 10**).



Figure 8



Figure 9



Figure 10

13. Obtain new crank pulley. Apply Anti-Seize to center (**Figure 11**). Then apply silicone to center (same place as **Figure 11**). Place crank pulley on crank end (larger diameter end of crank pulley should face away from engine block).
14. Screw Crank Damp Pulley (CDP) clockwise into pulley (**Figure 12**). Hold CDP steady with 14mm wrench, tighten with 15" plumber's (monkey) wrench. Unscrew CDP (counterclockwise). (**Figure 13**)
15. Put Loctite on original 18mm crank pulley bolt. Install bolt into the pulley's center with 18mm deep socket. **TIGHTEN BOLT TO 85 FT-LB**
16. Put the belt back into place over crank pulley.
17. Obtain the new water pump pulley put it in place. Secure the new pulley with the original four 10mm bolts. These bolts also must have Loctite on them. Tighten bolts with 10mm socket in 3/8" gun.



Figure 11



Figure 12

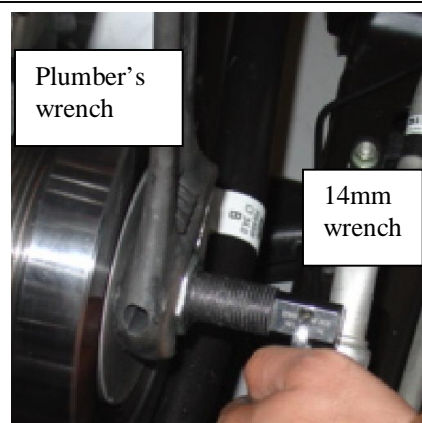


Figure 13

18. With ½” breaker bar, finish putting the belt back into place (**Figure 14**).
19. Tighten alternator pulley bolt when the belt is installed
20. Reinstall fan. **ALWAYS PLUG THE FAN BACK IN!!!! (The plug is on the passenger side of the fan)**. Reattach fan and two fluid reservoirs with original 5 bolts using a ¼” air ratchet and 8mm socket.



Figure 14