2nd Gen Tacoma Release Bearing (Throw Out Bearing) Destructive Findings and Shift Detent mod.

Discussion in 'Technical Chat' started by Key-Rei, Jun 12, 2019.

? Have you had clutch and or clutch bearing noise?

Yes.

No.

Results are only viewable after voting.

Jun 12, 2019 at 7:39 PM #1

This thread serves to inform those with a 2nd Gen Tacoma V6 RA60 / RA60F of the construction and operation of the Toyota Release

Key-Rei [OP]
Well-Known Member

Joined: Jun 20, 2017
Member: #221942
Messages: 4,561
First Name: Key
Florida

2010 TRD Off-Road
6Spd 4x4 209BSM

Locker anytime Fog Lights anytime Full LED light conversion

bearing commonly known as the throw out bearing.

I recently replaced my clutch due to an EXTREMELY heavy clutch pedal and pretty bad rear main seal leak. The difficulty to depress the clutch pedal was a direct result of issues with the quill wear.

In my research on performing the maintenance I discovered significant misinformation about our clutch systems. I discussed with an experienced Toyota technician, and a few engineers through my work and these were my findings.

Before anything related to the throw out bearing DELETE YOUR ACCUMULATOR VALVE IT ONLY CAUSES MORE PROBLEMS!!!

Now:

First off Toyota issued a TSB (T-SB-0365-10) for our trucks to increase the spring length and pressure of the release cylinder (slave cylinder) to supply constant pressure on the throw out fork and thus bearing against the clutch pressure plate. I (The new TOB also has a longer collar/lip that contacts the pressure plate.) It is normal and intentional for the lip of the bearing to rest against the pressure plate fingers even before the stronger spring was implemented the design was of such that the bearing should be pressed against the pressure plate fingers and spin full time.

It should be noted that prior Toyota designs used a fork on a pivot in the center and a bearing that should be adjusted to not be pressed against the fingers as does the 4 Cyl Tacomas as they still use the R150 / R150F transmission.

See also this thread on the spring:
https://www.tacomaworld.com/threads/2005-tacoma-v6-clutch-slave-cylinder-rebuild.387315/

Thank you @baldy77 !

Toyota also release a secondary TSB for the support release fork ball stud in an effort to fix the squeak I recommend changing to this pin if you have not already. Part numbers and images listed below TOB information. (T-SB-0365-10)

Second as PER the FSM (Factory Service Manual) the RB (Release / Throw Out bearing) is lifetime lubricated and has no provisions to lubricate the internal load bearing parts. The inner sleeve however must be lubricated with clutch grease when installing as well as the

points of contact the bearing has with the fork, the fork has to the support stud, and the contact point where the release cylinder push rod meets the fork.

I personally recommend Honda 08798-9002 Ultra High Temp Urea Grease. I have used this on many clutch parts prior and have had no issues with sound and excellent function. Relatively in expensive and a little jar goes a LONG way.

$14 Genuine Honda 08798-9002 Urea

https://www.amazon.com/Genuine-Honda-08798-9002-Urea-Grease/dp/B00BFDFYKW

(It also makes for a fantastic grease to put on the insides of oil seals when installing as I used it on my rear main seal inner surface.)

Third there is no pilot bearing in our systems and thus all support for the input shaft is done within the bell housing quill and the transmission case and bearings themselves.

The quill is aluminum.

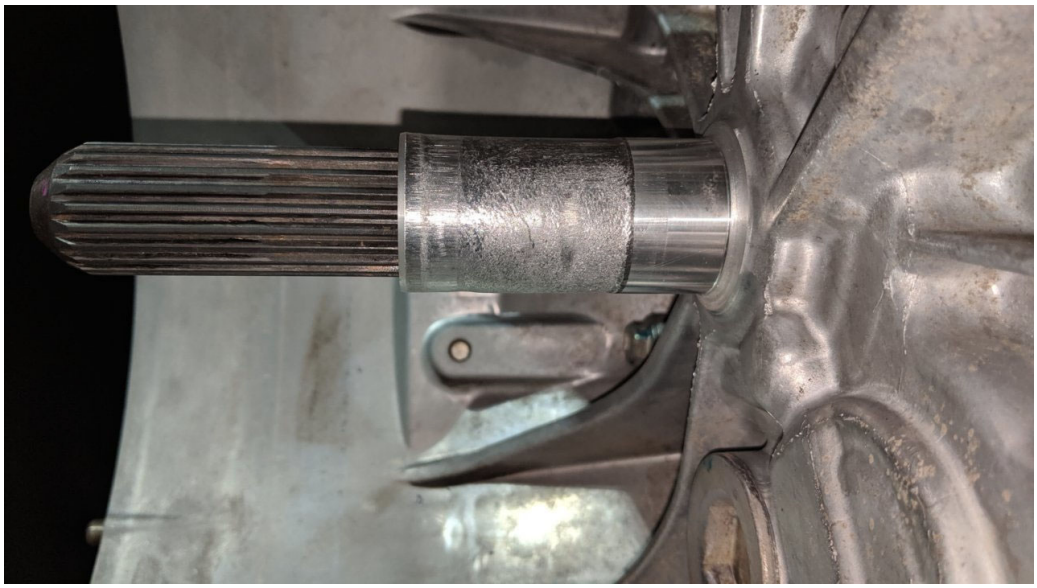
It wears straight from the start and when as it wears the throw out bearing becomes miss aligned and difficult to, well, throw out further exacerbating the wear.

When the TOB is miss aligned on the pressure plate fingers the bearing is unequally loaded and this can generate squeaking and other noise when the clutch is engaged. (Foot off pedal.)

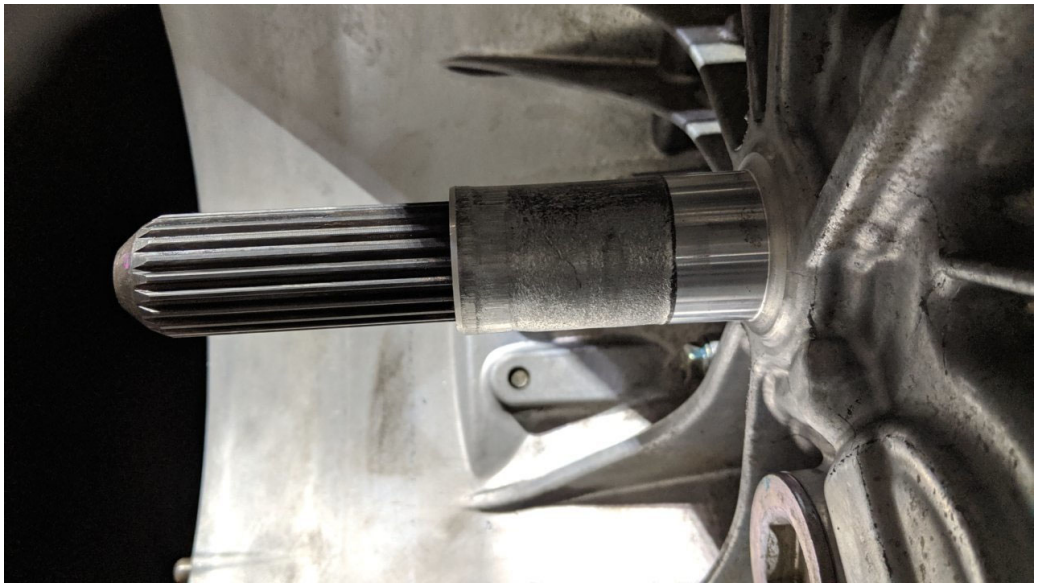
Here you can see how un-centered my bearing was, lower left of image you can see the lip of the TOB rode beyond the edge of the finger and across from it you can see it was a few mm onto the finger. It should be darn close to perfectly centered this is a high speed rotating assembly after all it needs equal support and pressure for even engage and disengagements and balance.

Worn quill, look how scarred that surface is! It should be near

polished to allow the TOB to slide. As is nearly a full mm of material has been removed from the TOB sliding back and forth. As the TOB wears the quill the bearing becomes more and more misaligned and greater pedal force is needed this and wears the quill faster and faster.

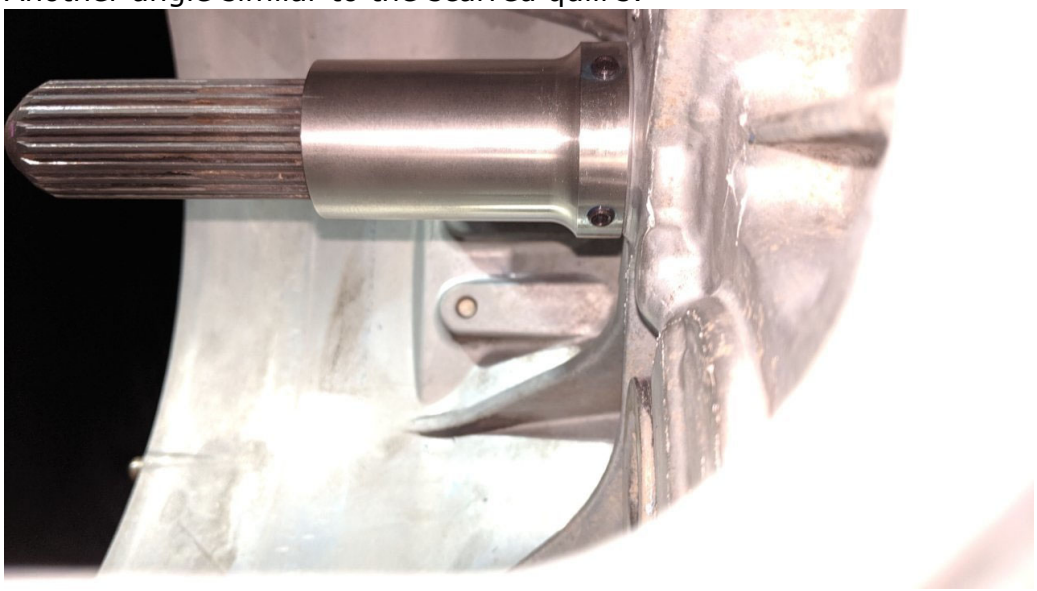


Again without flash look how concave those sides are!



Solution URD stainless quill sleeve. This is a solution to the quill wear however it is possible your quill is BENT and this will not bring your TOB back into alignment. Note you can also see the fork support post mentioned earlier here in the top left.

Another angle similar to the scarred quill's:



It is also possible your alignment and noise issues are due to a worn support fork as seen below look closely at the profile of the humps in focus at the back. (Sorry about the visual noise in the background didn't think to put something solid up behind at the time.)

Worn:

New:

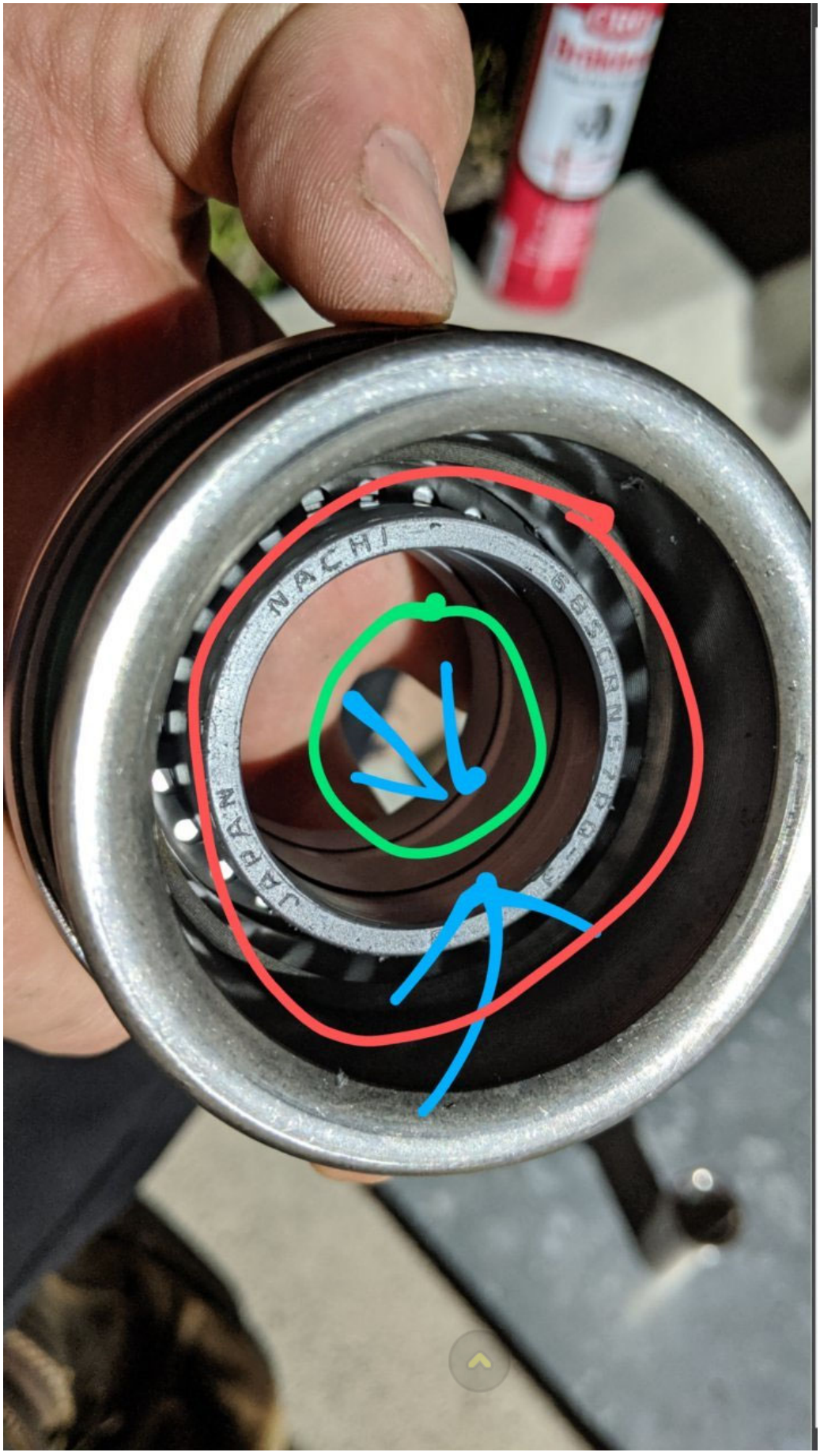
The fork should be LIGHTLY greased on top of those humps, on the flat insides where it makes contact with the sides of the release bearing and a small dab of grease in the channels on the back where the release bearing spring clips onto it. (Not pictured)

Blue arrows are the grease reserve grooves that need filled.

Green ring bearing "inside"

Red ring:

Retainer snap ring for the TOB's actually bearing inner seal.


NACHI
JAPAN

When greased it should look like the below.

NOTE: This is a URD bearing and in the instructions where they say to fill the grooves with grease as the are a reservoir they are referring to the grooves on the inside of the sleeve in the bearing as can be seen in the doodled picture above NOT BETWEEN THE SLEEVE AND THE BEARING LIP TUBE!!!
Proper greasing of the throw out bearing / release bearing according to the FSM and my findings below. (Excuse my finger painting)

(URD modified bearing specific.)
Probably a little on the heavy side here but I wanted to ensure the grease reservoirs the URD instructions mention were well and filled. After installing I slid the bearing back and forth on the quill and removed the excess grease build up from the end of the quill.

I used the blue URD grease on the TOB to maintain URD warranty but I would have normally used the green Honda Urea grease in it's place.

Installed, here you can see NO grease is to be applied inside the

bearing wall.

Now onto the destructive investigation:

Before cutting my old bearing I noticed the OEM bearing is made in Japan by Nachi, part number 68SCRN5ZPQ - 3

The URD bearing is also made by Nachi in Japan part number 68SCRN57PQ - 3

THAT'S RIGHT THE SAME EXACT PART NUMBER AS THE OEM!!!

The difference being that the URD bearing has had the inner sleeve (composite as you will see below) machined to steel a few thou over as it must have a larger internal diameter to fit over the new quill sleeve and the grease holding grooves have been added, the OEM is smooth inside the slide sleeve.

First point of note was made when making the first cut, the OEM bearing uses some form of sintered metallic plastic composite instead of a fully metal sleeve, I suspect this was intended to act sacrificially and be softer to protect the aluminum quill from wear but as the plastic abrades away quickly the metallic flakes are exposed and are harder than the quill and the smooth sliding inner sleeve quickly becomes sandpaper eating at that quill. The quick wearing plastic also allows room for sand to work it's way in between the sleeve and quill wearing even faster.

Once the retaining snap ring that holds the bearing extension tube which actually contacts the pressure plate fingers was cut the tube essentially fell out and is beside the bearing as shown below.

See the plastic buildup on the side of the cut line from the cutting wheel heat:

All the way through one side from the front to the back, the bearing and case was easily removed from the stamped and folded body of the bearing itself.

Front that normally has the bearing against it:

The back of the thatbearing that sits against the fork you can see the spots of wear and notice the flats that fit between the fork fingers when installed. Both the horizontal and vertical surfaces should have a LIGHT film of grease put on them when installing the new bearing.

You can also see residue of Toyota's misunderstanding of the issue squeak fix. What appears to be brass impregnated grease, that is the copper colored funk all over the back side. This is NASTY SHIT like thick nickel anti seize. Power degreaser and a pressure washer won't

even touch it, if you get it on anything it won't want to come off that either, including YOU!

Fortunately it seems reasonably susceptible to CRC brake cleaner and a little elbow grease. You now have more warning than I did, be prepared.

Here you can see the multiple layer sandwich construction of the body of the bearing (and more brass grease goose poo) the top layer is actually the edge of the core of the bearing sleeve that is encapsulated in the composite.

Now entirely bifurcated you can really see what I am talking about:

Here is the bearing top seal (green to the side) bearing case, outer race, ball cage holding the ball bearings, and you can JUST make out the lower lip seal in black that prevents any grease getting in or out at the bottom of the bearing extension tube.

Case, outer race and bottom seal:

That's right, the bottom of the extension tube (bottom left) is shiny as it rotates and seals against the black ring in the case (bottom right)

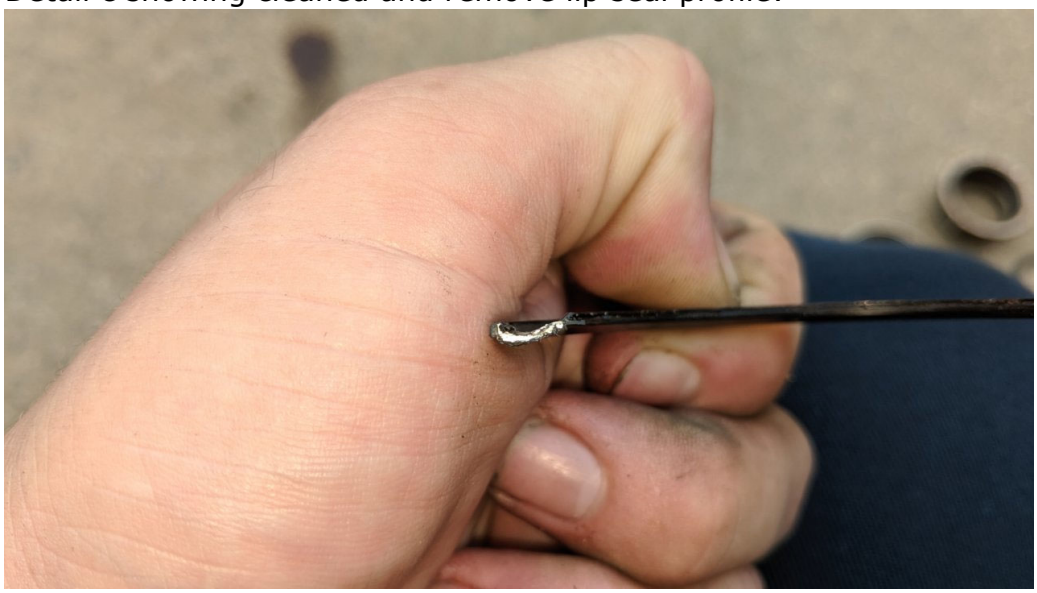
detail A misaligned to show seal:

detail B properly resting against seal

You normally cannot see this as the inner slide tube passes through the opening the pictures were taken through and has very minimal clearance around it.

Side profile of outer case, race, and lip seal:

Detail c showing cleaned and remove lip seal profile:



detail d showing bearing extension tube mated to seal.

NOTE: extension tube IS the inner race:

Final, all bearing pieces in their approximate assembly layers left to right is top to bottom.

Support post details I do not have original pictures:

Original support post 31236-60060

New support Post 31236 35050

The second part of the write up pertains to the detent "Pin, Lock Ball" 33292-0K011 as remedy to difficulty shifting in and out of gear (That I experienced in my 2nd Gen and yes I run Redline MT90 GLIV) in the 3rd Gen 6 speed (R161 R161F) See TSB 0088-16 for details. I'd like to thank @Opihi59 for his write up and calling the part to my attention even if it is for 3rd gens.

The purpose of this pin is to prevent the shifter falling into and out of gear and to help it stay in neutral.

The problem arises as theorized because you have a round cylinder in a round hole and as it travels gear oil intended to lubricate it's action can get behind the pin and then have difficulty escaping when the transmission case and parts are ever so slightly enlarged due to heat soak as the cylinder tries to move back when it slides past the recesses in the shifter shaft as you change gears.

The solution is a detent pin with a D shaped cross section vs the original O shaped.

The bellow is information collected on my findings there, suffice to say in short this modified 3rd gen pin fits our 2nd gen trucks and has definitely made shifting smoother and easier in and out of gear in my experience. Apparently our transmissions are just as susceptible to gear oil "hydro locking" of the shift shaft detent.

To change the pin ball you first should be in neutral.

The pin can be changed with the transmission installed easily. You should NOT have to remove the drive shaft.

You will NOT loose any noticeable quantity of gear oil though the parts will have a film of gear oil on them.

You DO have to remove the plastic "heat blanket" shroud to access the plug as the shroud covers it tightly and isn't flexable enough to pull it away and get tools on the plug.

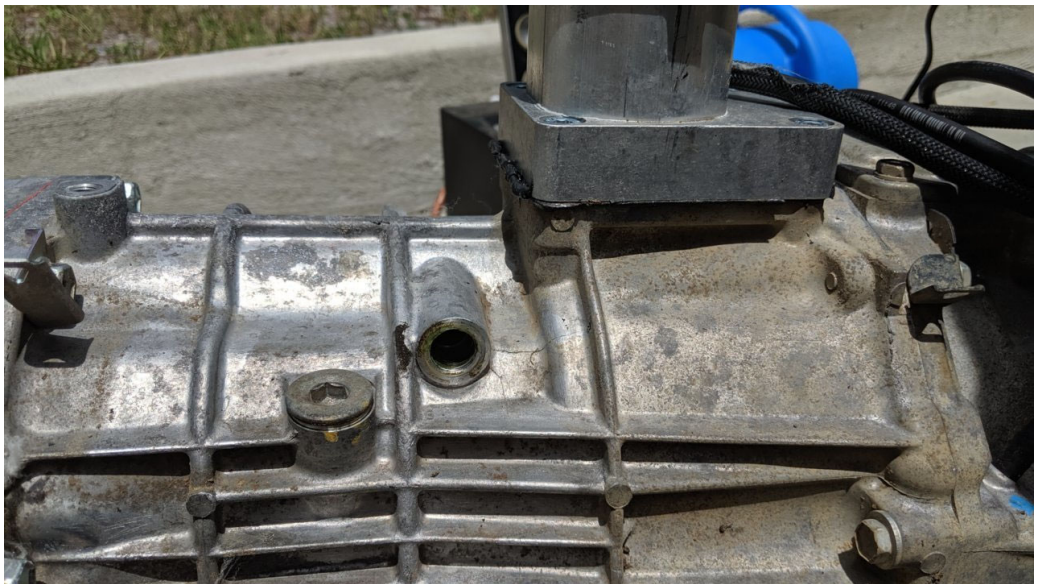
YOU ONLY HAVE TO REMOVE THE 5 BOLTS (Two on each side one on top near the front) AND SHIFT IT FORWARDS YOU DO NOT HAVE TO PULL IT OFF THE TRANSMISSION COMPLETELY.

Note you may need to support your transmission with a jack and remove the rear transmission support cross bar to allow you to lower your transmission down slightly in order to reach the top plastic cover bolt forward of the gearshift tower and to have enough clearance for tools to remove the plug and pin. (You should be able to get away with leaving the Y pipe in place however mine was absent when I did this. If you attempt this please let me know.)

The blanket bolts are 10mm (12mm? I need to confirm...) socket, the plug is 10mm hex.

NOTE: You may be able to grind a flat on your existing detent ball pin BUT BE CAREFUL THE METAL IS THIN AND YOU CAN GRIND THROUGH IT GUESS HOW I KNOW!

The hole the plug pin and spring are removed from:



Spring and plug inside:

My attempt at grinding before I tried to flush it out and went too far, in retrospect it probably doesn't need to be perfect but I was doing my best to imitate what I saw from the other write up thread's pictures.

In my opinion this is too far as I realized only after obtaining the new OEM part. I do recommend if you attempt pin modification vs replacement with a factory part that you round the end of the cylinder as a sharp corners of the flat and kerf burn you can see below could hang up and score the aluminum bore of the transmission the pin lives in.

Going to far opens a cavity where behind the big ball are about a hounded tiny shot balls seen here:

Old pin where you can really see the hole and new 3rd gen pin:

Side by side:

Technical details:

_____NEW PIN_____OLD PIN_____Difference N/O

External Diameter: 12.48mm_____12.49mm_____-0.01mm(Within margin of manufacturer tolerance)

Internal Diameter: 8.65mm_____8.63mm_____+0.02mm

Cylinder Length: 21.38mm_____25.36mm_____-3.98mm

Ball diameter: 7.35mm_____7.67mm_____-0.32mm (This is the most accurate reading I could achieve given the situation but not exact as the old ball without the shot to push it forwards would recess with the slightest pressure but I belive it shows they are the same size well enough)

Ball protrusion: 2.68mm_____2.64mm_____+0.04mm

Spring Cavity depth: 11.07mm_____15.15mm_____-4.08mm

Measuring the external diameter at the flat to the opposite side is 12.02mm. Meaning the flat is only .4mm deep into the curve and 5mm wide.

END

I am only providing this information; I am not responsible for and damage, injury, or loss from attempting the above modifications or maintenance.

Hopefully I included everything and it makes sense when I review this with a clear head and sleep tomorrow.

-Key

Last edited: Jun 13, 2019

Key-Rei, Jun 12, 2019 #1

Jun 12, 2019 at 7:48 PM **#2**

BassAckwards
Well-Known Member

Joined: May 3, 2016
Member: #186002
Messages: 25,057
Gender: Male
First Name: Robert

Nice thread, lots of good info. I like how you took the old bearing apart as well

BassAckwards, Jun 12, 2019 #2

Key-Rei [OP] likes this.

Jun 12, 2019 at 8:00 PM **#3**

The other lesser mod I feel like throwing in this thread because if you're this far in you may as well go all the way:

EXTENDED TRANSMISSION AND TRANSFER CASE BREATHER MOD

Key-Rei [OP]
Well-Known Member

Joined: Jun 20, 2017
Member: #221942
Messages: 4,561
First Name: Key
Florida

2010 TRD Off-Road
6Spd 4x4 209BSM

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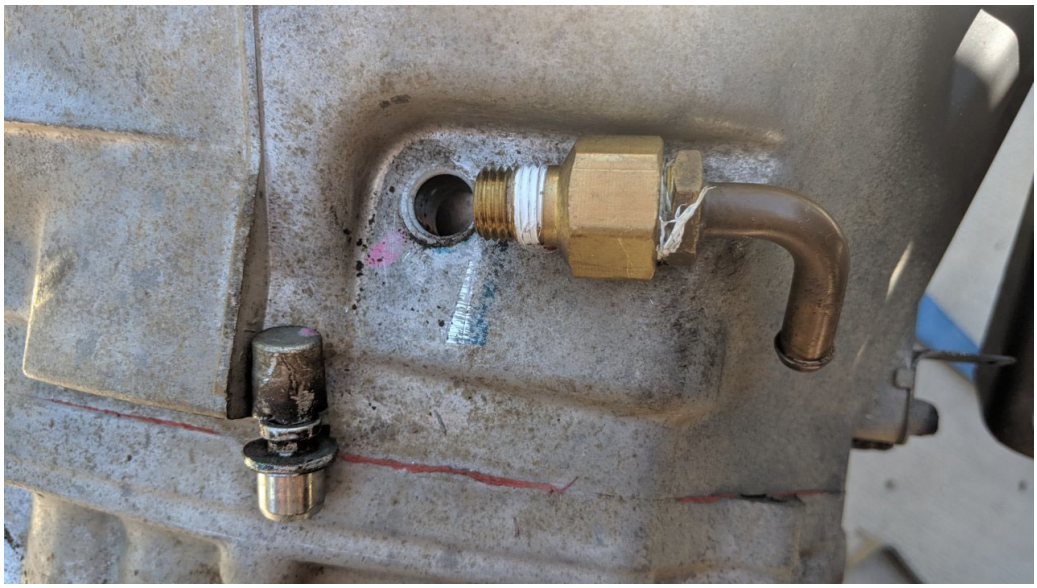
Easy peasey.

Once you have the transmission removed. (SEE FSM)

Use a wonder bar to pry the failed factory press fit breather out of the smooth hole the fitting and elbow shown is 1/4 NPT and is to demonstrate size only there is not enough clearance when installed for such a tall fitting.



Broken dirty breather bits:

Tap out the hole with a 1/4" NPT tap:

NOTE: You do not need to drill the hole it is already the perfect size for the 1/4 NPT tap.

DO NOT GO TOO DEEP YOU COULD POTENTIALLY CRACK THE TRANSMISSION CASE!

NOTE: Use thick grease to collect shavings when tapping and to lubricate the tap itself.

Use the shop vac a reducer and some hose to get way down in there

and suck up anything that could have fallen in from the tap.

FIRST:
Install ONE 90deg into the transmission I recommend using pipe tape on all threaded parts.

SECOND:
Install second 90deg into first 90deg

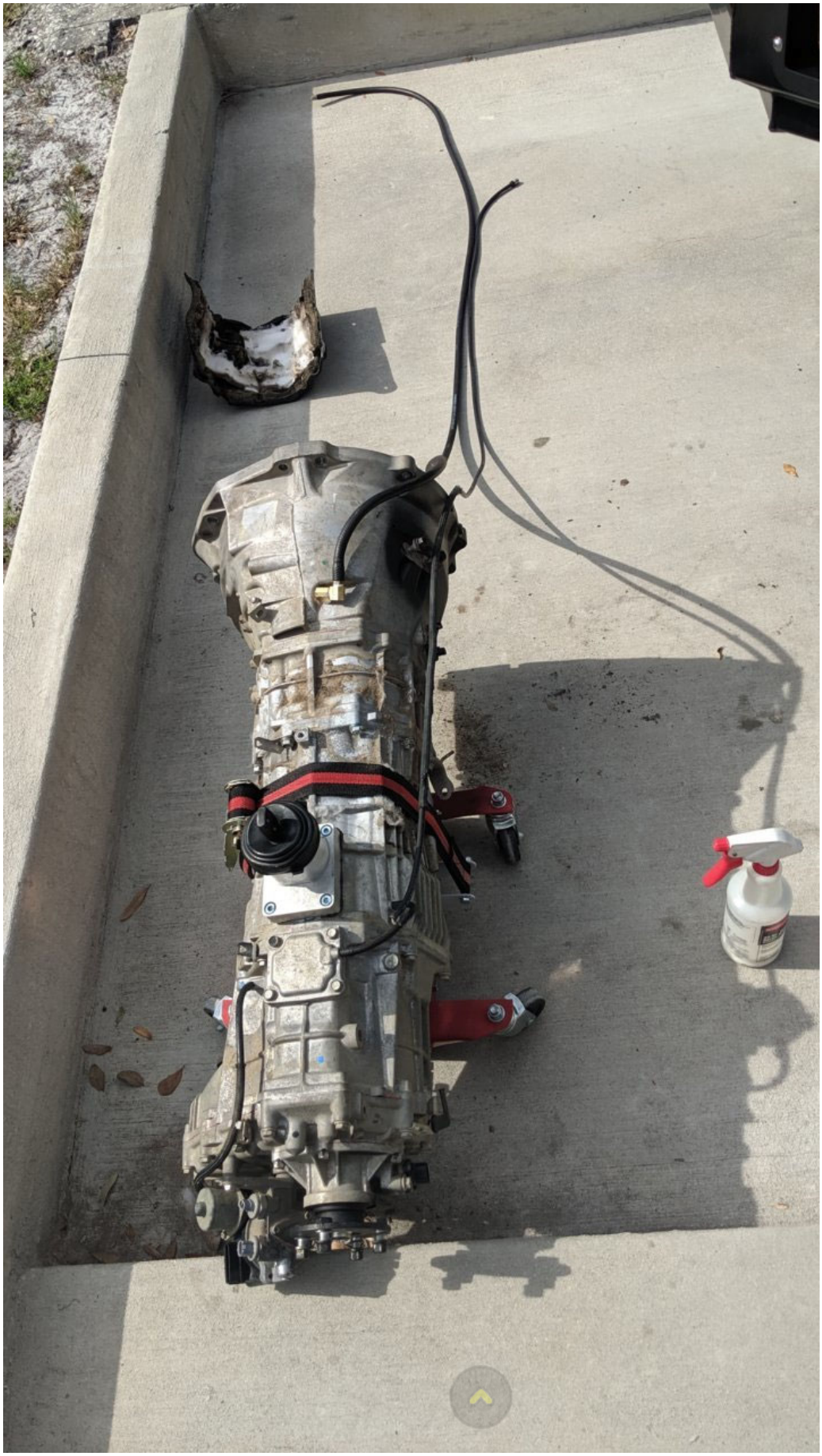
THIRD:
Install barbed nipple into second 90deg. (Nipple is for 5/16 transmission oil cooler hose hose)

NOTE:

YOU MUST DO ONE AT A TIME THEY WILL NOT CLEARANCE ENOUGH TO TURN IN AS AN ASSEMBLED UNIT

Install hose:

NOTE: I also took this opportunity to install a longer hose for the transfer case breathers. (I used 1/8" fuel line hose here)



All coiled up:

Your hose may be dry rotted, burned from touching the exhaust or other wise damaged as mine was so replacing the transfer hose is a good idea and extending it up into the engine bay is cheap insurance.

Install the trans and rout the hose with zip ties up into the engine bay, you can use the open hole at the corner of the right engine head for a connection point. as you can see that fitting is very low profile and works great!

NOTE:!!!

The above image shows the (Black) transmission blanket installed and the pesky top bolt location mentioned in the second part of my first post.

_____
_____
_____
_____

I am only providing this information; I am not responsible for and damage, injury, or loss from attempting the above modifications or maintenance.

Hose endings in the engine bay pics coming tomorrow I R go to bed.

Key-Rei, Jun 12, 2019 #3

Jun 12, 2019 at 8:00 PM **#4**

BassAckwards said: ↑

> *Nice thread, lots of good info. I like how you took the old bearing apart as well*

I kind of forgot the add the second post bit to the first but I did that too while I had it all out.

Key-Rei [OP]
Well-Known Member

Joined: Jun 20, 2017
Member: #221942
Messages: 4,561
First Name: Key
Florida

2010 TRD Off-Road
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Key-Rei, Jun 12, 2019 #4

Jun 12, 2019 at 8:29 PM **#5**

Nice thread! My TOB has been squealing for a while and have been meaning to change out to the URD kit along with a heavier duty clutch. I never heard of the R160 transmission in a 2nd gen I believe you are referring to the RA60/RA60F?

6 gearT444E
CEO & CFO @BPF

Joined: Feb 3, 2018
Member: #243372
Messages: 3,333
Deep South
Herculiner Hootus

6 gearT444E, Jun 12, 2019 #5

Key-Rei [OP] likes this.

Jun 12, 2019 at 9:02 PM **#6**

Fantastic write up !!!

I havnt done a clutch on a Tacoma in a long time . I cant wait to get my hands into another 6 speed clutch mind you . I have a few tricks I plan to try as well and will be posting them when the time comes . Some after market clutch release bearings are available with a self centering feature that allows the bearing to move from side to side

gearcruncher
Well-Known Member

Joined: Nov 1, 2012

Member: #90305

Messages: 6,391

Gender: Male

First Name: Canadain bumper technician

Great white North
51.0333° N, 93.8333° W

2010.TRD.SportDCL B4x4Limited leather package

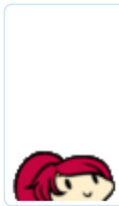
TRD Sport Rally -5 speed automatic Limited ,Factory

in an attempt to constantly remain centered with the pressure plate fingers . I am unfamiliar with the URD bearing and was wondering if it has the self centering feature ?

gearcruncher, Jun 12, 2019 #6

Key-Rei [OP] likes this.

Jun 13, 2019 at 7:50 AM **#7**



Key-Rei [OP]
Well-Known Member

Joined: Jun 20, 2017
Member: #221942
Messages: 4,561
First Name: Key
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You are CORRECT!

I was tired when I wrote everything up and I was thinking R150 in the 1st gen tacoma but knew the 2nds had a 60 something that was the product.

It has since been corrected.

2nd Gens use the Aisin RA60 and RA60F respectively.

3rd gens Use the RA61 and RA61F.

@gearcruncher has a pretty amazing and intensive write up on getting to know your transmission for the RA60 series.

For what it's worth I went with the URD Torque U heavy flywheel as part of the stage Two kit.

I'm still evaluating it but so far I like it.

The stage 2 feels lighter thsn ny stock clutch but only so because my quill and bearing were binding requiring extreme force.

I'm fortunate I didn't end up snapping my quill off, if you suspect your quill may be worn I highly recommend doing the job sooner vs later snapping the quill off requires replacement of the bell housing which in our application isn't just an extension and adapter it's actually a stressed member of the transmission case itself!

Key-Rei, Jun 13, 2019 **#7**

Jun 13, 2019 at 11:04 AM **#8**

> gearcruncher said: ↑

Key-Rei [OP]
Well-Known Member

Joined: Jun 20, 2017
Member: #221942
Messages: 4,561
First Name: Key
Florida

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> *I havnt done a clutch on a Tacoma in a long time . I cant wait to get my hands into another 6 speed clutch mind you . I have a few tricks I plan to try as well and will be posting them when the time comes .*
> *Some after market clutch release bearings are available with a self centering feature that allows the bearing to move from side to side in an attempt to constantly remain centered with the pressure plate fingers . I am unfamiliar with the URD bearing and was wondering if it has the self centering feature ?*

It appears to be just a stock OEM bearing modified. Nothing self-centering added. The only change I could tell without hacking my brand new one open also is that the composite sleeve has been milled out of the center and the grooves to hold more grease were milled into the inner metal sleeve.

I'm eager to see what you've got in store. Your write ups are very thorough.

Never seen or even heard of a mobile TOB. Curious how that would even work.

Taco'09 had this to say on the subject of release bearings.

> Taco'09 said: ↑
>
> *Hey @Key-Rei. I went through it and that is an absolutely outstanding document +10*
>
> *Not to hijack your post here but I have had a lifetime of frustration with bad throwout bearings and have been known to do some very unconventional things. For sure do not do this, but I do. After finding way too many nearly dry new bearings I now use a vacuum pump and chamber to add additional grease to throwout bearings prior to install.*

I kind of like the theory of the idea but I'm not pulling the trans again just too try it out.

That and I'm too chicken about impregnating a TOB with high pressure grease and or oil in something I have to drive everyday everywhere.

I had to ride my motorcycle in crazy traffic, sweltering heat and pouring rain for the two weeks it took to get the parts from Toyota and everything cleaned and reassembled and I'm not jonesing to

revisit that experience anytime soon.

Key-Rei, Jun 13, 2019 #8

gearcruncher likes this.

Jun 13, 2019 at 11:20 AM **#9**

DaveInDenver
Not Actually in Denver

Joined: May 18, 2013
Member: #104390
Messages: 3,595
Gender: Male
First Name: David
Grand Junction

2008 Super White TRDOR AC 6MT

Unexceptional

Great write-up. I just went through some of these issues and wanted to add that the actual manufacturer (I believe anyway) of the sleeved release bearing is PDM near Denver.

Their kit number is TSK45.

http://www.pdmusa.com/OrderStorm-ecommerce-product-page/759177DA-A48A-4243-864E-DD688AD9D625

My clutch was original and at 90k miles the release bearing extension snout was grooved and I needed the sleeve. I had a bearing chirp and a slight squeak when operating.

I replaced the original pivot with the revised one as well. If you do this make sure to order by the number and not by model year or VIN, Toyota doesn't seem to supersede the original one and the dealer insisted the new part number wasn't correct for my 2008.

My pressure plate fingers showed very obvious signs of the bearing running off center just like @Key-Rei's.

I used an Aisin clutch kit CKT-57, which included a throw out bearing which I did not need. But it was cheaper to buy the kit than just a friction disk and pressure plate individually. I keep meaning to call PDM and see if they do a core return or swap, send them a stock bearing and they return a modified one. The modifications appear to be very simply boring the center slightly.

Clutch works much better without a doubt.

DaveInDenver, Jun 13, 2019 #9

Key-Rei [OP], Taco'09 and Truc577 like this.

Jun 13, 2019 at 12:19 PM #10

Taco'09
Well-Known Member

Joined: Dec 31, 2008
Member: #12073
Messages: 1,665
Gender: Male

@Key-Rei @DaveInDenver
FWIW, the guy actually making the quill kit is a retired machinist and lives near me, correctly in Denver as DaveinDenver has stated. I had a lengthy discussion about all this with him and the machining of the interior groves for grease. They are also currently using the latest TSB bearing ending in part number xxx41 so that is good.

One thing to be ultra careful about the quill kit is that mine came with pointy Allen screws. The quill is extremely thin aluminum and getting those screws a bit to tight could be disastrous IMHO The few pics occurring online showing the quill broken off seem to be in the place the set screws occur and, although I do not know for certain, I have a suspicion that metal fatigue could occur in that area from over-tightening. So just be careful.

Taco'09, Jun 13, 2019 #10

DaveInDenver and Key-Rei [OP] like this.

Jun 13, 2019 at 12:19 PM #11

Key-Rei [OP]
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Click to expand...

Nice! And good info!

Thank you for contributing.

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IIRC URD claims to be the original developer of the sleeve and bearing, I wonder who copied who there.

Or maybe URD did come up with it and they are the machine shop the use to mill the sleeves and bearings.

Side note when installing mine I also had to polish some burs in the inside of the sleeve where the set screw threads were tapped in. The corners were sharp and dragged in the aluminum creating more resistance that I was comfortable with when trying to put it on.

It should be snug but not tight. I was able to put it on 60% by hand after addressing the burrs inside and then used a small rubber mallet and a piece of PVC to gingerly walk it on before snugging the set screws with the blue lock tight.

My stainless quill sleeve sat perfectly flush with the end of the aluminum quill.

Also be sure to use the oil tolerant stuff 243. I believe most stores only sell normal 241.

Key-Rei, Jun 13, 2019 #11

DaveInDenver likes this.

Jun 13, 2019 at 12:22 PM **#12**

Key-Rei [OP]
Well-Known Member

Joined: Jun 20, 2017
Member: #221942
Messages: 4,561
First Name: Key
Florida

2010 TRD Off-Road 6Spd 4x4 209BSM

> Taco'09 said: ↑
>
> *@Key-Rei @DaveInDenver*
> *FWIW, the guy actually making the quill kit is a retired machinist and lives near me, correctly in Denver as DaveinDenver has stated. I had a lengthy discussion about all this with him and the machining of the interior groves for grease. They are also currently using the latest TSB bearing ending in part number xxx41 so that is good.*
>
> *One thing to be ultra careful about the quill kit is that mine came with pointy Allen screws. The quill is extremely thin aluminum and getting those screws a*

Yes that is correct, URD even states in their instructions snug the set screws but DO NOT GET THEM TOO TIGHT.

I wish we had a torque spec but I suspect it's in the ones of inch pounds.

Locker anytime Fog Lights anytime Full LED light conversion

As is I used one finger on the end of the short allen key they provided in the kit.

The blue oil tolerant locktite is the anti rotation not the thread/pressure loading in this application.

Key-Rei, Jun 13, 2019 #12

DaveInDenver likes this.

Jun 13, 2019 at 12:23 PM **#13**

Taco'09
Well-Known Member

Joined: Dec 31, 2008
Member: #12073
Messages: 1,665
Gender: Male

> Key-Rei said: ↑
>
> *Nice! And good info!*
>
> *Thank you for contributing.*
>
> *Click to expand...*

PD&M is the manufacturer of Tacoma kit and they also make kits for other makes for Subarus, etc. They told me directly they make it and distribute to the aftermarket.

Taco'09, Jun 13, 2019 #13

Jun 13, 2019 at 12:23 PM **#14**

DaveInDenver
Not Actually in Denver

Joined: May 18, 2013
Member: #104390
Messages: 3,595

I don't want to speculate about URD but PDM makes kits for several brands and models so I have my suspicions about what is what.

DaveInDenver, Jun 13, 2019 #14

Key-Rei [OP] likes this.

Gender: Male

First Name: David

Grand Junction

2008 Super White TRDOR AC 6MT

Unexceptional

Jun 13, 2019 at 12:25 PM **#15**

BassAckwards
Well-Known Member

Joined: May 3, 2016

Member: #186002

Messages: 25,057

Gender: Male

First Name: Robert

You could add the RA61F to the list in the first post. My mom has a 6spd fj and that thing chirps like crazy

BassAckwards, Jun 13, 2019 #15

Jun 13, 2019 at 12:31 PM **#16**

Key-Rei [OP]
Well-Known Member

Joined: Jun 20, 2017

Member: #221942

Messages: 4,561

First Name: Key

Florida

2010 TRD Off-Road 6Spd 4x4 209BSM

Locker anytime Fog Lights anytime Full LED light conversion

> BassAckwards said: ↑
>
> *You could add the RA61F to the list in the first post. My mom has a 6spd fj and that thing chirps like crazy*

I was under the impression that the FJ used the RA60 and only the 3rd gens had the RA61 although admittedly my knowledge is focused on what I have.

I do know the FJ's have a slightly different gear ratio in their boxes which includes a higher over drive ratio in 6th.

I suspect Toyota assumed the Tacoma would be hauling and more towing more and opted for the more torquey gears for the Tacoma vs the more economical gears in the FJ.

Key-Rei, Jun 13, 2019 #16

Jun 13, 2019 at 12:36 PM **#17**

DaveInDenver
Not Actually in Denver

Joined: May 18, 2013
Member: #104390
Messages: 3,595
Gender: Male
First Name: David
Grand Junction

2008 Super White TRDOR AC 6MT

Unexceptional

For 4WD - 2nd gen Taco used the RA60F, FJ Cruiser (and Prado and Hilux sometimes) used an RA61F. The 3rd gen Taco uses a RC62F.

The difference in RA60F and RA61F is only 6th gear (Tacoma = 0.85, FJC = 0.80). Maybe reverse, not sure.

AFAIK the 3rd gen RC62F has a steel snout for the release bearing so I *think* it shouldn't be nearly as problematic as it was for the 2nd gen Tacoma and FJC.

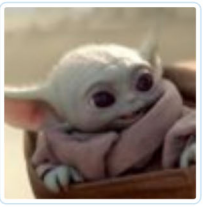
The ratios on the RC62F are completely different, as well as I think the housings. Not sure about bell housing bolt patterns either.

Last edited: Jun 13, 2019

DaveInDenver, Jun 13, 2019 #17

Jeff Lange, nxrunner and Key-Rei [OP] like this.

Apr 7, 2021 at 5:54 PM **#18**



DaytonaTaco
Well-Known Member

Joined: Feb 25, 2017
Member: #211621
Messages: 111
Gender: Male

2015 Tacoma Sport 4x4 access cab 6spd manual trans w/ tow

3 inch Toytec suspension lift, 285/75's, Avid off

> Key-Rei said: ↑
>
> *Before anything related to the throw out bearing DELETE YOUR ACCUMULATOR VALVE IT ONLY CAUSES MORE PROBLEMS!!!*

Thread revival I know, but I was wondering why this is?

DaytonaTaco, Apr 7, 2021 #18

Apr 8, 2021 at 3:38 AM #19

Key-Rei [OP]
Well-Known Member

Joined: Jun 20, 2017
Member: #221942
Messages: 4,561
First Name: Key
Florida

2010 TRD Off-Road 6Spd 4x4 209BSM

Locker anytime Fog Lights anytime Full LED light conversion

> DaytonaTaco said: ↑
>
> *Thread revival I know, but I was wondering why this is?*

Pretty much summed up in that post there but also it can cause pedal return issues when cold and or worn and lead to dangerous conditions while driving.

https://www.tacomaworld.com/threads/mt-accumulator-delete-mod-adm-and-bs-thread.568303/

Key-Rei, Apr 8, 2021 #19

DaytonaTaco likes this.

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