

# PERRIN

## PERFORMANCE

### FA Engine Lightened Crank Pulley

2014-04-30

Thank you for purchasing this PERRIN product for your car! Installation of this product should only be performed by persons experienced with installation of aftermarket performance parts and proper operation of high performance vehicles. If vehicle needs to be raised off the ground for installation, the installer must use proper jacks, jack-stands and/or a professional vehicle hoist for safety of the installer and to protect property. If the vehicle is lifted improperly, serious injury or death may occur! Please read through all instructions before performing any portion of installation. If you have any questions, please contact our tech department prior to starting installation. We can be reached in any of the following methods:

Email [Tech@PERRINperformance.com](mailto:Tech@PERRINperformance.com)  
Instant Chat off the main page of [www.PERRINperformance.com](http://www.PERRINperformance.com)  
Or simply call our tech team at 503-693-1702

Modifications to any vehicle can change the handling and performance. As with any vehicle extreme care must be used to prevent loss of control or roll-over during sharp turns or abrupt maneuvers. Always wear seat belts, and drive safely, recognizing that reduced speeds and specialized driving techniques may be required. Failure to drive a vehicle safely may result in serious injury or death. Do not drive a vehicle unless you are familiar with its unique handling characteristics and are confident of your ability to maintain control under all driving conditions. Some modifications (and combinations of modifications) are not recommended and may not be permitted in your state or country. Consult the owner's manual, service manual, instructions accompanying these products, and local laws before purchasing and installing these modifications. You are responsible for the legality and safety of the vehicle you modify using these components.

#### SPECIAL NOTES:

- The use of a factory service manual is highly recommended for installation. These can be purchased online at <http://techinfo.subaru.com>.

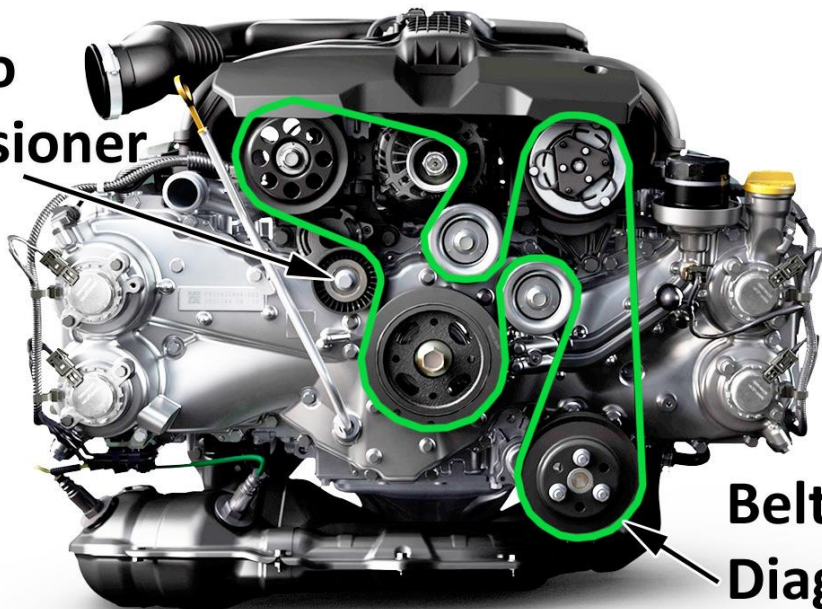
#### Included Parts with PERRIN Crank Pulley:

- (1) PERRIN Lightened Crank Pulley

#### Installation Instructions

1. Locate automatic belt tensioner on front of engine. Using 14mm socket and breaker bar, remove tension from belt and remove serpentine belt from engine. Take note of belt orientation.
2. Place transmission in 5<sup>th</sup>(or 6<sup>th</sup>) gear. Apply parking brake to prevent vehicle from moving during removal. If car is equipped with automatic transmission, please consult factory service manual. This will require a special tool that locks the flex plate from turning.

Auto  
Tensioner



Belt  
Diagram

Above Diagram for FB Engine (2012+ Impreza), FA engine (BRZ/FR-S) has similar routing except upper middle pulley is missing.

3. Using a breaker bar and 22mm socket, loosen crankshaft bolt turning it counter clockwise. This can be very tight and will require over 100ft-lbs of force along with loading the drivetrain slightly. Take care not to damage other pulleys and radiator hoses while loosening.
4. Remove bolt and pulley from engine.
5. Make sure nose of crankshaft is clean of corrosion or contaminants before installing new pulley. Use a Scotchbrite pad and penetrating oil to clean nose of crankshaft if needed.
6. Slide PERRIN Lightened pulley onto crank. Slowly turn pulley to align keyway with key on crank, and continue to slide pulley on. **Failure to line up key with keyway on pulley will result in damage to pulley and nose of crankshaft. NOTE: If crank pulley doesn't go right on check that key hasn't slid off the crank or lifted off. This is very rare but can happen.**
7. Apply engine oil to crankshaft pulley bolt seat and threads. Tighten bolt to 33ft-lbs. Taking note of angle, tighten bolt to 94ft-lbs. During this final tightening, bolt should have tightened more than 45 degrees. If tightening angle is less than 45 degrees, replace bolt.
8. Place transmission into neutral.
9. Reinstall belt to all pulleys in the same direction they came off, but leave belt off automatic tensioner pulley.
10. Using 14mm socket and prybar, un-tension tensioner and install belt to automatic tensioner pulley. Slowly release tensioner making sure belt stays aligned.
11. Start engine and check for belts being misaligned and check for crank pulley wobble. If belts are aligned and crank pulley isn't wobbling then installation is complete. If either problem exists, recheck your installation.

**Questions, Comments and Suggestions Contact: [Tech@PERRINperformance.com](mailto:Tech@PERRINperformance.com)**

**Visit Our Website for Instant Chat Options at [www.PERRINperformance.com](http://www.PERRINperformance.com)**

**Call Our Tech Team at 503-693-1702**