

Part # AXM-6-310

CorkSport
MAZDA PERFORMANCE

CorkSport Aluminum Crank Pulley
Various Models

1



This package should contain:

- ❑ 1. One (1) CorkSport Aluminum Crank Pulley



CorkSport Aluminum Crank Pulley Various Models



Thank you for purchasing the CorkSport Aluminum Crank Pulley. Add some shine to your engine bay and a bit more pep in your step with the CorkSport light weight crank pulley. We hope you enjoy your new part! Please let us know your feedback by submitting a review at: <http://corksport.com/>

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. **These installation instructions were written using a 2013 CX5 FWD.** Other years and models will be similar.



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 the old design of the crank pulley that did not have the windows/cutouts. Installation is exactly the same, the CS pulley will just look slightly different in these instructions.

Materials and Time:



General Info.

Part #: AXM-6-310
Time Est: 30-45 min
Wrench Rating: 2/5



Tooling List

3/8" Ratchet
1/2" Ratchet
1/2" Breaker Bar
3/8" - 17mm Shallow Socket
1/2" - 21mm Deep Socket
1/2" Torque Wrench
Flathead Screwdriver
Jack and Jack Stands
Clean Shop Towel



Parts List

One (1) CorkSport Aluminum Crank Pulley


Need Help With Your Installation?
Call (360) 260-CORK




Order of Operations & Table of Contents

 **Support Car on Jackstands**
Section 1: Jack Vehicle Up

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 **Disassembly and Removal**
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Section 3: Remove the OEM Crank Pulley

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 **Installation and Assembly**
Section 4: Install the CorkSport Aluminum Crank Pulley
Section 4: Reinstall the Engine Access Cover

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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 Cover

- a) **Remove the cover to gain access to the pulley.** Use a flathead screwdriver to pop out the plastic clips **circle in red** in **Figure 2a**. There is also a clip located at the **red dot**.

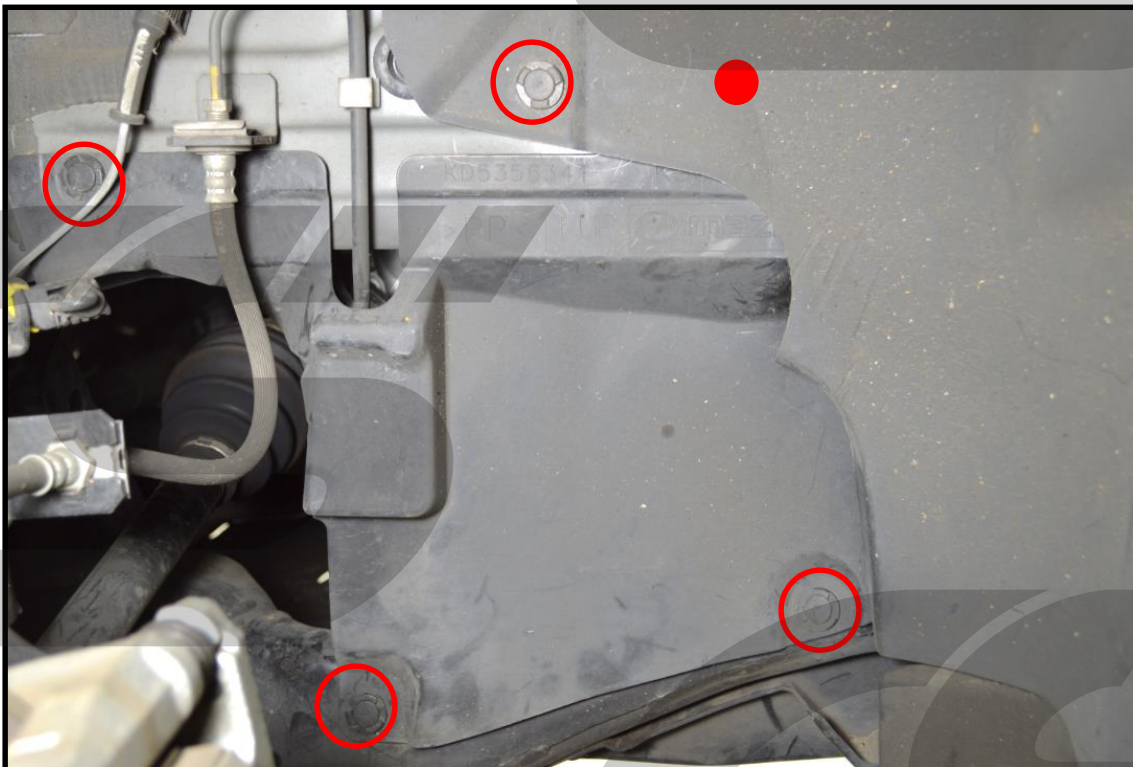


Figure 2a

Detailed Instructions

3. Remove the OEM Crank Pulley



Put the vehicle in Neutral (Manual or Automatic) so the crank can rotate freely.

a) Remove the serpentine belt.

Use the 3/8" ratchet and 17mm socket to remove the belt tension. In **Figure 3a** the **blue dot** is the tensioner pulley and the **blue arrow** is the 17mm bolt. Place the wrench on the 17mm bolt and rotate the wrench in the direction of the **red arrow**.

b) Take the belt off while loose.

You only need to remove the belt from the crank pulley.

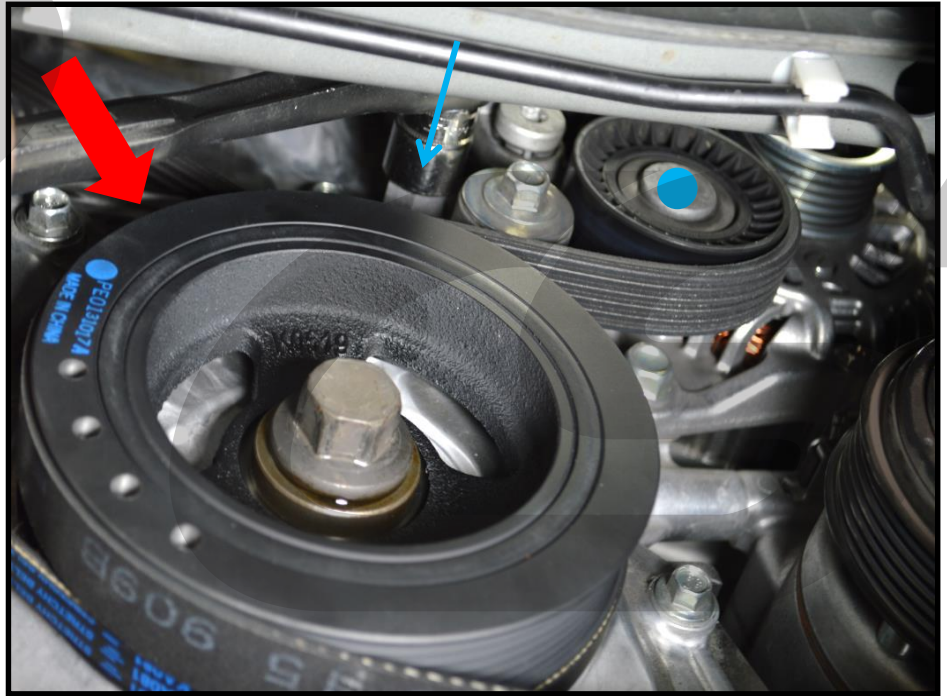


Figure 3a

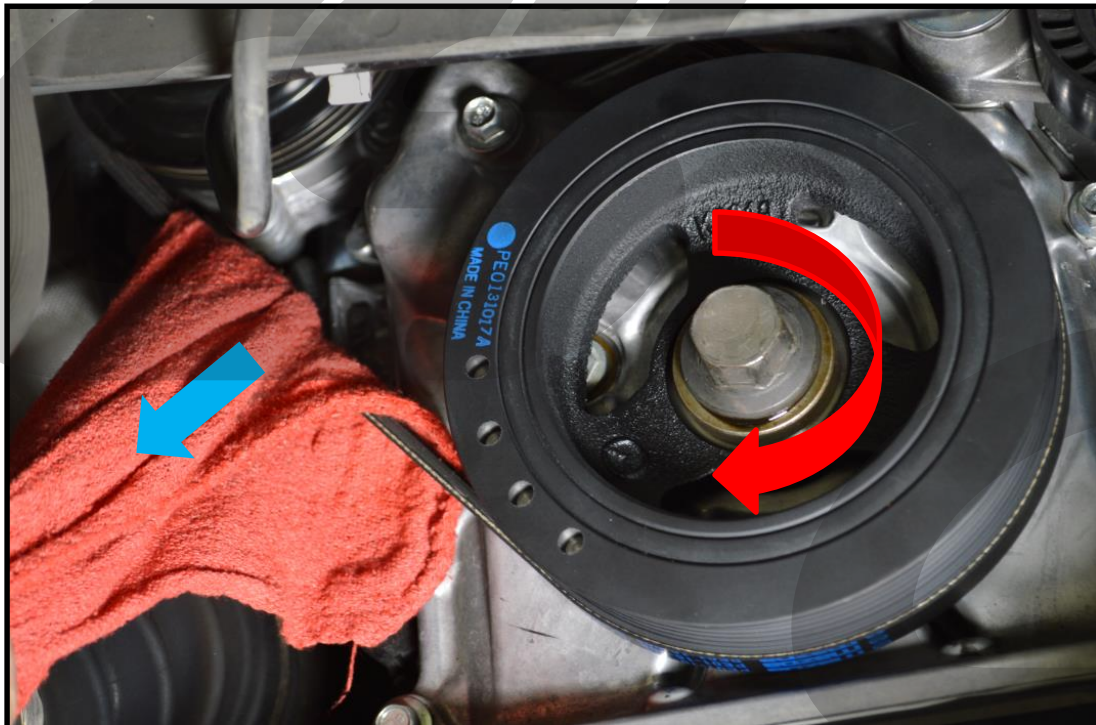


Figure 3b


- #### c) Remove the water pump belt (aka the stretchy belt).
- Shown in **Figure 3b**, use the clean shop towel to pull the belt in the direction of the blue arrow and outward while rotating the crank clockwise. This should walk the belt off the water pump pulley.

Detailed Instructions

3. Remove the OEM Crank Pulley (continued)


Manual Transmission: (for Automatic skip to step 3f)

- d) **Put the vehicle in gear and have another person press the brake pedal.** This should prevent the engine from turning over.
- e) **Remove the crank pulley** with the 21mm socket and breaker bar, then pull the pulley off the crank. If this is not working, use an electric or air impact gun to remove the bolt at the center of the pulley.

 Now is a good time to inspect the belts for any wear. Typical wear can include cracks, missing chunks, tears, or fraying. Also inspect the seal for any cracks, missing chunks, or tearing.

Automatic Transmission: (for Manual skip to section 4)

- f) **First, put your vehicle in park and have another person press the brake pedal.** Remove the crank pulley with the 21mm socket and breaker bar, then pull the pulley off the crank. If this is not working, you will need to follow the below steps.

 You can remove the pulley with a 21mm socket and electric/air impact gun but you will need to perform the following steps prior to tightening the new pulley.

- g) **Remove the rear section of the plastic under tray.** Remove six (6) push clips using a flathead screwdriver or trim removal tool (red circles in Figure 3c). Then remove eight (8) bolts using a 10mm socket (blue circles in Figure 3c).

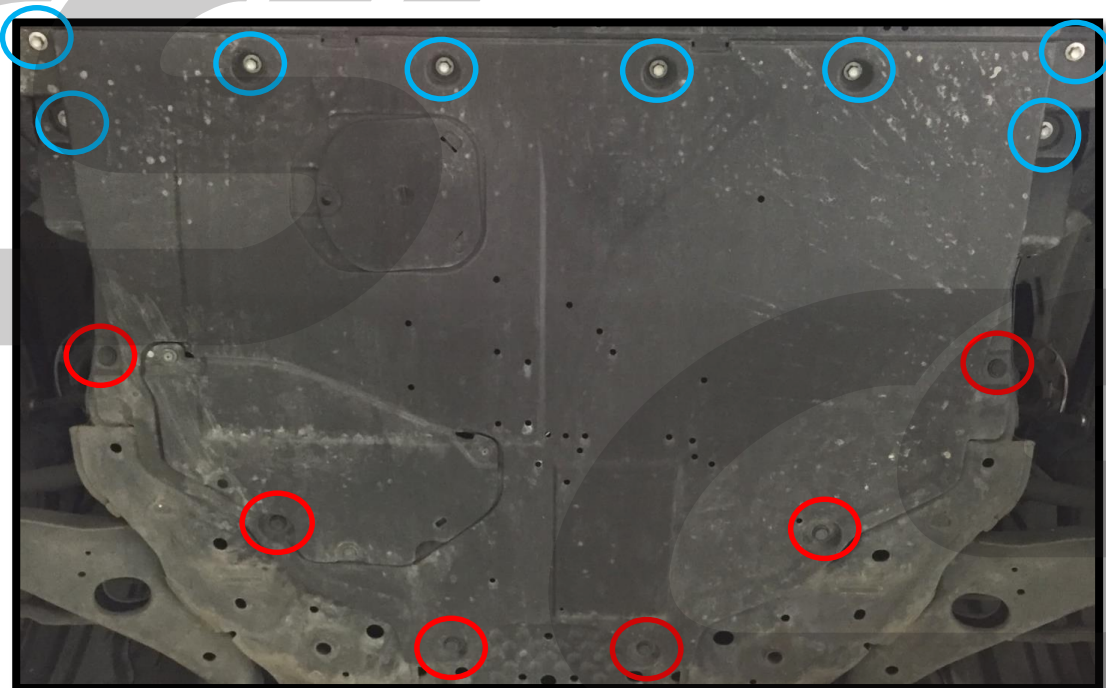


Figure 3c

Part # AXM-6-310

Detailed Instructions

3. Remove the OEM Crank Pulley (continued)

Automatic Transmission: (for Manual skip to section 4)

- h) **Locate the small access hole shown in Figure 3d.** You should be able to see the flywheel through this hole.

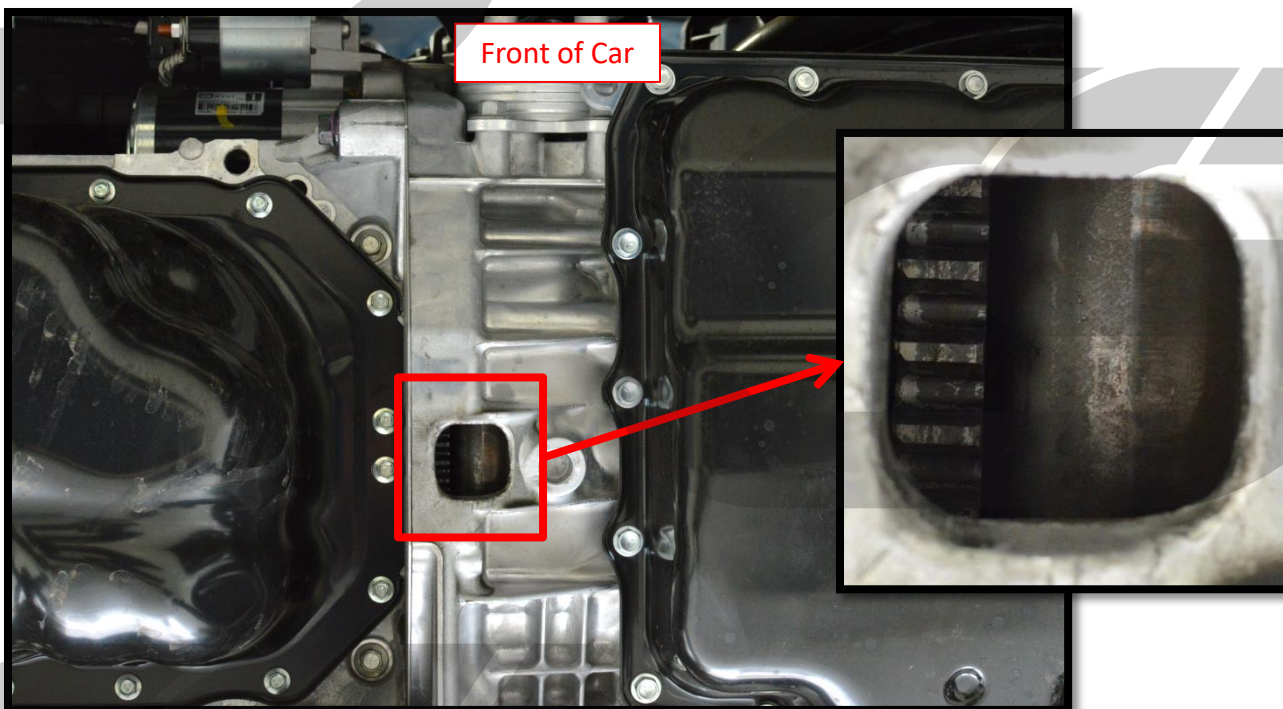


Figure 3d

- i) **Have another person use a large screwdriver or small pry-bar to prevent the flywheel from rotating (see Figure 3e).**
- j) **Use a 21mm socket and breaker bar to loosen the bolt on the crank pulley.** Then remove the crank pulley.



Now is a good time to inspect the belts for any wear. Typical wear can include cracks, missing chunks, tears, or fraying. Also inspect the seal for any cracks, missing chunks, or tearing.



Figure 3e

Need Help With Your Installation?
Call (360) 260-CORK

Detailed Instructions

4. Install the CorkSport Aluminum Crank Pulley

- a) **Slide the CorkSport pulley onto the end of the crankshaft.** Ensure the rectangular keyway aligns with the key on the crank. Once positioned correctly, gently tap the pulley in the center using a rubber mallet or deadblow hammer to fully seat the pulley
- b) **Install the CorkSport pulley** with the 21mm socket and torque wrench. Torque to 67-80 ft-lbs. See steps 3d-3e for preventing rotation with Manual Transmission. See steps 3f-3j for preventing rotation with Automatic Transmission.
- c) **Install the water pump belt (aka the stretchy belt).** Shown in **Figure 4a**, place the belt in the inward set of grooves on the crank pulley. Then place the belt around the smooth section of the water pump pulley. Use the 21mm socket and ratchet to rotate the crank clockwise while pushing the edge of the belt towards the engine and into the grooves of the water pump pulley (**blue arrow**).

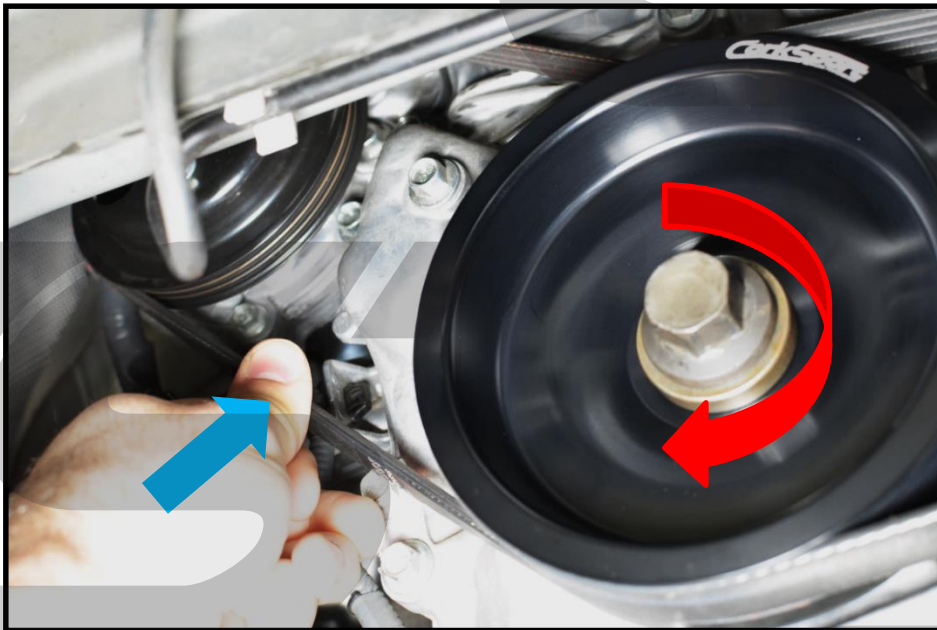


Figure 4a

- d) **Repeat step 3a to install the serpentine belt.**



Verify that the belts are correctly positioned in the grooves of all the pulleys. Belt misalignment can result in damage to the belts and engine.

A Simple Check: Feel the belt all around the pulley. You should not feel the belt sticking outward from the edge of the pulley, the belt should be flush.

Detailed Instructions

5. Reinstall the Engine Access Cover(s)

- a) **Install the cover with the pop clips.**
Refer to **red circles** in **Figure 5a**.

- b) **Automatic Transmission Only:** If removed, reinstall the plastic undertray by installing the eight (8) 10mm bolts and six (6) push clips shown in **Figure 3c**.

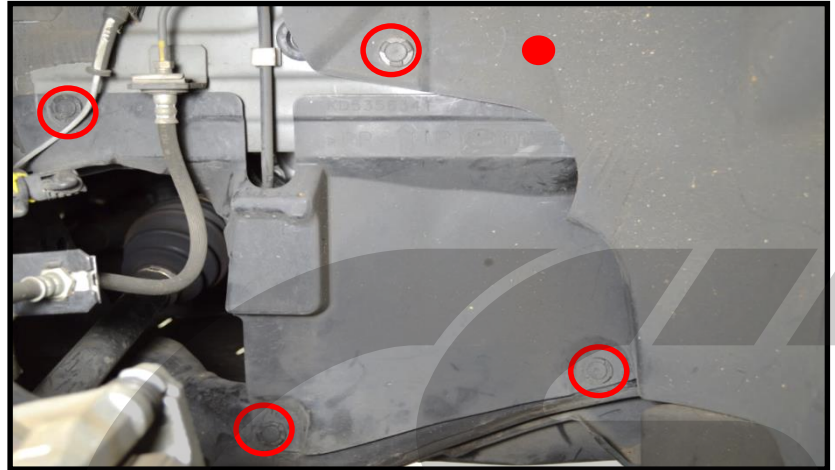


Figure 5a

What's Next:

[CORKSPORT 2013+ CX-5, Mazda 6, Mazda 3 SkyActiv Power Series Short Ram Intake](#)



One of the easiest and most beneficial performance enhancements you can do for your vehicle, the CorkSport Power Series Short Ram Intake replaces your factory airbox with an open intake system allowing more air into the intake chamber. Engineered with exacting tolerances, the CorkSport SkyActiv Short Ram Intake includes our precision machined MAF housing made from billet aluminum, a durable dry flow air filter and custom reinforced silicone connector. In initial testing with the 2.0 Liter SkyActiv engine, the CorkSport Short Ram Intake netted peak gains of +5 HP and +6 lb torque at the wheels.

[CORKSPORT 2013+ Mazda CX5, Mazda 3, Mazda 6 Exhausts](#)



Get added power and upgrade the look of your 2013+ Mazda CX5, Mazda 3 or Mazda 6 with the CorkSport Power Series Exhausts. As always, the CorkSport Mazda exhaust is constructed from T-304 stainless steel and is TIG welded with precision laser cut flanges and features full mandrel bending to eliminate any possible flow restrictions. The CorkSport Exhausts can be found at our online catalog here:

[CorkSport 2013 CX5 Power Series Exhaust](#)

[CorkSport 2014+ Mazda 6 or Mazda 3 Power series Exhaust](#)