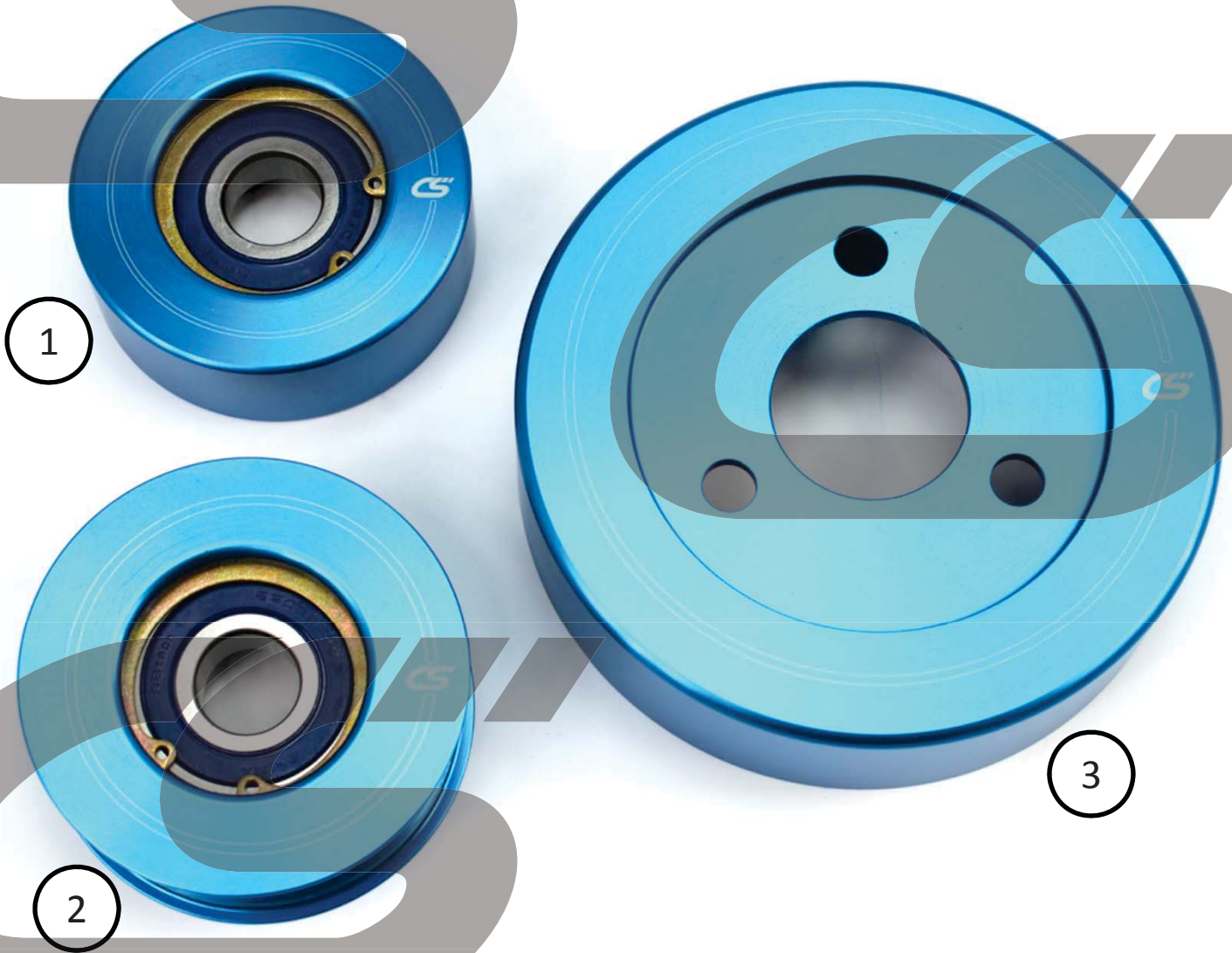


**CorkSport Aluminum Pulley Set**  
2007-2013 Mazdaspeed3 & 2006-2007 Mazdaspeed6



**This package should contain:**

- 1. One (1) CorkSport Aluminum Idler Pulley
- 2. One (1) CorkSport Aluminum Tensioner Pulley
- 3. One (1) CorkSport Aluminum Water Pump Pulley



## CorkSport Aluminum Pulley Set

2007-2013 Mazdaspeed3 & 2006-2007 Mazdaspeed 6



**Thank you for purchasing the CorkSport Aluminum Pulley set for Mazdaspeed3 and Mazdaspeed6.** Add some shine to your engine bay and a bit more pep in your step with the CorkSport light weight pulley set. Manufactured from 6061-T6 aluminum, the CorkSport Pulleys weigh 15% less than OEM. We hope you enjoy your new part! Please let us know your feedback by submitting a review at: <http://corksport.com/2007-2013-mazdaspeed-3-aluminum-pulley-set.html>

### Pre-Installation Notes:



**Make sure your vehicle is on a level surface** prior to starting installation.



**These instructions were written for reference only** and the use of a factory service manual is recommended. Please read these instructions thoroughly prior to starting installation.



**How our instructions work:** To best cover all of our customers experience levels, we have included a table of contents/order of operations along with step-by-step instructions.



**These installation instructions were written using a 2009 Mazdaspeed3.** Other models and years will be similar.

### Materials and Time:



#### General Info.

**Part #:** AXL-6-312  
**Time Est:** 90 min  
**Wrench Rating:** 2/5



#### Tooling List

3/8" Ratchet  
1/2" Ratchet & Breaker Bar  
3/8" – 8mm Socket  
3/8" - 10mm Socket  
3/8" – 12mm Socket  
1/2" – 17mm Socket  
1/2" – 19mm Socket  
1/2" – 21mm Deep Socket  
2 – 1/2" 4" Long Extensions  
10mm Box End Wrench Long  
14mm Box End Wrench  
Flathead Screwdriver  
#2 Phillips Screwdriver  
Jack and Jack Stands



#### Parts List

One (1) CorkSport Aluminum Idler Pulley  
One (1) CorkSport Aluminum Tensioner Pulley  
One (1) CorkSport Aluminum Water Pump Pulley

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## Order of Operations & Table of Contents



### **Support Car on Jackstands**

Section 1: Jack Vehicle Up

Pg. 2



### **Disassembly and Removal**

Section 2: Remove Engine Access Covers

Section 3: Remove the OEM Pulleys

Section 4: Remove the Passenger Motor Mount

Pg. 2

Pg. 3

Pg. 4



### **Installation and Assembly**

Section 5: Assemble the CorkSport Pulley Set

Section 6: Install the CorkSport Pulley Set

Section 7: Reassemble the Vehicle

Pg. 5

Pg. 6

Pg. 7

## Detailed Instructions

### 1. Support Car on Floor Jack/Jackstands or Lift

- a) Verify that the vehicle is on a level and stable surface.
- b) Use a floor jack and jackstands to remove the passenger side front tire/wheel.



Always refer to the floor jack and jack stand manufactures instructions as well as the factory owners manual for your vehicle to determine jacking points and support points. Alternately, use an automotive lift to gain access to the underside of the vehicle.

### 2. Remove the Engine Access Covers

- a) Remove the seven 10mm bolts holding the engine undertray shown with the red circles in Fig 2a, then remove the two push clips circled in blue.
- b) Remove the engine undertray from the vehicle.
- c) Remove the two 10mm bolts holding the inner fender engine access cover shown with the red circles in Fig 2b, then remove the plastic push screw with a #2 Phillips screwdriver shown with the blue circle.
- d) Remove the access cover.

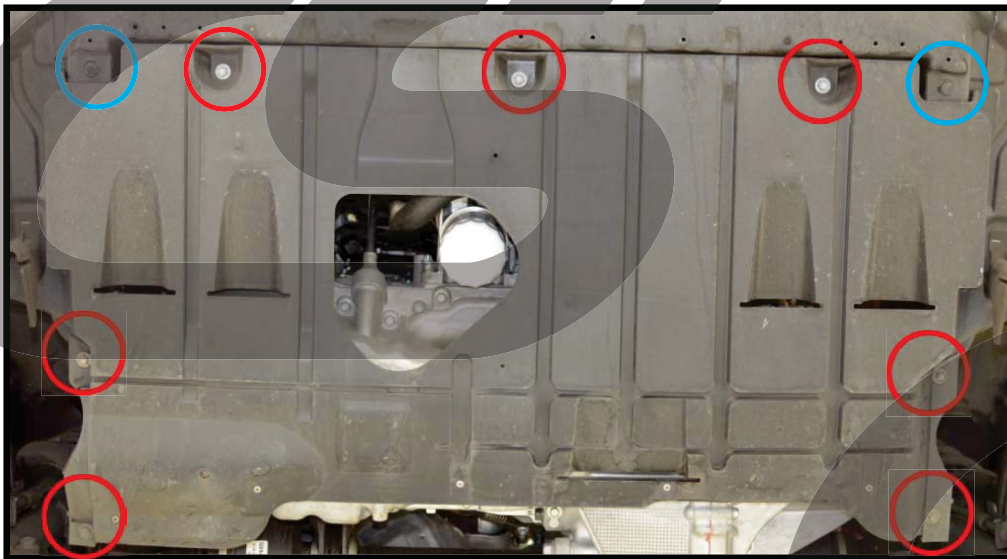


Figure 2a

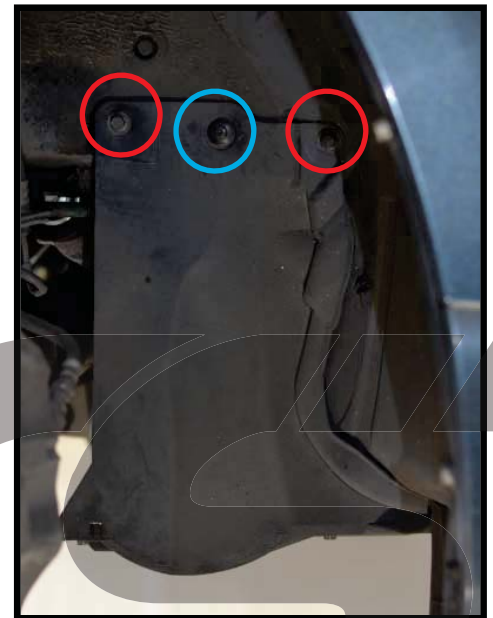


Figure 2b



## Detailed Instructions

### 3. Remove the Pulleys

- a) **Loosen the three bolts holding the water pump** using a long 10mm box end wrench. Red circles in Fig 3a.



The engine may turnover due to trying to loosen the bolts. Allow the engine to turnover until it builds compression and stops; holding the pulley. If this does not work, try pulling down (red arrow in Fig 3a) on the belt to add more tension then jerk bolt with the wrench.

- b) **Leave the water pump pulley attached**, it will be removed in section 4.
- c) **Remove the belt.** Use a 14mm wrench to rotate the tensioner pulley. Red arrow in Fig 3b.
- d) **Remove the two 12mm bolts** holding the tensioner pulley. Red circles in Fig 3c.
- e) **Remove the 10mm bolt** holding the idler pulley. Red circle in Fig 3d.

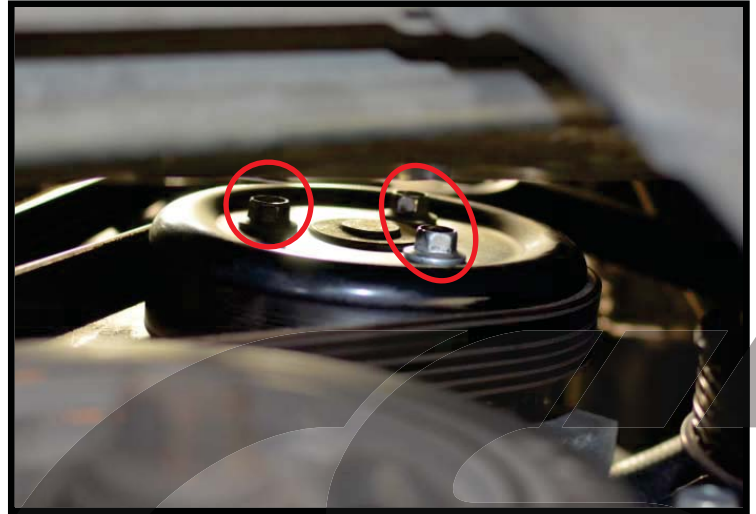


Figure 3a

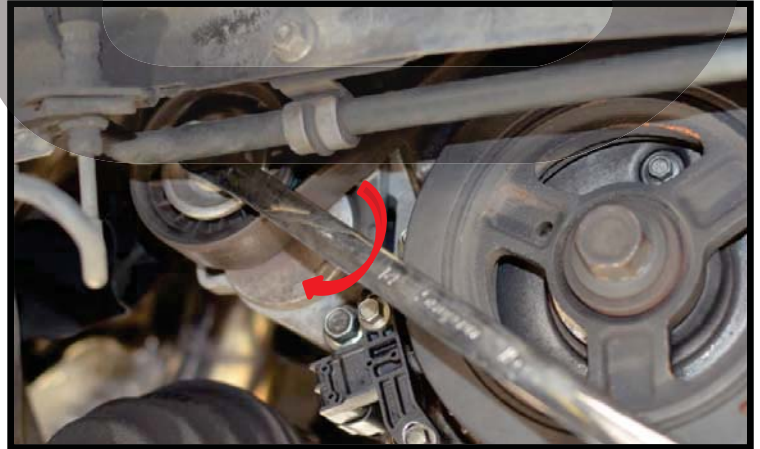


Figure 3b

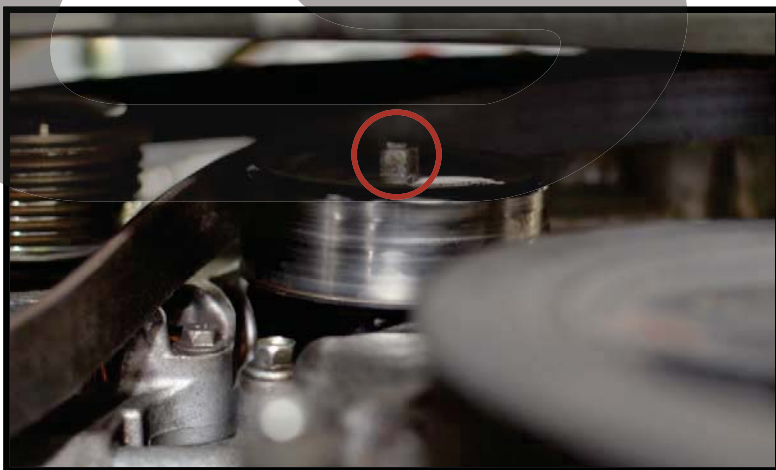


Figure 3d



Figure 3c

## Detailed Instructions

### 4. Remove the Passenger Motor Mount

- a) Remove the two 10mm bolts holding the coolant and power steering reservoir, red circles in Fig 4a, then set to the side.
- b) Support the passenger side of the vehicle with a floor jack. Shown in Fig 4b.
- c) Remove the 8mm bolt holding the grounding cable. Green circle in Fig 4c & 4d.
- d) Remove the 17mm nuts attaching the PMM to the engine, red circles in Fig 4c & 4d.
- e) Remove the 17mm (19mm for CS) bolts holding the PMM to the chassis, blue circles in Fig 4c & 4d.
- f) With the PMM removed, use the floor jack to raise the engine approximately ¼".
- g) Remove the water pump pulley.

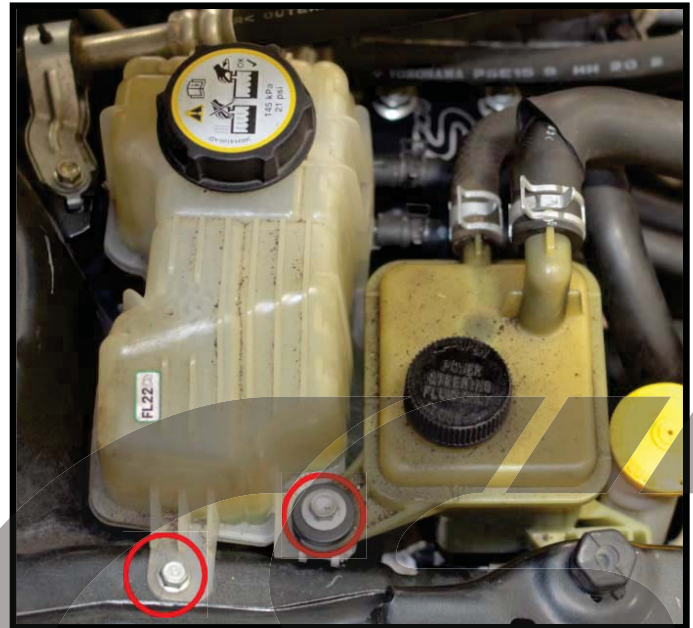


Figure 4a

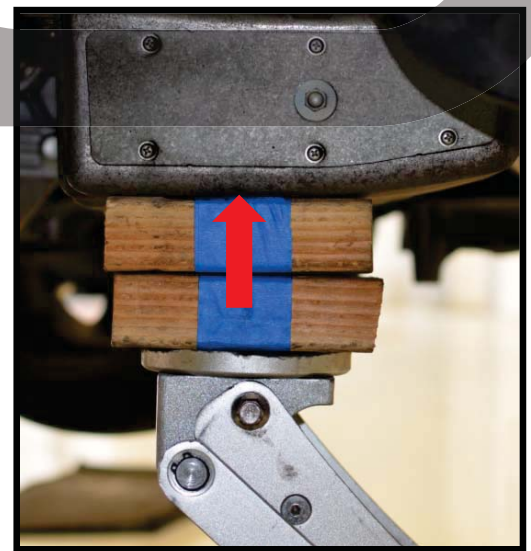


Figure 4b

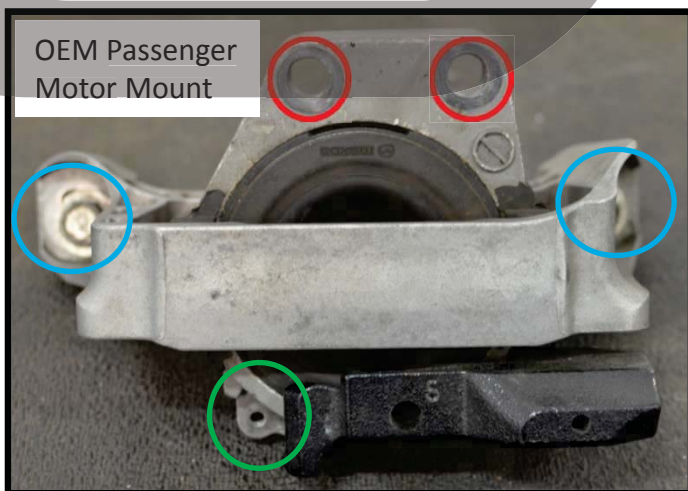


Figure 4d

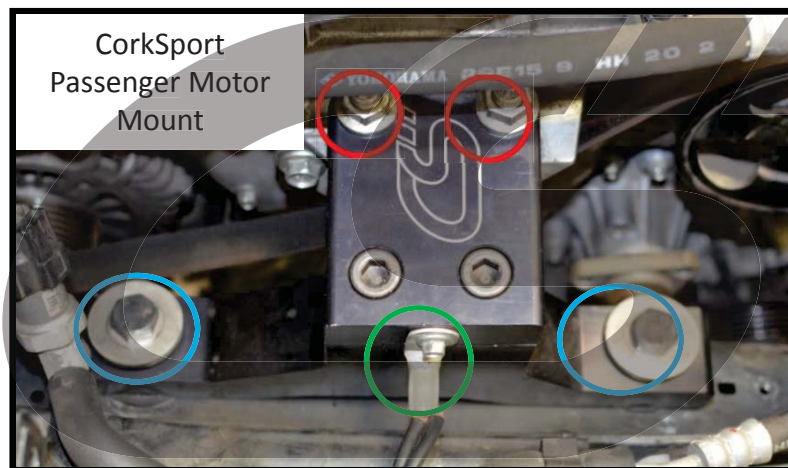


Figure 4c

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## Detailed Instructions

### 5. Assemble the CorkSport Pulley Set

- a) Remove the 14mm bolt holding the tensioner pulley to the tensioner, Fig 5a, then remove the dust shield from the bolt it will not be used for the CorkSport pulley.
- b) Disassemble the OEM idler pulley as shown in Fig 5c. (Assembled idler pulley shown in Fig 5b).
- c) Install the CorkSport tensioner pulley onto the OEM tensioner as shown in Fig 5d. Torque to 35 ft-lbs.
- d) Assemble the CorkSport idler pulley with the OEM hardware as shown in Fig 5b & 5d.
- e) The result should look like Fig 5d.



Figure 5a

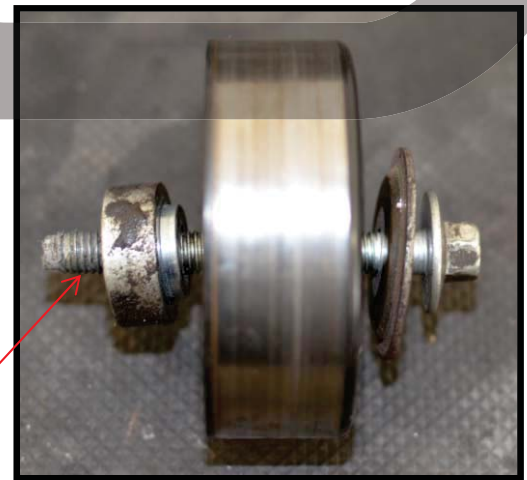


Figure 5b

Plastic Clip  
Goes Here



Figure 5d

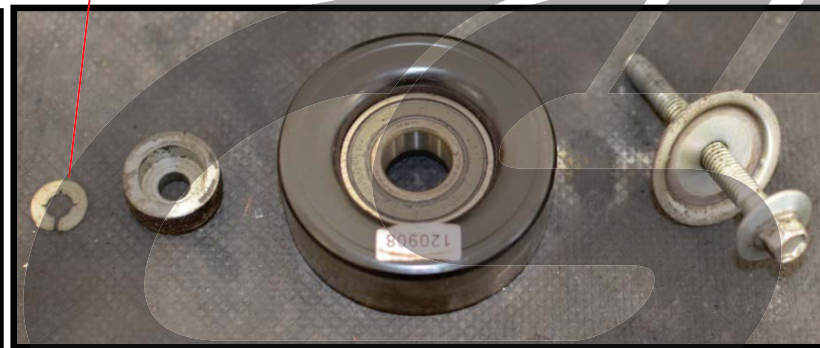


Figure 5c

## Detailed Instructions

### 6. Install the CorkSport Pulley Set

a) With the engine raised approximately  $\frac{1}{4}$ ", install the CS water pump pulley. Shown in Fig 6a & 6b. It is a tight fit, moving the engine up further and forward/back a bit may be necessary.

b) Leave the water pump pulley bolts loose.

c) Install the CS idler pulley in the location shown in Fig 6a. Torque to 16-18 ft-lbs.

d) Install the tensioner in the location shown in Fig 6d. Torque to 20-22 ft-lbs.

e) Install the serpentine belt with the routing shown in Fig 6d.

f) Using the belt to hold the pulley, push down on the belt in the direction of the red arrow in Fig 6c. Torque the bolts to 16-18 ft-lbs.

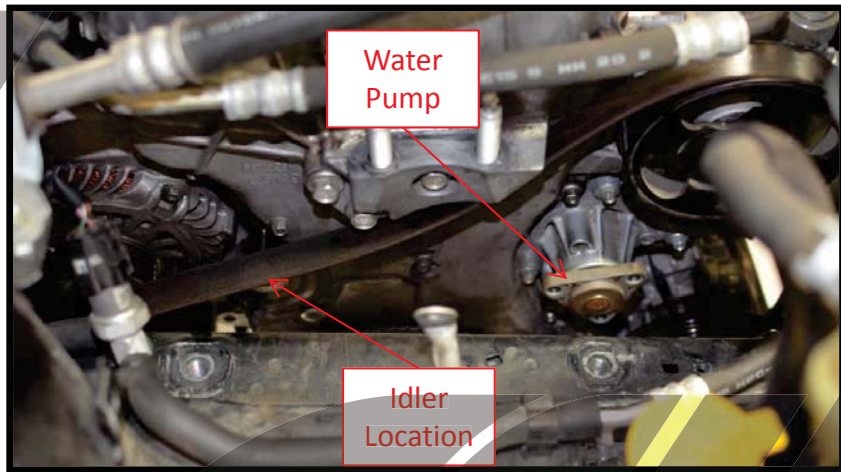


Figure 6a



Figure 6b



Figure 6c

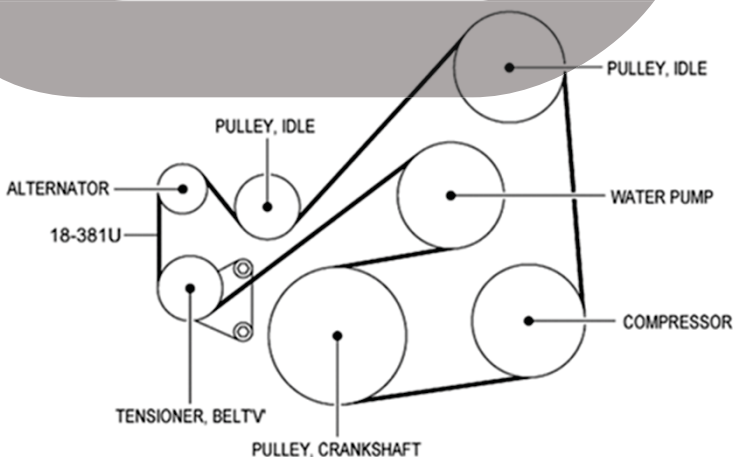


Figure 6d

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## Detailed Instructions

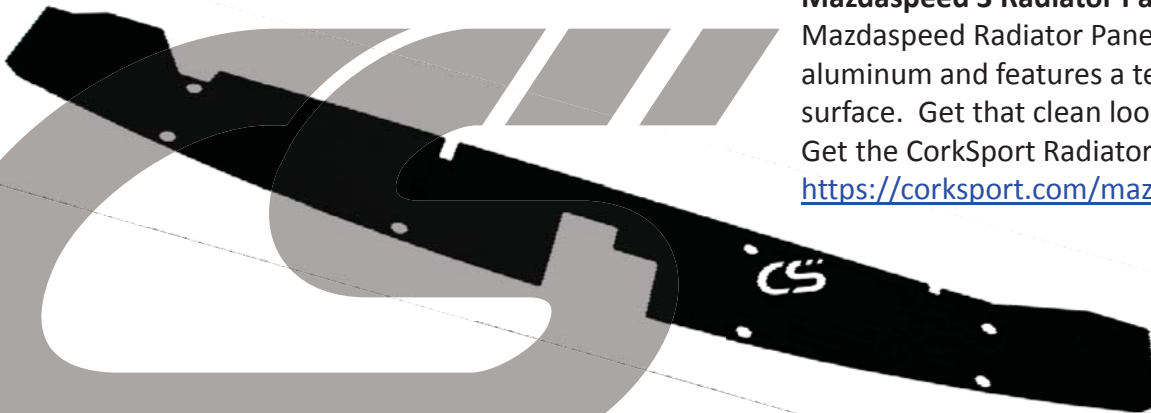
### 7. Reassemble the Vehicle

- a) **Reinstall the passenger motor mount.**
  - a) Torque the 17mm nuts & bolts to 56-76 ft-lbs
  - b) For CS PMM: Torque the 19mm bolts to 53-68 ft-lbs
- b) **Install the grounding wire.**
- c) **Install the coolant and power steering reservoir.**
- d) **Install the inner fender engine access cover and the engine undertray.**
- e) **Install the wheel and torques to the wheel manufacturers suggested rating.**
- f) **Start the vehicle and verify that the belt and pulleys are functioning correctly.**

## What's Next:

### CORKSPORT Mazdaspeed 3 Radiator Panel

Add some style to your engine bay with the CorkSport Mazdaspeed 3 Radiator Panel. The CorkSport Mazdaspeed Radiator Panel is made from 5052 aluminum and features a textured powder coated surface. Get that clean look you have always wanted. Get the CorkSport Radiator Panel at :  
<https://corksport.com/mazdaspeed-3-engine-cover.html>



### CORKSPORT Adjustable Weight Aluminum Shift Knob



Add a personal touch to your interior with the CorkSport Mazda Aluminum Shift Knob. Adjustable weights to adjust your throw, increase the response and tailor it to you. Get the CorkSport adjustable Weight Aluminum Shift Knob at:  
<http://www.corksport.com/corksport-shift-knob.html>