03-30-2007, 05:01 PM #1

k-huevo
6th Gear
iTrader: 0% (0)

Join Date: Aug 2004
Location: Pipe Creek, Texas
Posts: 1,589
Gallery

Drivetrain :: Clutch, Flywheel, and Quaife Install Overview

With the amount of time required to remove and install the transmission I didn't have enough extra for a complete Quaife, clutch & flywheel how-to, but I still wanted to share some of the experience so here is a general overview for the procedure.

Refer to the front swaybar install for the first stage of this task.
http://www.northamericanmotoring.com...23#post1420223

I didn't want to forget the small stuff so I started with something that is sure to be overlooked, the gear case sensor.

I was prepared to remove the starter with the heat shield intact but discovered improper routing for the power steering cable which had caused some damage to the sheath.

Installed my first car part...
2nd Generation MINIs : Coupe Talk (2007+)

Aux input with NAV
1st Generation MINIs : Navigation & Audio

Show your Winter Set Up
MINIs in General : Tires, Wheels, & Brakes

Anybody tow their Mini behind...
MINIs in General : General MINI Talk

What did you do to your mini...
MINIs in General : General MINI Talk

need a little help
1st Generation MINIs : Coupe Talk (2002-2006)

can some one explain the...
2nd Generation MINIs : Clubman Talk (2008+)

Anybody use silver anti-seize...
1st Generation MINIs : Drivetrain (Cooper S)

stick vs automatic in Mini S
MINIs in General : 1st Gear

From Russia with love... (so...
2nd Generation MINIs : Coupe Talk (2007+)

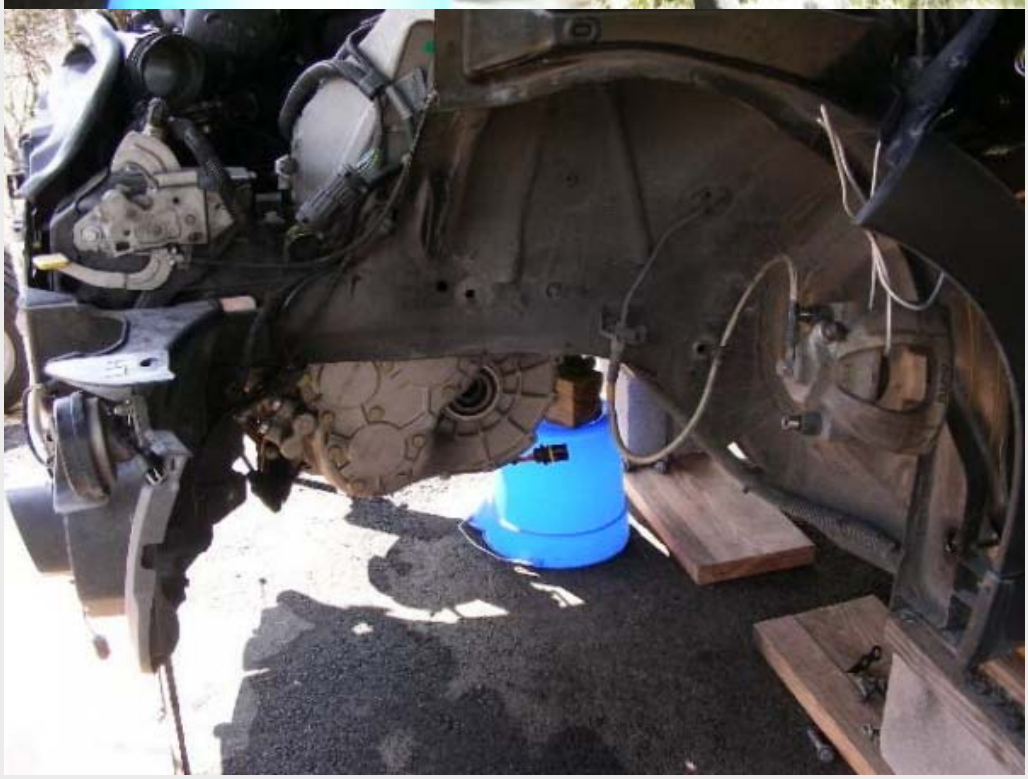
» Buddy List

No buddies online

The cables were squished in this crack between the heat shield and the oil pipe mount.

Either during manufacture or when the engine harness was replaced locally, the installer had become impatient with the heat shield and forced it in place, bending the shield, missing the grommet mounts, and abrading a starter wire & powersteering cables.

So out came the heat shield, followed by the starter, the passenger's side drive & mid shafts, the driver's side drive shaft and steering knuckle.



I labeled the wiring so I would know what they attached to during reassembly and took photos of the routing both from below and above for a reference.

The shift cables had to be disconnected; shown is the nifty BMW/MINI tool for the job.

The radiator support was put in service mode and every thing attached to the transmission or in the way had to be removed.

In addition to an automotive jack I used the OEM engine support bracket suspended by an upper engine support. This provided more control during removal and the difficult realigning of the transmission input shaft with the clutch disc after the install. The passenger's side hydraulic engine mount remained in place and only the brace (03 model) and nut were removed.

Out came the transmission. Some of the bolts were incredibly tight and in inconvenient locations so be prepared. I recommend a 15mm impact swivel socket and powerful impact wrench, although all the bolts can be done (and one had to be) with a standard socket, short extension, and long breaker bar.

The pressure plate bolts require a Torx E8 socket; as with all the bolt removal and installs, loosen in a cross pattern.

Here is the ill fated aluminum flywheel that I couldn't use. This had to be removed and because of time constraints I installed the latest OEM flywheel and pressure plate kit.

Some of the lower bolts on the gear case were badly rusted requiring a clean up with a thread restoration tap and die.

The split gear box and stock open differential. Oddly the shifter cable holder had threadlocker on the bolts so they also required some clean up with the restoration tap and die as well as an application of blue thread locker when reassembled (if BMW specs threadlocker on the bolt, I do it).

Here are metal shavings captured by the transmission magnet. The magnet is about the size of a half-dollar coin; this is not very bad and does not mean damage has been done; most came from the open differential gears. An analysis of the OEM fluid (the second change interval) showed very little wear residues.

Here are the early and late model Quaife ATB differentials. The one on the left is the newest version which had 2lb-6oz trimmed away. The early version has very close tolerances and the Quaife on a diet rattles like a maraca when shaken. The original plan was to install a lightweight flywheel; I wanted lower reciprocal mass in as many places as possible while putting this package together so the newer model was installed. I'm told by Autotech here is no functional difference between the two and only machining of the outer surfaces was performed; the manufacturing die is identical.

My apologies for the lack of photos on the next steps since this is the part not covered by the Bentley Service Manual, I felt the need to stay focused (although I wish I had pictures for extra QC/QA) but here it is in a nutshell; the differential ring gear has to be removed and fastened to the Quaife. Again, loosen in a cross pattern. Degrease the ring gear bolts and clean the threads with a wire brush. There is more than one approach to the ring gear fastening step; here is the procedure I performed. Tighten the bolts in a cross pattern in 10 ft-lb increments up to 30 ft-lb, remove each bolt in the same cross pattern one at a time, degrease, forced air dry, apply red threadlocker and torque to 70 ft-lb (final torque value sources – LuckyDogGarage and Hubie Fuh). With ten bolts to tighten on this critical component it's easy to get lost; quality control measures are necessary. I used sticky page markers to number label each bolt, removed the appropriate number, applied torque and marked with Whiteout, for the next round applied the number and marked, and followed with remove the number and marked, and so on, in the end all bolts had the same number of marks. Applying 70 ft-lb on this small component was not easy, requiring a method of securing the differential; I used a large centering tool/round pry bar, braced one end of it against a stop, and the other round end wedged in one of the Quaife's oil holes, I put every ounce of personal energy on keeping it all together, in place without moving, and applying torque, there must be a better way. New carrier bearings should be installed on the new differential. I first tried and failed baking the bearing and dropping it on; the bearing stuck on the oven mitt, got cocked on the end shaft and cooled quickly, others had better luck with that method. A local shop corrected my mistake and pressed on the other bearing (I baked them some cookies). All exposed bearings (the differential in particular), races, and gear teeth were lubricated with fresh transmission fluid. Blot up as much fluid as you can in the outboard gear case half before the next step, so when turned over to cap the case, none will drip down and spoil the sealant application. The mating surfaces of both gear case edges are thoroughly cleaned, anaerobic surface prep is applied to one side (use masking shields to keep the surface prep off the gear box internals), a thin bead of anaerobic sealant is applied to the other mating surface and the two halves carefully put together. Once again it's important to monitor the torque applied (30 ft-lb) to all the gear case bolts because it's easy to forget your place and miss one of them.

Here are some of the extras needed when splitting the gear case and replacing the flywheel; threadlocker, anaerobic sealant (plus anaerobic surface prep not shown), special grease for the clutch shaft splines & release bearing, and two new bearings.

The rear main seal had been weeping; at first I didn't think it warranted attention when the aluminum flywheel was installed. When I pulled the lightweight flywheel I could see the areas I'd cleaned were moist again; this combined with advice from a couple of local MINI techs prompted me to order a new seal to install. BTW, none of the local MINI techs had replaced one before so they couldn't provide any guidance. The old seal was very difficult to remove unlike one I had removed from a Cooper motor. After trying to be extra careful and destroying one of the special fabricated tools I made, I was getting no where. It took a smooth flat blade screwdriver to chisel some pressure relief, then one of my fabricated do-dads to pry it out.

The only OEM MINI installation tool available was a seal protector sleeve which I was glad to have during the install. I used some PVC fittings to drive the seal and this was not easy either. Only time will tell whether the replacement seal will be any better because the hole was not round which is probably why the original seal was weeping.

It was a successful seal install in the end.

Here's a tip learned from one of the local MINI techs in order to hold the crankshaft while tightening any bolts; use a transmission bolt as a brace against a large screwdriver with the blade indexing a starter gear tooth (this pry bar fit perfect). That's the most resent version of the stock dual mass flywheel and it is much quieter than the original on my vehicle.

The entire kit installed. Clutch engagement is now right in the middle of travel instead of an inch off the floor like the old one and pedal pressure is effortless. The difference is so pronounced there must have been a problem with the old flywheel & pressure plate/clutch.

I was pressed for time to complete the job before the weather turned bad again and I had a few difficulties (new strut install/fat Bilstein) that put me way behind so once again no photos for the rest of the install. Very lightly grease the transmission shaft splines and clutch pressure release bearing ID. Right before positioning the transmission for install, check to make sure the pressure release bearing is where it's supposed to be and clicked on the actuator fingers/fork. The transmission housing required some wiggling & wrangling to re-fit, this is where the transmission dolly and two engine supports came in handy for a solo install. I had a breaker bar and socket on the end of the crankshaft damper bolt to move the crankshaft for clutch spline alignment, an elbow on the jack handle, a hand guiding the gearbox, a knee on the transmission lift, and sometimes looked like one of those break dancers spinning around on their head. I corrected the improper routing of the engine harness, fixed the heat shield, and

put all the brackets where they should have been in the first place. Bleeding the clutch slave after this job is a must; plenty of bubbles could be seen in the catch bottle hose.

All of the torque values except for those involving the gear case can be found in the Bentley Service Manual.

Although this job can be performed “by-the-numbers” it does require a little more than average mechanical skills. I recommend contracting a professional for this install, but money savings can be substantial for the do-it-yourselfer.

Special thanks goes out to Chad http://www.detroittuned.com/ , Dan http://www.grassrootsgarage.com/ , Jan (El Diablito), Joe http://www.jgcycles.com/jagindex.html , and Mike (drmike@txwerks.com), http://engr.smu.edu/rcam/cpm3v/minic...niclutch01.htm

Quote

03-30-2007, 06:07 PM #2

TonyB
6th Gear
iTrader: 0% (0)

Join Date: Apr 2003
Location: a canyon, south Bay Area
Posts: 3,838
Gallery

Keith, you don't post much, but when you do... it's usually good. And this qualifies as exceptional!!! Thank you very much.

I wonder if that power steering cable issue is somewhat chronic as I recall a few losing their steering, namely racers...

And I see a better photo of the infamous blue bucket you got some grief about . Thanks again!

_____
Weight ('03 IB MCS): 2,424 lbs (corner-balanced, 1/4 tank gas)
WHP: 223 @ 7,300 RPM on 13.5 psi (Mustang, ABF Performance)
Front: -2.2 deg camber, 0 toe, 350# PSS9's, CE28N's, Conti Ext Contact DW, 205/50-16, 36 psi
Rear: -1.6 deg camber, .06 toe in, 340# PSS9's, CE28N's, Conti Ext Contact DW, 205/45-16, 38 psi

Quote

03-30-2007, 06:37 PM #3

norm03s
6th Gear
iTrader: 0% (0)

Join Date: Apr 2003
Location: Ellicott City, Maryland USA
Posts: 1,721
Gallery

Thanks k-huevo, excellent stuff
This needs to be a How to sticky!

_____
Have you ever noticed that anybody driving slower than you is an idiot, and anyone going faster than you is a maniac?
George Carlin

Quote

03-30-2007, 11:05 PM #4

markldriskill
5th Gear
iTrader: 0% (0)

Join Date: Apr 2003
Location: Long Beach, CA
Posts: 811
Gallery

Weeping...

...is what I would have in common with your seal if I ever tried to perform this operation.

All I can say is "Wow."

Thanks for all the astounding effort. If nothing else, this convinced me that I will give up any thought of doing it myself.

So, you ended up going to an OEM flywheel AND clutch? So the only mod was actually the Quaife?

If you don't mind my asking:
> how many hours did this take?
> did I read correctly that you only had to purchase one special BMW/MINI tool?
> how do you like the Quaife?
> why not a badder FW and clutch (other than the time element)?

Again, thanks for everything!! and

YES THIS MUST BECOME A STICKY.

_____
- Mark

03-30-2007, 11:16 PM #5

justintime
6th Gear
iTrader: 0% (0)

Join Date: Aug 2006
Location: bryan tx
Posts: 2,184
Gallery

keith knows all great write up as alwayssss.

_____


www.justin-davis.com

03-30-2007, 11:32 PM #6

billie_morini
5th Gear
iTrader: 0% (0)

Join Date: Feb 2006
Posts: 981
Gallery

k,
that is a mighty fine and educational set of photos. Thank you so very much
billie

03-31-2007, 01:05 AM #7

k-huevo
6th Gear
iTrader: 0% (0)

Join Date: Aug 2004
Location: Pipe Creek, Texas
Posts: 1,589
Gallery

markldriskill,
>It took more hours than I can count but I also had multiple projects going on.
>The shift cables can be removed with a pry bar or screwdriver but the OEM tool makes it quick & easy.
>I like to think I'm smooth with the brake & accelerator pedal so in normal driving it isn't noticeable but of course I have to see what it can do, in those situations, steering control and grip have improved.
>The OEM flywheel and clutch were plan B; there was a fitment problem with the "badder" kit and no replacement was available. I couldn't afford a rental car for an indefinite period of time and the OEM kit was on the shelf at the local parts department.

Tony, Norm, Justin, and Billie, thanks for the positive comments.

03-31-2007, 01:32 AM #8

jhiggs26
5th Gear
iTrader: 100% (3)

Join Date: Apr 2004
Location: Maple Ridge, BC
Posts: 894
Gallery

Superb how-to write up! Too bad about your lightened flywheel/pressure plate/clutch combo. Please keep us updated on your impressions of the lightened version of Quaife's ATB diff.

Jeremy

_____


2004 Liquid Yellow MCS Sport/Chrome Pkg, 17% Alta SC Pulley, Alta Intake, Alta IC Diverter, Ultrik Cam, CM Flywheel/FX200, OBX ATB Diff, JCW Fuel Injectors and Software, Edge Racing Sport Header with Magnaflow Cat, 1 Ball Exhaust, JCW Plugs, Powerflex Front Subframe Bushings, Powerflex Motor Mount Inserts, Alta Springs, Alta Lower Control Arms, Alta 19mm Rear Sway Bar, Rear Seat Deleted, 17 by 7 O.Z. Ultraleggeras, Auto Meter Boost/Vacuum And Oil Pressure Gauges.

Quote

03-31-2007, 06:37 AM #9

SpiderX
6th Gear
iTrader: 0% (0)

Join Date: Sep 2004
Posts: 5,149
Gallery

As always Kieth your info is tops..... really nice job..... taking pictures and documenting is hard to remember to do while in the battle. Thanks

_____


my grandson Cian, the Mini and me
Mini was sold to a good home in CA. I now have a 2001 M roadster silver/black .... DDM intk, M7 TB, M7 DFIC 2, RMW head/shrick , WMS pm runners/intk mfld/cmber plates, CMP custom header/ Milltek, PSS9s, BBS/T1R, AP bbk, Alta SS, plo coil/ngy, M7 str/ustr/CC , F/R sway bar, Aero Kit, op/bst gauges, JCW 380s, Quaiffe/ Clutchmaster/FW, RMW custom tune 231.7 whp, F&R sway bars and more

Quote

03-31-2007, 09:27 AM #10

norm03s
6th Gear
iTrader: 0% (0)

Join Date: Apr 2003
Location: Ellicott City, Maryland USA
Posts: 1,721
Gallery

This needs to be a How to sticky!

_____

Have you ever noticed that anybody driving slower than you is an idiot, and anyone going faster than you is a maniac?
George Carlin

Quote

03-31-2007, 11:02 AM #11

k-huevo
6th Gear
iTrader: 0% (0)

Join Date: Aug 2004
Location: Pipe Creek, Texas
Posts: 1,589
Gallery

This OEM tool was helpful also, it aligns the clutch disc to the center while tightening the pressure plate; a big time saver. The plastic alignment tool that comes with aftermarket pressure plate kits is far less precise.

03-31-2007, 01:02 PM #12

Partsman
Legion_of_Doom
iTrader: 100% (9)

Join Date: Mar 2005
Location: Westerly, RI
Posts: 3,991
Gallery

Excellent job and thread, Keith. Thanks very much for taking the time to document and post it. You really gave those of us that haven't been that deep into the car yet a good look.

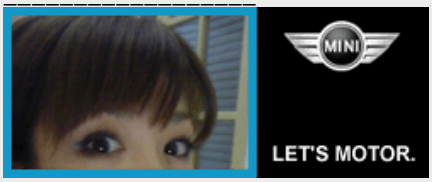
03-31-2007, 01:18 PM #13

nabeshin
Functioning Lunatic
ALLIANCE
iTrader: 100% (1)

Join Date: Sep 2006
Location: Lincoln, NE
Posts: 4,899
Gallery
Garage

Can I hire you to do this on my car? I know the dealership overcharges, but what is a good rate for an import mechanic to do this?

_____



9/29/2002 EB/W MCS 81,504 miles
Original owner since 2002.

03-31-2007, 03:51 PM #14

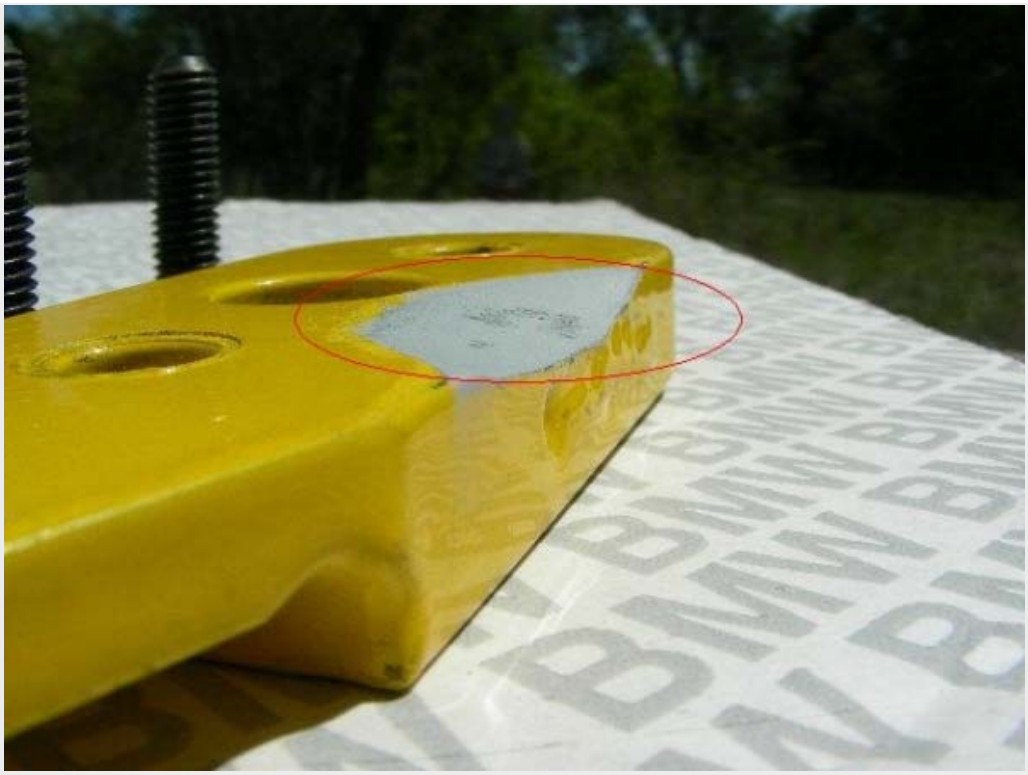
k-huevo
6th Gear
iTrader: 0% (0)

Join Date: Aug 2004
Location: Pipe Creek, Texas
Posts: 1,589
Gallery

Here's a better photo of the upper engine support and the transmission jack; helpers for us old guys.

The OEM engine support bracket.

Some filing of the bracket is needed in order for it to fit behind a coolant hose.



Quote

03-31-2007, 04:46 PM #15

002
5th Gear
iTrader: 0% (0)

Join Date: Feb 2005
Posts: 913
Gallery

K-huevo,
Is there any special thought required concerning axial play of the diff in the case when pressing on the bearings? Any extra noise from the quaife? How's the backlash when getting on/off the gas compared to the stock open diff?

Quote

03-31-2007, 11:51 PM #16

k-huevo
6th Gear
iTrader: 0% (0)

Join Date: Aug 2004
Location: Pipe Creek, Texas
Posts: 1,589
Gallery

The only concern is to be sure the bearing is fully seated on the shaft. As long as the correct bearing part number is used there will be no change in relationship with the race. Starting with Tony Nuzzo and echoed by more than one installer including a local transmission expert; cautions were issued against bearings made in China and Taiwan. The stock bearing is manufactured in Germany by SKF, one of the best made. Japanese bearings have been given high marks also along with the U.S. made Timken. There was a question raised about setting lash to keep noise down on the Quaife and improve shifting. I showed pictures of the split case and gears to someone who blueprints racing transmissions and he told me I didn't have anything to be concerned about so I didn't pursue that any further.

There is no noise from this Quaife; I am using a higher viscosity transmission lube (Silkolene SYN5 75W90) at the moment which may have something to do with that, and since it's a new clutch, I've been avoiding engine braking. I'll be going back to the stock MTF-94 in another week so we'll see.

I had backlash before the install especially after a downshift and hard throttle on, but I thought that was a function of the clutch. In that regard the only change has been to a silky smooth clutch engagement. I've not hammered this thing yet (maybe just a little) so a thorough evaluation will have to wait.

Quote

04-01-2007, 12:07 AM #17

TonyB
6th Gear
iTrader: 0% (0)

Join Date: Apr 2003
Location: a canyon, south Bay Area
Posts: 3,838
Gallery

This is just awesome info! I have never done something like this before, and with this information, and considering my current situation regarding the lack of a garage, I might not anytime soon.

With the projects I have done, I must say that it does take a conscious effort to document steps and take photos along they way, especially when tired, frustrated, and with dirty hands... I appreciate those who do this for the Community!

_____
Weight ('03 IB MCS): 2,424 lbs (corner-balanced, 1/4 tank gas)
WHP: 223 @ 7,300 RPM on 13.5 psi (Mustang, ABF Performance)
Front: -2.2 deg camber, 0 toe, 350# PSS9's, CE28N's, Conti Ext Contact DW, 205/50-16, 36 psi
Rear: -1.6 deg camber, .06 toe in, 340# PSS9's, CE28N's, Conti Ext Contact DW, 205/45-16, 38 psi

Quote

04-01-2007, 12:25 AM #18

002
5th Gear
iTrader: 0% (0)

Join Date: Feb 2005
Posts: 913
Gallery

K-huevo,
Thanks. I have the obx (yeah yeah I know it's cheap, but I felt like gambling) and I was going to use the bearing number you gave me for napa. I took the lsd apart to look inside and check out the machining. It's pretty rough, but I think it will do. I still can't quite understand how it works though. I'll have to find a theory of operation document.

Some how today I got an itch to install a cam as one of my last power mods (until I rebuild the old beast) so that may come first. I want to be able to hammer it after the install and not wait for the clutch to break in.

Quote

05-07-2007, 04:35 PM #19

k-huevo
6th Gear
iTrader: 0% (0)

Join Date: Aug 2004
Location: Pipe Creek, Texas
Posts: 1,589
Gallery

Not long after the install, fluid appeared at the transmission weep hole. My first thought was a failure of the rear main seal again; as fate would have it the OEM seal driver I ordered over two months ago finally arrived and I had a new approach for removing the old seal, so it felt like I was prepared this time. Well, the leak was coming from the transmission input shaft seal instead and it was a big mess. Enough had pooled to be picked up by the starter ring gear and slung around the clutch housing contaminating the clutch disc as well.

The rub with this seal is a bearing located behind it so extra care is required during removal to avoid damaging the bearing retainer. After a couple of pros gave me a cavalier suggestion to “just use a screw driver” I gave it a try. I used a nut driver for a fulcrum and a screw driver as the lever to pry open a space, then an angled needle nose to pull it out; there is a shoulder on the input shaft that provided perfect leverage for the pliers’ elbow. That’s plastic from a water bottle protecting the shaft.

This is the prophylactic method I used when sliding the seal over the shaft splines.

The seal was driven flush using a PVC sink fitting, first using the flange side to drive it flush, then the smaller diameter side to take it a little further like the way the stock seal fit.

While I was in there, it was a good opportunity to freshen up the clutch release mechanisms. The latest guide tube has a polished surface to reduce friction with the clutch release bearing; the older model has a course Parkerized finish.

The new version of the clutch release bearing has a self-lubricating nylon sleeve for the sliding surface.

The older bearing is all metal in the interior diameter.

Since the clutch release parts had to be removed to degrease the clutch housing, the clutch release shaft's nylon bushings were also replaced along with new threadlocker equipped OEM bolts. Before replacing the bushings, the shaft had play in all directions, after the new bushings the shaft would no longer wiggle. BTW, there was no wear on the clutch release fork's contact pads so need for that part to be replaced.

The Bentley Service Manual calls for a light film of ESSO Unirex S2 grease on the guide tube and the directions with the pressure plate kit extend that recommendation to the transmission input shaft splines. It requires only a very small amount of this special tenacious grease.

A final inspection to make sure the clutch release bearing is in its place before bolting up the gear box.

In all the clutch & flywheel install threads I've read it's only mentioned to replace the clutch release bearing, but I think it makes sense to replace the other wearing parts in the mechanism also; the clutch release bearing and guide tube as a pair would seem a must.

Last edited by k-huevo : 05-10-2007 at 12:11 AM.

Quote

05-07-2007, 04:55 PM #20

Fisher
3rd Gear
iTrader: 0% (0)

Join Date: Jan 2003
Posts: 172
Gallery

> Quote:
> Here is the ill fated aluminum flywheel that I couldn't use. This had to be removed and because of time constraints I installed the latest OEM flywheel and pressure plate kit.

Why you can not use this flywheel?

Does not go on the OEM clutch?

Last edited by Fisher : 05-07-2007 at 07:40 PM.

Quote

05-22-2007, 01:14 PM #21

chawness
1st Gear
iTrader: 0% (0)

Join Date: May 2006
Posts: 37
Gallery

Wouldnt it be easier to just pull the engine??

_____
Steve - Certified Amsoil Dealer
2002 MCS - ALTA cold air intake - Remus Stainless exhaust
ALTA 15% pulley - SPC camber plates - Powerflex Bushings - ALTA cntrl arms
Ive replaced: Head Gasket, #1 piston, Control Arm bushings, CV boot, F.brakes, Fan shroud assembly, Water pump, thermostat, rear control arms. Got Mini? Grab your tools!

Quote

05-22-2007, 01:27 PM #22

chawness
1st Gear
iTrader: 0% (0)

Join Date: May 2006
Posts: 37
Gallery

Nevermind!

_____
Steve - Certified Amsoil Dealer
2002 MCS - ALTA cold air intake - Remus Stainless exhaust
ALTA 15% pulley - SPC camber plates - Powerflex Bushings - ALTA cntrl arms
Ive replaced: Head Gasket, #1 piston, Control Arm bushings, CV boot, F.brakes, Fan shroud assembly, Water pump, thermostat, rear control arms. Got Mini? Grab your tools!

Quote

07-22-2009, 02:43 AM #23

gokaht
3rd Gear
iTrader: 100% (6)

Join Date: Sep 2007
Location: MA
Posts: 218
Gallery

GREAT writeup - I'm going over it many times before digging in

Any idea what the pn was for the OEM clutch tool as well as the seal protector? I can't seem to find them...

Aside from that, I'm taking your approach and replacing the wear items you did as well. Better safe than sorry!

Do you have the torque specs for all the bolts?

Lastly, if you don't disconnect the slave cylinder, do you need to bleed the clutch system? I always thought if the system wasn't opened no bleeding was necessary....

_____
'03 MCS : 6SPD : JB/B : 75K MI : RMW TUNED (201.1WHP BEFORE BELT, CAT DELETE) : K&N 1550 HAI : CM FX300 : JBR FW : ALTA 15% : 380CC : MSD : HOTWIRES : TSW DAMPER : MILLTEK : 4-1 SS HEADER (NO CAT) : B&M SSK : WHALEN CUE : TT BOOT : H&R'S : SPARCO MILANOS : CHROMELINE : ICE<LINK : BOBCATS : TSW CARBONS : STOPTECH SS LINES : BRASS BUSHINGS : VIS CF HOOD

Quote

08-03-2009, 11:33 PM #24

WJHMH
2nd Gear
iTrader: 0% (0)

Join Date: Apr 2009
Location: Panther City, Texas
Posts: 144
Gallery

Thanks for the write up, great read on the install.

_____
2005 MCS - **Kurgan: Back from the dead...**

Quote

08-03-2009, 11:40 PM #25

MrCooperS
Marketplace Moderator
ALLIANCE
iTrader: 100% (3)

Join Date: Nov 2007
Location: Boston, MA.
Posts: 1,916
Gallery
Garage

I guess my question is... has anyone figured out what causes the squeaky/rusty/rubbery sensation when you depress the clutch?

_____

/ / / MINI Cooper S

Quote

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Page 1 of 2 1 2 >

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Refbacks are **Off**

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