TJ York Bracket Kit

Installation Document

Off Road Only
ph 651.644.2323
www.offroadonly.com
oro-info@offroadonly.com

Image 1 Bracket Kit Contents

The ORO TJ York bracket kit includes:

A. Black E-coated mounting bracket
B. Serpentine belt, (25061080 for W/A/C and 25060950 for W/O A/C)
C. Idler assembly with bearing
D. 2x Black steel spacers, about ¼" difference in length between them
E. Aluminum Idler Assembly mount
F. Hardware kit

NOTE: To use this kit you will NEED to have an original Jeep Wrangler 4.0L belt tensioner assembly. The original part on the Jeep will be reused, if yours has been removed, you'll need to source another unit.

Tools Needed:

A. ½" drive ratchet or breaker bar (to move belt tensioner)
B. 3/8" drive ratchet with the following sockets
C. 3/8" Allen wrench or driver bit for 3/8" ratchet
D. ½" socket
E. 9/16" socket
F. 15mm socket
G. 17mm socket
H. T40 Torx driver to remove OEM tensioner from OEM mount
I. 13mm wrench
J. 15mm wrench
K. 17mm wrench
L. 9/16 wrench
M. Whatever tools needed to remove your air filter assembly only to gain access for the area to work

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The following guide will step you thru the installation.

1. Disconnect the battery

2. Remove the air box, or whatever air filter you may have mounted, simply for ease of working in this area. No modifications to the stock box will be required to reinstall.

3. Using a 1/2” ratchet, relieve the tension on the serpentine belt and remove it completely from the vehicle

4. Disconnect the electrical connections on the alternator. The gray plastic connector has a spot to depress while pulling to remove it from the alternator. 13mm wrench on the large cable, retain the nut

5. Remove the 2 metric bolts that mount the alternator to the aluminum mount and remove alternator, the longer bolt may be re-used to mount the fork side of the alternator to the new bracket.

6. Now, we need to remove the tensioner from the remaining aluminum mount, as well as removing the mount from the engine. First, utilizing a Torx 40 bit, remove the center mounting bolt on the tensioner and set the tensioner aside for reassembly. This would be a good time to spin the pulley and make sure the bearing feels smooth. There is an o-ring holding the torx head bolt into the tensioner, roll that off first to remove the bolt completely from the tensioner. Next, remove the 4 3/8” bolts and remove the aluminum alternator mount from the side of engine.

Image 2 OEM Tensioner with torx bolt

7. Now, we are going to use the 2 mounting bosses that are lower on the side of the engine, directly below the 2 rearward bosses for the 3/8” bolts you just removed. Locate one of the metric bolts (10mm x 65mm) in the supplied hardware kit, thread into these 2 lower bosses, if there is any dirt or other obstruction preventing these from threading in nice, clean the threads now. It’s much easier than doing it later with the bracket in place.

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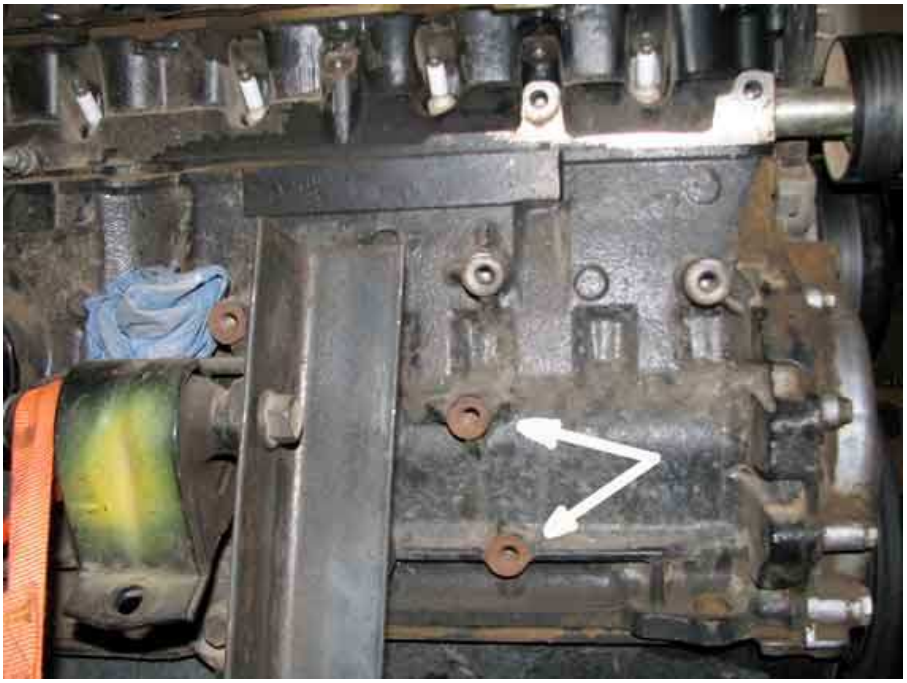

Image 3 Arrows depict lower 2 mounting bosses also to be used

8. At this point, the side of the engine should be bare, all 6 mounting bosses should be clean and ready for assembly.

9. Prepare the York Bracket by installing the tensioner to the lower mounting face. Use the 5/16” bolt and washer, the index holes in the mount will provide an accurate positioning of the tensioner, tighten the 5/16 bolt to 15 ft lbs. Verify that the tensioner mounting surface is sitting flush to the face of the mounting bracket. If this is not fitting straight, there may be on obstruction in one of the mounting holes, check, clean and reassemble. Test fit the alternator fork end over the lower mounting block. The rear nut on the alternator slides, you may need to insert a bolt into the mounting holes, start the threads and then tap the head of the bolt towards the rear of the alternator, this will open up the mounting width of the fork. Once the alternator fits over the lower mounting block, the York bracket may be lowered into position.

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Image 4 Stock tensioner installed on ORO bracket

10. With stock fenders the stock alternator will just barely slide between the stock inner fender, motor mount and York bracket and can be wiggled into place. With any custom fenders, larger case alternators or motor mount lifts, you may want to set the alternator onto the frame rail, against the motor mount, before you lower the York bracket into place. This may be absolutely necessary on some configurations of options.

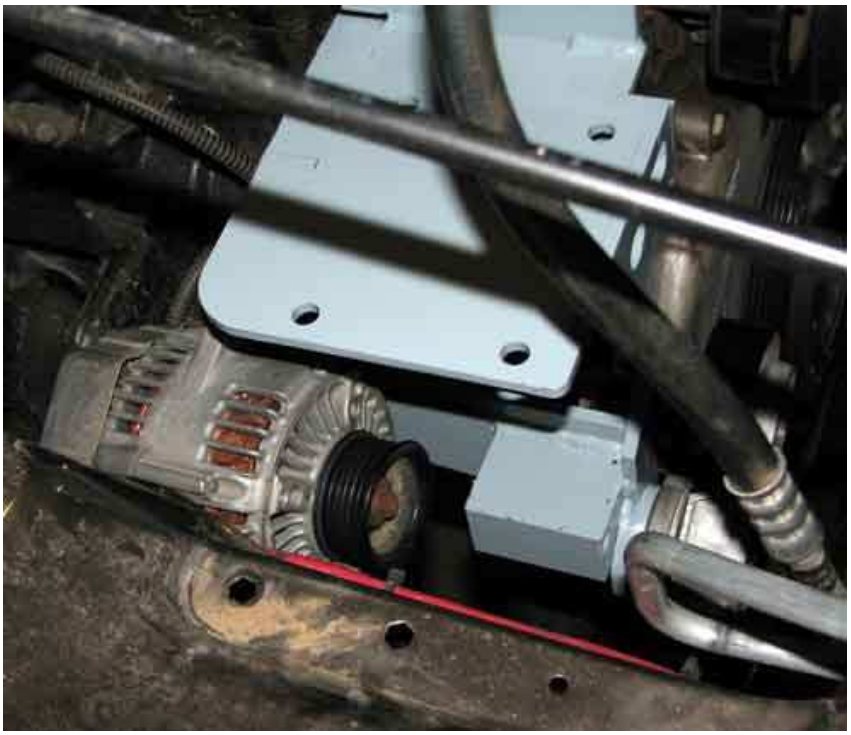

Image 5 Alternator resting below mounting bracket

11. Start mounting the York bracket to the engine with the shorter supplied 3/8” bolts and flat washers, loosely start all 4 of those bolts in the upper 4 hole.

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12. Locate the black steel spacers, they should be of slightly different lengths. These are spacers to go between the vertical tab and the lower 2 mounting bosses that you cleaned the threads on. The shorter one will be on the top boss with the longer on the lower. Using the 10mm x 65mm bolts and flat washers, start each of these bolts as well before tightening any of the 6 bolts mounting the bracket to the engine.

Image 6 Depicting the 6 mounting bolts for the bracket

13. With all the mounting bolts started, tighten them down, first snug them up and then tighten to 30 ft lbs.

14. Next, install the York compressor in the upright orientation, outlet fittings at the top. Locate the 4 3/8" x 1.5" bolts and 4 flat washers in the hardware kit. Set the York on the top of the bracket surface, start the outer two bolts first as they are the easier to get to. Then start the 2 closer to the engine. Tighten these to 30 ft lbs, or as best you can with the wrenches necessary to install. You may use the square opening in the face of the mount to place a wrench on the forward, engine side bolt. If you have an A/C equipped Jeep, you may need to bend slightly the rigid aluminum lines to allow proper room for operation. These lines bend very easily, go very softly to start, if you kink them they will need to be replaced. Make sure the lines clear both the head of the compressor for the large line heading towards the firewall, and the smaller line that heads to the condenser must clear the clutch pulley on the york.

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Image 7 York compressor and Alternator installed, you must install the York and tighten the bolts first!

15. Next, install the alternator. First, if you removed the aluminum alternator mount, then you can reuse the longer metric bolt for the fork end. If you do not have that bolt, there is a metric bolt in the hardware kit, 10mm x 90mm, that will work. Then locate the ½" –13 black socket head cap screw and your 3/8" allen wrench. This will pass thru the round hole on the face of the mounting bracket as it catches the upper ear of the alternator and threads into the mounting tab. Our testing has shown it to be easier to hold the alternator fork over the lower mount, and then drive the socket head capscrew into position, a jiggle of the alternator may be necessary to get the capscrew to start. Once started, install the lower alternator bolt as well, with both of them started, tighten them up. Lower bolt should be torqued to 20 ft lbs, tighten socket head capscrew as best you can with the allen wrench.

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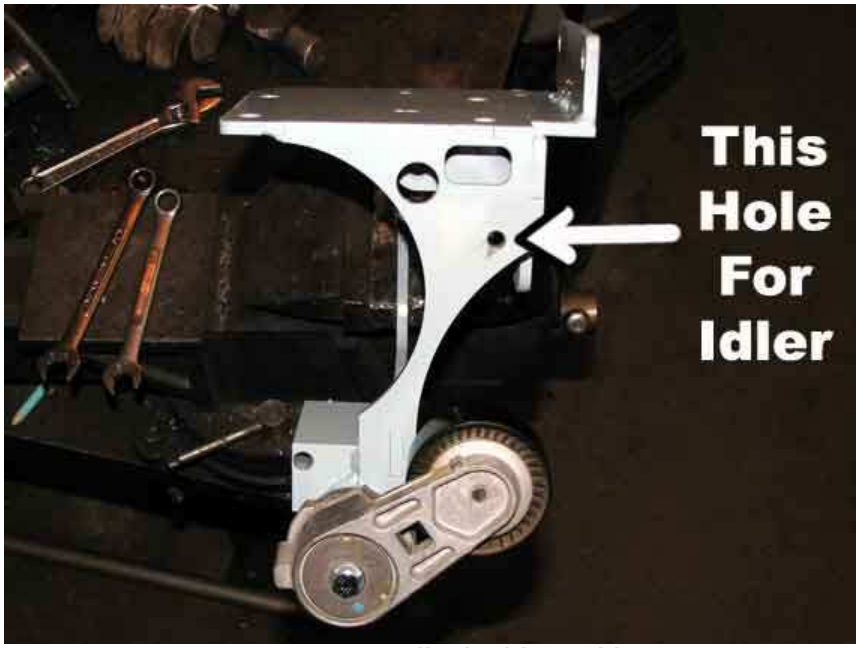

Image 8 Mount Idler in this position

16. Now, install the supplied idler pulley. Locate the aluminum pulley stand and insert it into the pulley, from either side. Locate the 3/8" x 2" bolt and flat washer. Place this thru the pulley and then pulley stand, with the washer under the head of the bolt, against the pulley bearing. This gets mounted to the 3/8" threaded hole in the face of the bracket, just below the York mounting surface. Torque to 25 ft lbs.

Image 9 Idler pulley, assemble in this direction

17. Now you are ready to route the belt. See the image of the belt routing and duplicate the belt position on your engine. Route the belt in its full, proper location with the exception of the smooth steel idler attached to the front of the head. Leave the belt over this unit. Now, insert the ½" ratchet into the tensioner, and while you push the ratchet down to open the tensioner, slide the belt past the smooth steel pulley at the same time. With the tensioner maxed out at the open position, you should just be able to slide the belt past the idler pulley. If it is not sliding past, then you may not have the belt sitting on all the pulleys properly. Once in place, release the tension. Double check belt placement to ensure it is ready to test.

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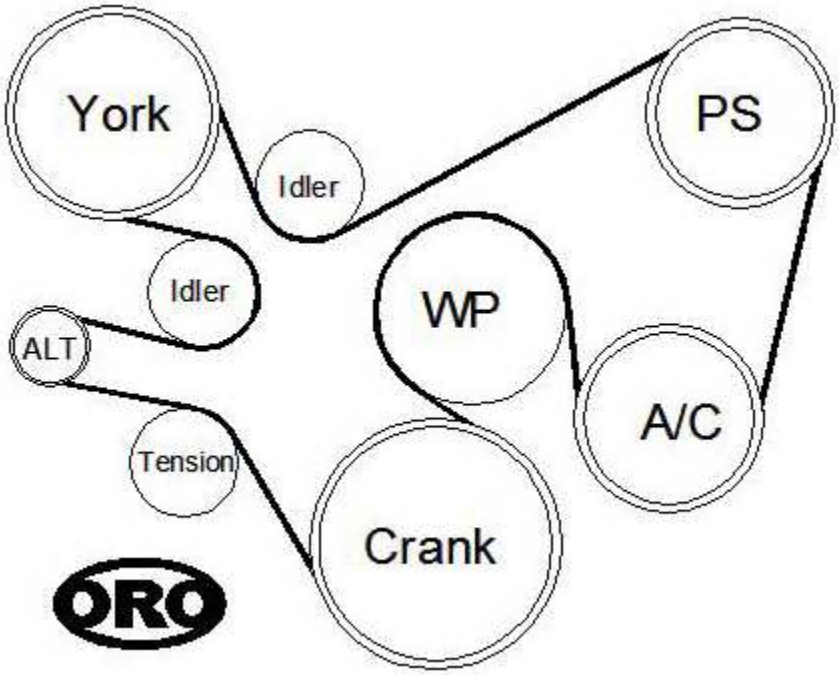

Image 10 Belt Routing with A/C

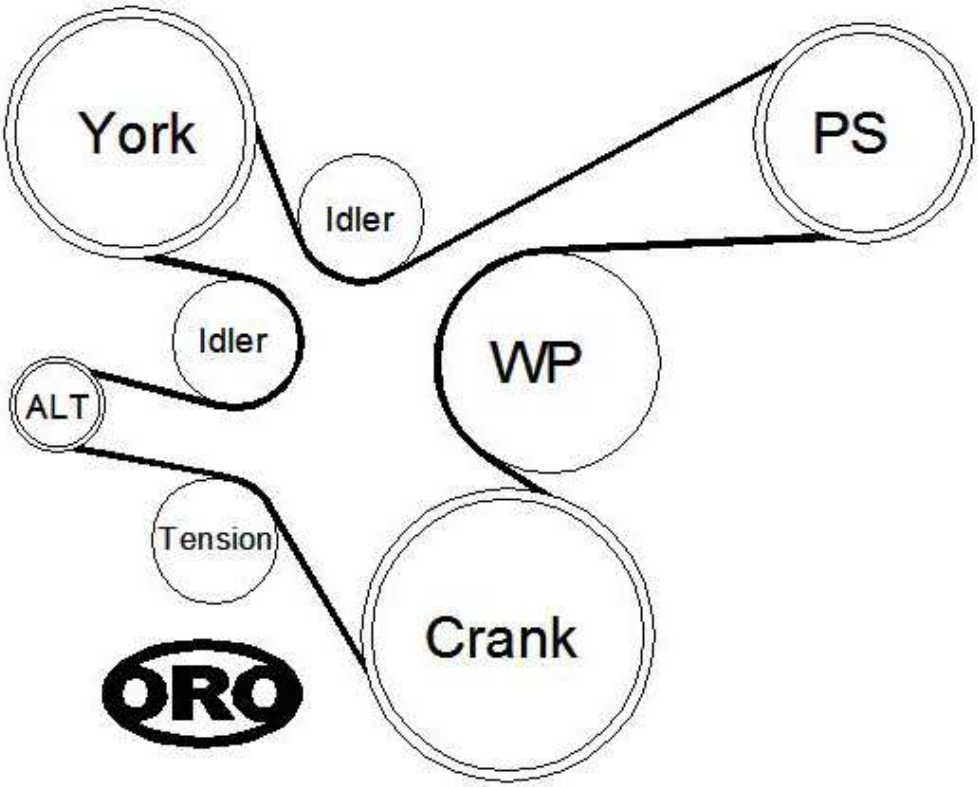

Image 11 Belt Routing without A/C

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Image 12 Note the belt fully installed other than the top idler

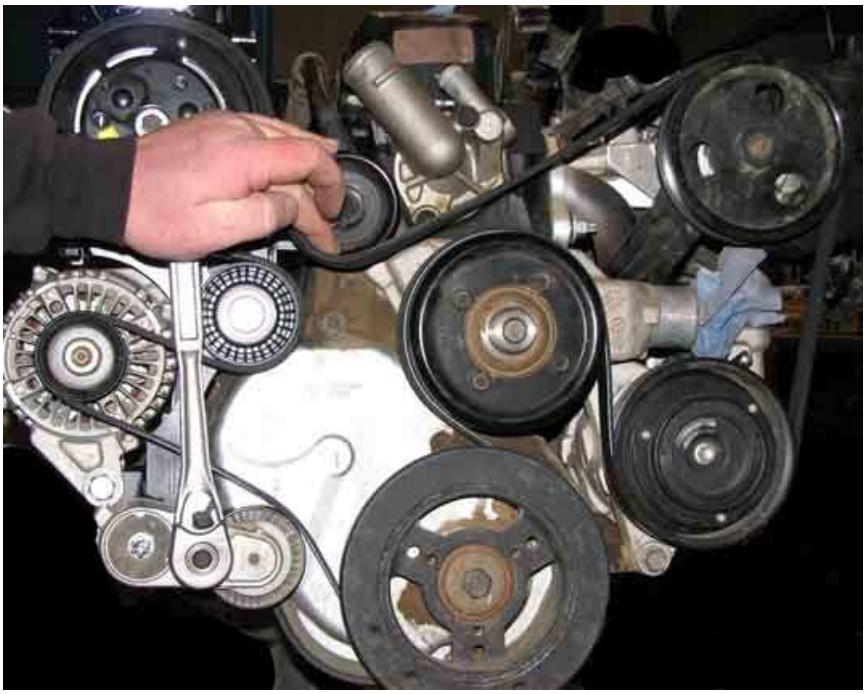

Image 13 Open tensioner and slide belt over edge of upper idler to put in position.

18. Reconnect the alternator wiring, plug in the gray connector and mount the large battery cable.

19. Reconnect the battery for a test start. Once proven to work, reinstall what you removed for the air cleaner/air box assembly.

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