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02-21-2007, 02:40 PM #1

ChinoCharles
Resident Sh!t Disturber



View User's Garage
Drives: 07 Manual LB
Join Date: Jul 2006
Location: Ohio, USA
Posts: 3,222

DIY: Nonstop Tuning CR-Lite Pulley

This is a DIY guide for the NST (NonStopTuning) CR-Lite Crank **Pulley** for the Yaris
http://www.nonstoptuning.com/pKitToyYaris.htm

Here it is... DIY for the NST crank **pulley**. This install was done on a liftback. Sedans may be a little different, but the basics still apply. Also, a couple pictures I wanted for this didn't turn out, but there are still plenty to give everyone a strong foothold on what they're facing.

First, the numbers...
OEM TOYOTA YARIS CRANK **PULLEY** - 50.00 oz (3.125 lbs)
NST CR-LITE CRANK **PULLEY** - 12.5 oz (0.78125 lbs)

At the very least you will need...

12 and 14 MM sockets w/ a 3/8" ratchet
19 MM socket with a 3/4" drive ratchet (you can get away with a smaller ratchet, I'll explain)
Torque wrench
Rubber mallet
Grease (we used chain wax)

Now, for the bad news. You will have one hell of a time getting the crank bolt off without air tools. Some of you guys are built and have more leverage than me, but I weight 160 pounds soaking wet and without a 5 foot ratchet handle I wasn't going anywhere. Just be advised if you are going to use hand tools, bring a pipe or something that will fit over the handle of your ratchet to give you more leverage so you can torque that crank bolt off... or bring a really, really strong friend.

Thus, the optionals...
AIR RATCHET!!!
Picture 015.JPG
Loctite (if you want to be really pro)

The crank **pulley** is located in the wheel well behind the right front tire. First thing you want to do is jack your car up and remove that wheel. It will also help if you turn your steering wheel all the way to the right to get the brakes out of your way a bit.

There is a piece of protective plastic covering the bottom of the block. It is held in by six bolts, four through plastic and two through metal. The metal bolts have much thinner threading. The bolts are all located either in the wheel well or underneath the right side of the front bumper. Remove these bolts and remove the plastic covering to reveal the block and the shitty OEM **pulley**.

Picture 006.JPG
Picture 007.JPG

The next step is releasing the tension on your belt. Luckily, these are Toyotas and our

namesake made this process very easy. There is a 14mm bolt next to the alternator that sits in a banana-shaped groove. First, mark the position of the bolt so you know how much tension was on the belt stock. Now if you loosen this bolt, the alternator and its **pulley** will slide forward, thus releasing tension on your belt. It isn't easy, but a quick couple bashings with a prybar and a rubber mallet should do the trick. Some members expressed difficulty with this step. If your alternator doesn't want to move forward, feel free to loosen the lower bolt on the alternator as well to provide for easy movement. It is also 14mm.

Picture 013.JPG

Now comes the fun part. You're one bolt away from having your old **pulley** off. As I said before, if you have air tools this should be cake. If you don't, get the beefiest ratchet you can find and give yourself as much leverage as you can. I wouldn't use a 3/8" drive for this... you'll risk snapping your ratchet. A 3/4" drive would work. I wouldn't go any less than 1/2". The bolt is 19 MM.

You'll see a little hole in the stock **pulley** near the center. There is a small metal dowel in this hole. DO NOT LOSE THIS DOWEL. You'll need it to align the new **pulley**. Remove the stock **pulley** and remove the dowel from it. Place your stock **pulley** in your home office for use as a gangster-ass paperweight.

Below is a picture of the crank without the **pulley** attatched. We used whiteout to highlight the hole the dowel will go into. Theres the dowel... its about the size of a tic-tac. Watch it.

Picture 012.JPG

Roll the dowel around in a bit of grease before inserting it into the hole in the NST **pulley**, then use the dowel position to align the NST **pulley** to the crankshaft. At this point you can put a touch of loctite on the 19mm crank bolt, but it isn't necessary. Spin the bolt finger-tight by hand, then use your torque wrench to torque the crank bolt to a whopping 128 ft-lbs. If the **pulley** wants to spin with you, have a friend hold the **pulley** in place. A good way to do this is to have him loop a shop rag through one of the holes and provide opposing pressure.

Picture 001.JPG

You're almost there! Remember marking the stock position of the 14mm bolt near the alternator? Move the alternator back to stock position to put tension on the belt again.

Picture 003.JPG

Now use a regular old ratchet to spin the crank **pulley** a few times and make sure the belt is sitting nicely in the grooves.

Picture 004.JPG

Thats it... put your shielding and your wheel back on and go to town.

Install with air tools took 45 minutes from when I turned my car off to when the garage was clean... 8 bolts and a dowel. Cake. Before you do the install, throw your car into neutral and give it a few good revs. It'll be the last time your car revs that slow. After the install, stomp it and notice the difference. Your engine isn't making more power... the pieces attatched to it just went on a diet, and now your engine doesn't have to work as hard to get things spinning.

This mod will give modest horsepower gains throughout the entire powerband as well as improve gas mileage at normal commuting speeds. Group buyers can expect theirs March 1st. The rest of you can now buy them from NST's main page at http://www.nonstoptuning.com.

Oh, and one last thing...

NST FTW!!!



_____



Last edited by ChinoCharles : 04-18-2007 at 09:32 PM.

user: offline

quote

02-21-2007, 02:41 PM #2

ChinoCharles
Resident Sh!t Disturber



View User's Garage
Drives: 07 Manual LB
Join Date: Jul 2006
Location: Ohio, USA
Posts: 3,222



And the difference...

Picture 009.JPG
Picture 010.JPG
Picture 011.JPG

_____



user: offline

quote

02-21-2007, 03:01 PM #3

CASTREX
Who said Yaris was slow?



View User's Garage
Drives: Yaris Sedan 07'
Join Date: Nov 2006
Location: Costa Rica
Posts: 288

Please tell me you weight both pulleys??? What's the diff?

user: offline

quote

02-21-2007, 08:50 PM #4

ChinoCharles
Resident Sh!t Disturber

I didn't weigh both pulleys. It doesn't take a rocket scientist to realize there is a huge difference between the two. If anyone would like to weigh the two, I'll add it to the DIY. 

_____



View User's Garage
Drives: 07 Manual LB
Join Date: Jul 2006
Location: Ohio, USA
Posts: 3,222

user: offline



quote

02-22-2007, 04:02 AM #5

eTiMaGo
Moderator



View User's Garage
Drives: World's Sexiest Yaris
Join Date: Sep 2006
Location: Bangkok, Thailand
Posts: 2,260

user: online

pimpin'!

Can't wait to see a weird groovy red donut in my engine bay soon!

_____



quote

02-22-2007, 11:27 AM #6

spkrman
★★★★★



View User's Garage
Drives: 07 yaris LB
Join Date: Nov 2006
Location: IL
Posts: 1,400

user: offline

why *wouldnt* you weigh the 2, lol.

I plan on weighing mine on the fedex scales :)

_____
Mark Potts ~ speakerman525 on AIM ~ http://www.spkrman.com
http://www.zpiracing.net



ZPI Turbo Install Thread!

quote

02-22-2007, 12:33 PM #7

Doc Zaius
CCRD Intake FTW!



View User's Garage
Drives: the girls *crazy*!
Join Date: Nov 2006

Awesome writeup!!! Can't wait for spring and getting this on the car!

_____
2006 Red RS 5-door
TRD/Eibach Lowering Springs
Lots more to come...

Don't be a smarty-pants... there will *always* be someone who knows more than you!

Location: NCR, ON, Canada
Posts: 333

user: online

quote

02-22-2007, 01:05 PM #8

PetersRedYaris
★★★★



View User's Garage
Drives: 07' Yaris 3 door
Join Date: Nov 2006
Location: Mid-West
Posts: 527

user: offline

Nice! Do you notice ANY increase in engine vibration? I would also like to know the weights of each, just to know.

quote

02-22-2007, 01:36 PM #9

ChinoCharles
Resident Sh!t Disturber



View User's Garage
Drives: 07 Manual LB
Join Date: Jul 2006
Location: Ohio, USA
Posts: 3,222

user: offline

No increase in engine vibration whatsoever. The car feels stock with a little bit more pep... its nothing thats going to send you barrelling to 100 MPH or anything, but its there and it makes life easier.

You guys just won't get off this specific weight thing, will you? I'll see if I can't get some numbers in the next couple days then.

_____



quote

02-22-2007, 01:42 PM #10

Chris07LB
★★★★★



View User's Garage
Drives: Yaris Liftback
Join Date: Jun 2006
Location: New Jersey
Posts: 2,779

user: online

Well it's sure no Chris07LB DIY Write_Up, (bustin chops!) but I knew you could do it man.

_____

Commuter StreetFighter



"Most people are too scared to be different. This is why they'll never be remembered."

quote

02-22-2007, 01:43 PM #11

ChinoCharles
Resident Sh!t Disturber



View User's Garage
Drives: 07 Manual LB
Join Date: Jul 2006
Location: Ohio, USA
Posts: 3,222

user: offline

Quote:

> Originally Posted by **Chris07LB**
> *Well it's sure no Chris07LB DIY Write_Up, (bustin chops!) but I knew you could do it man.*

I may have one under my belt, but I know who runs the show!

_____



quote

02-22-2007, 01:47 PM #12

Chris07LB
★★★★★★



View User's Garage
Drives: Yaris Liftback
Join Date: Jun 2006
Location: New Jersey
Posts: 2,779

user: online

Dont mind me, im just jelouse!

_____
Commuter StreetFighter



"Most people are too scared to be different. This is why they'll never be remembered."

quote

02-22-2007, 02:22 PM #13

CASTREX
Who said Yaris was slow?



View User's Garage
Drives: Yaris Sedan 07'
Join Date: Nov 2006
Location: Costa Rica
Posts: 288

user: offline

[quote=ChinoCharles;57109]You guys just won't get off this specific weight thing, will you? QUOTE]

No we won't!!! The porpouse of this mod is weight reduction... ain't that right?

quote

02-22-2007, 02:33 PM #14

ChinoCharles
Resident Sh!t Disturber

As I've stated before, in-hand estimation had me guessing the NST **pulley** is about 80% lighter than stock. If you guys want numbers, though, then numbers you will get.

_____



View User's Garage
Drives: 07 Manual LB
Join Date: Jul 2006
Location: Ohio, USA
Posts: 3,222

user: offline



quote

02-22-2007, 02:43 PM #15

Nutzoids



View User's Garage
Drives: 07 Yaris Liftback
Join Date: Nov 2006
Location: Philadelphia
Posts: 567

user: offline

Quote:

> Originally Posted by **ChinoCharles**
> *As I've stated before, in-hand estimation had me guessing the NST **pulley** is about 80% lighter than stock. If you guys want numbers, though, then numbers you will get.*

I want Numbers God Damn It



quote

reply

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