



6T40 Internal Part 2

Presented by:
Bill Brayton
ATRA Senior Research
Technician



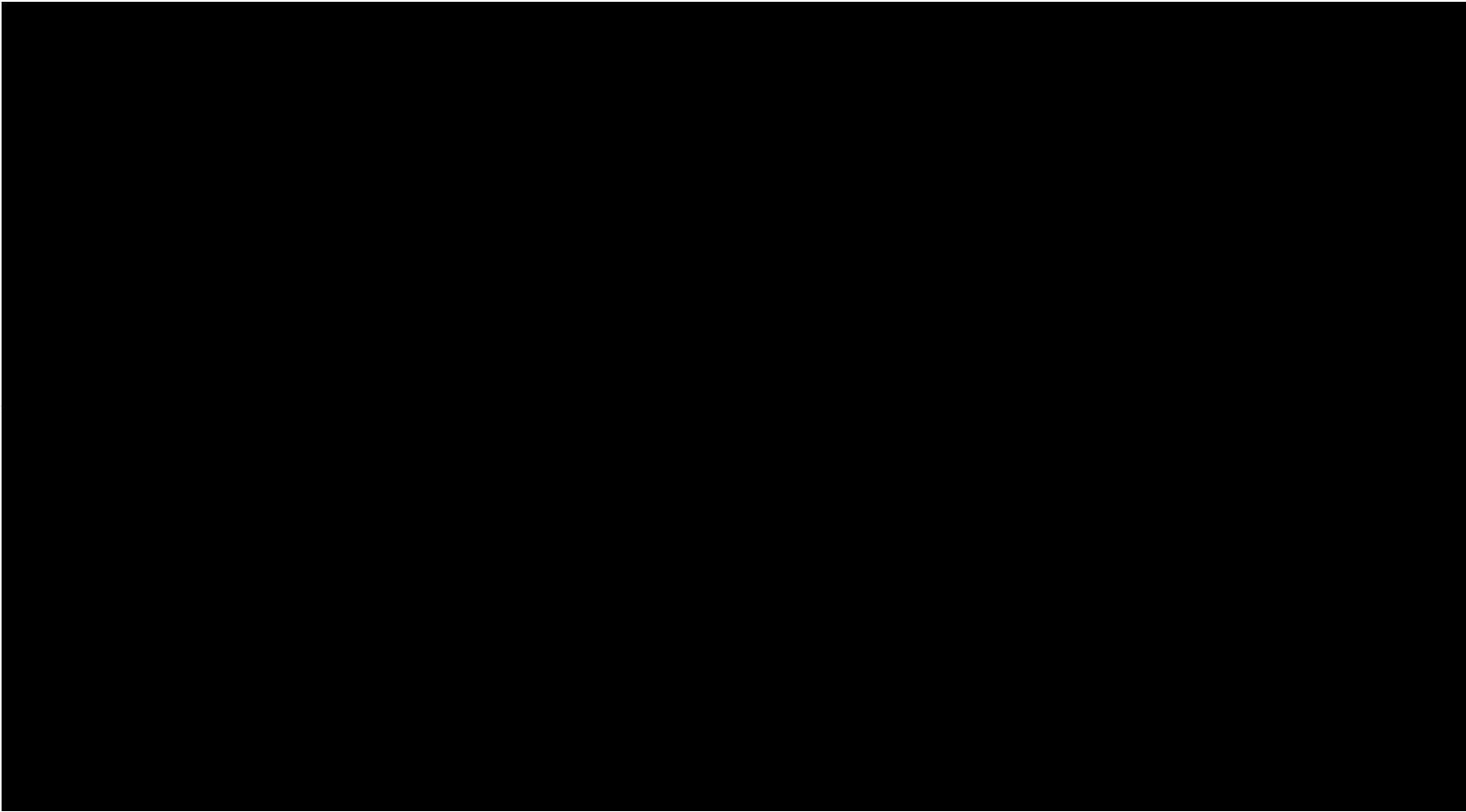
TRANStec®



*Welcome To
Today's Presentation
Sponsored By:*

TRANstec®

TRANstec®



TRANStec®



The Future of Training at Your Fingertips



2016 WEBINAR DATES		TRANSMISSION
January	19	6F35N Intro
February	2	AS68RC Intro
February	16	Lineartronic Gen 2 Introduction
March	1	6T40 Internal
March	15	Reprogramming 1
March	29	A5LF1 Internal
April	12	Reprogramming 2
April	26	Nissan CVT Introduction
May	10	6R140 Internal
May	24	6F35N Internal
June	7	AS68RC Internal
June	21	Lineartronic Gen 1 & 2 Comparison
July	5	6T40 & 6T70 comparison
July	19	Nissan CVT Internal
August	2	722.9 Internal
August	16	JF613 Internal
August	30	Drivability Diagnostics 1
September	13	Installation 101
September	27	Drivability Diagnostics 2
October	11	Hybrid Diagnostics & Safety

This and other technical webinars
are made possible by;



**SEAL AFTERMARKET
PRODUCTS**

your source for engineered solutions

TRANstec®



ATRA Webinars are presented every two weeks from January
to October.

HOW TO PARTICIPATE:

Login at <http://members.atra.com> and click on the webinar
schedule under the events menu. Once registered, you will
receive an email confirming your registration along with the
information you need to join the webinar.

*Free for everyone on the day of the webinar. ATRA Members have access to
all pre-recorded webinars

2016

WEBINAR DATES

TRANSMISSION

July	5	6T40 Internal 2
July	19	Nissan CVT Internal
August	2	722.9 Internal
August	16	JF613 Internal
August	30	Drivability Diagnostics 1
September	13	Installation 101
September	27	Drivability Diagnostics 2
October	11	Hybrid Diagnostics & Safety

TRANstec®



TRANstec®



*Any Questions Or Comments Please
Send Emails To webinars@atra.com*

*Any Questions That You May Have
During The Webinar Please Feel
Free To Text Them In At Any Time*


TRANstec®



When you received the email invitation to the webinar, there should be a place to click and download the Adobe (pdf file) of the presentation handout material.

Also there is an icon that you can click on to be placed onto the email list for future webinars. An invitation will be emailed automatically when future webinars are scheduled.

You can also invite a friend.



**ATRA Presents the
Chrysler/Mercedes 722.6
Webinar**

Greetings!
Today's vehicles present many challenges for the technicians that are required to repair them. Mike Souza will present this webinar Sponsored by Seal Aftermarket Products. This class is approximately 35mins.

Sponsored by

Seal Aftermarket Products

Simply click on the time zone below to register for the webinar. AEST is Australian Eastern Time zone.

Click **HERE** for the presentation handout

[Eastern Time Zone](#) 12:00PM September 2, 2014

[Mountain Time Zone](#) 12:00PM September 2, 2014

[Eastern Australia Time Zone](#) 7:00AM September 3, 2014

[Central Time Zone](#) 12:00PM September 3, 2014

[Pacific Time Zone](#) 12:00PM September 3, 2014

If you have any questions or problems logging in please contact Shaun Velasquez, ATRA Project Manager at webinars@atra.com or call 805 604 2021.

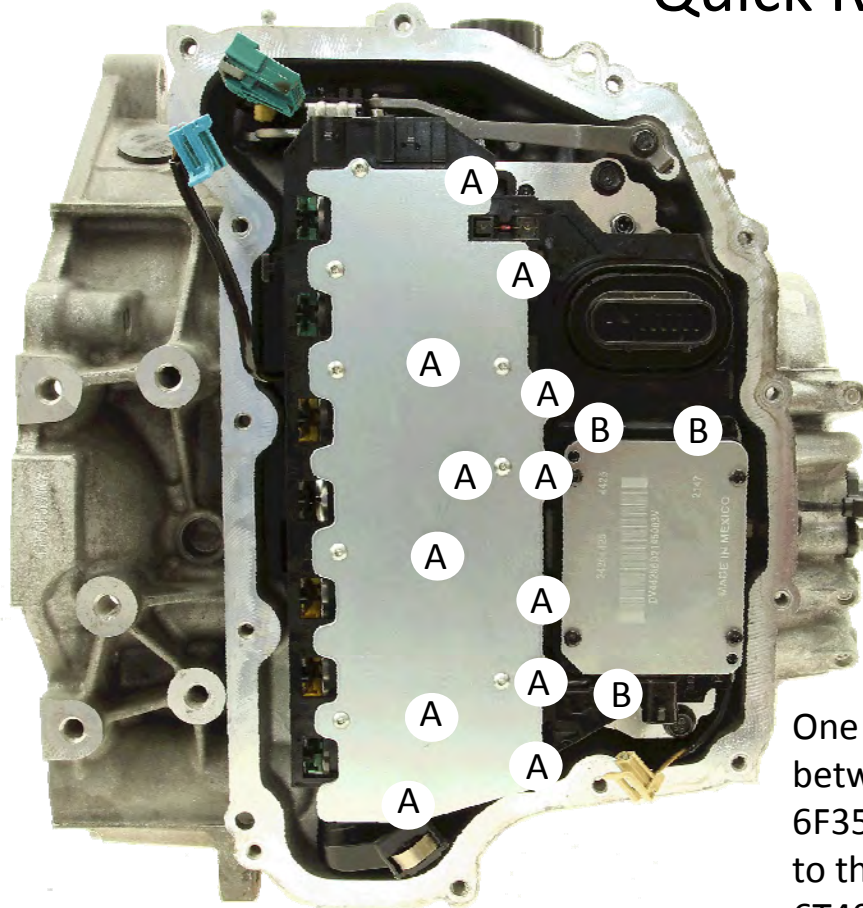
Register for your
time zone here.

TRANStec®

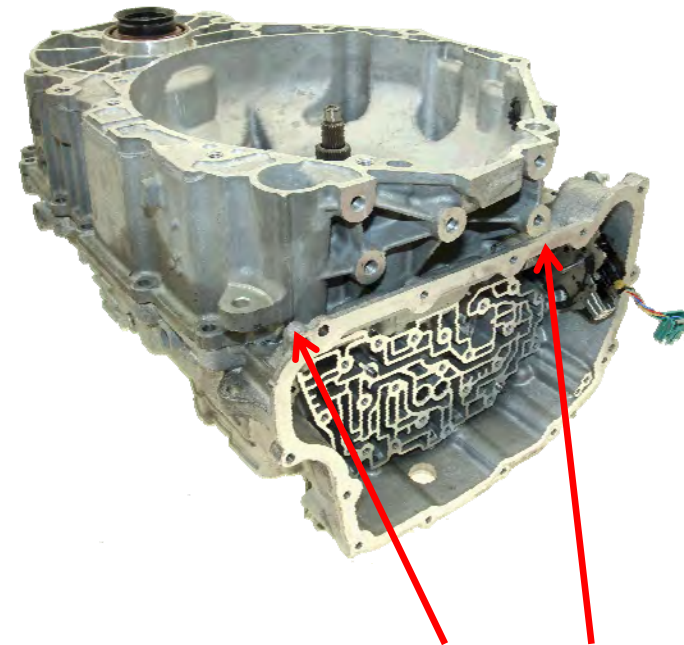


A = 96mm (10mm head)
B = 40mm (7mm head)

6T40 Internal Quick Review



Splitting the case



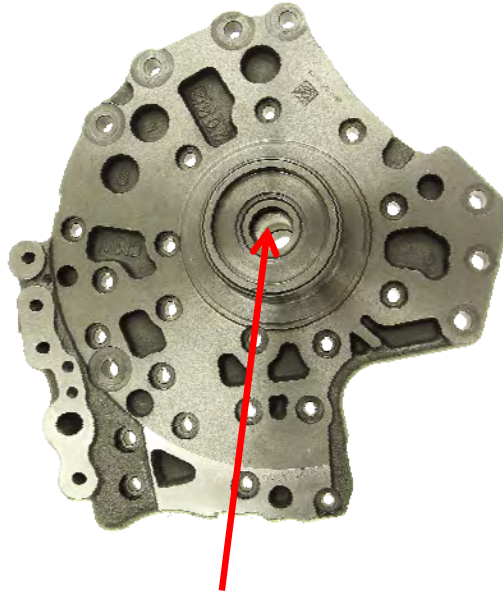
Pry Points

One of the many differences between the 6T40 and the 6F35 is the computer bolted to the valve body on the 6T40.

TRANstec®



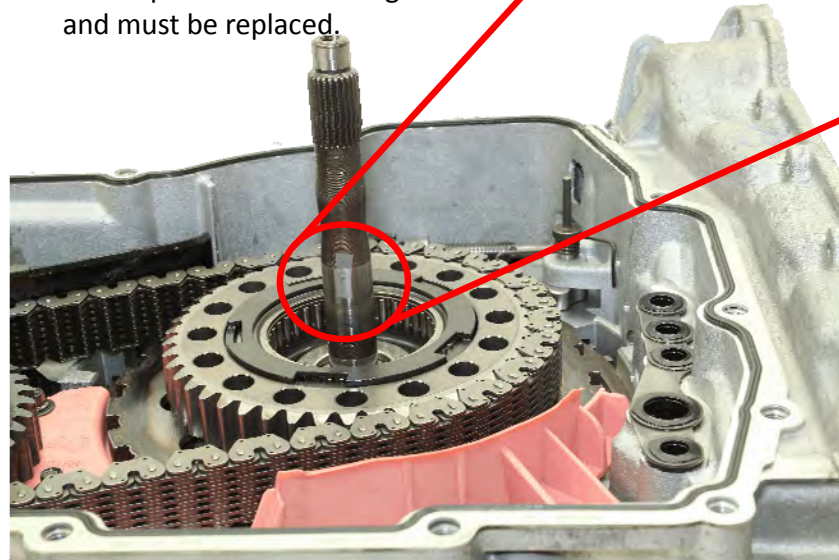
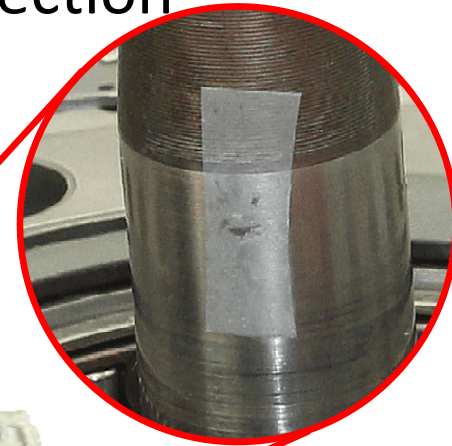
6T40 Internal Stator Bushing Quick Review Inspection



Insert the bushing

The stator bushing wear is very critical because there are no sealing rings on the shaft. If this bushing is worn TCC slip codes may set.

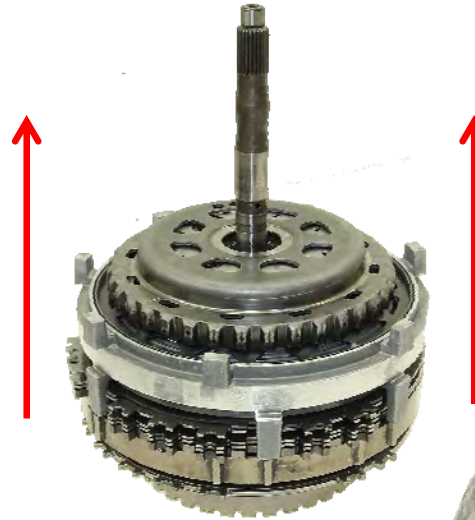
To test the bushing for wear use a small piece of cellophane tape on the input shaft. Place the stator on the shaft. If the stator goes over the shaft with tape on it the bushing is worn out and must be replaced.



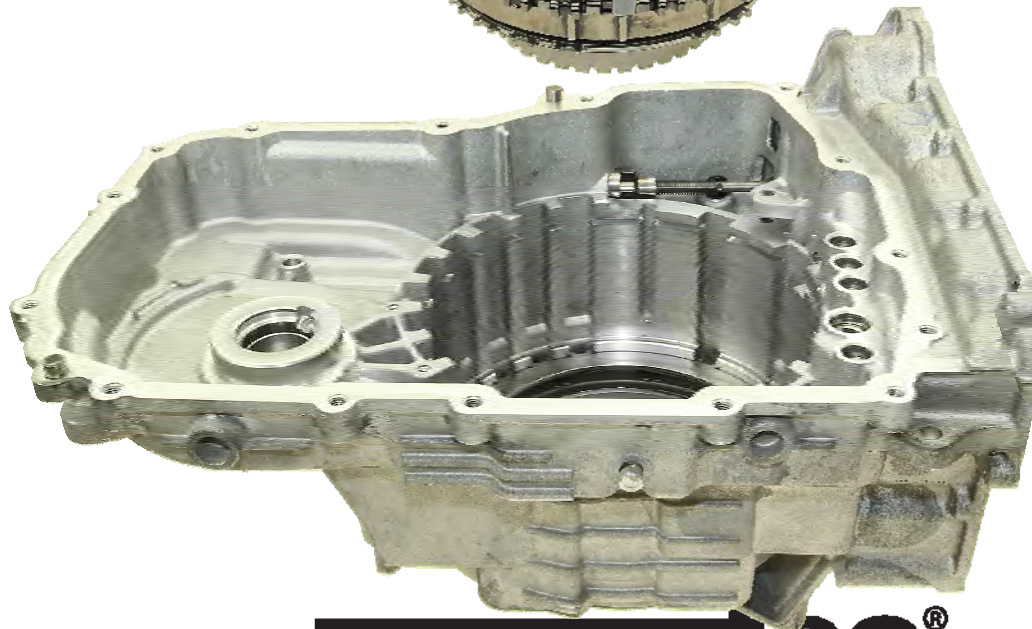
TRANStec



Grab the input shaft
and left the entire gear
train out of the case.
Set the assembly aside.



6T40 Internal Quick Review



TRANStec®



These units have solid sealing rings on the Input drum support. There are a couple of ways to install the new rings depending on your budget.

The factory can be bought on ebay for about 120.00 (recommended).

The alternative is to use a small engine ring compressor tool for 14.00 from the local parts store.

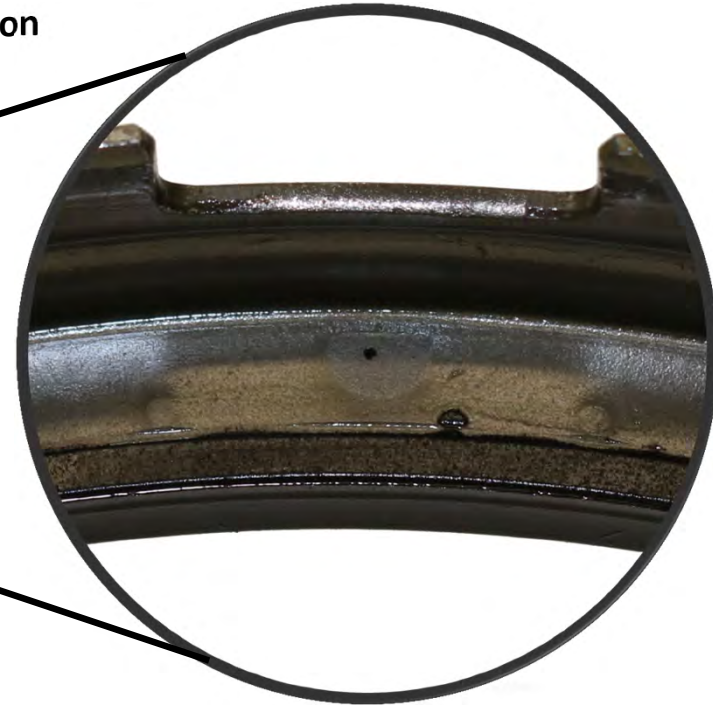
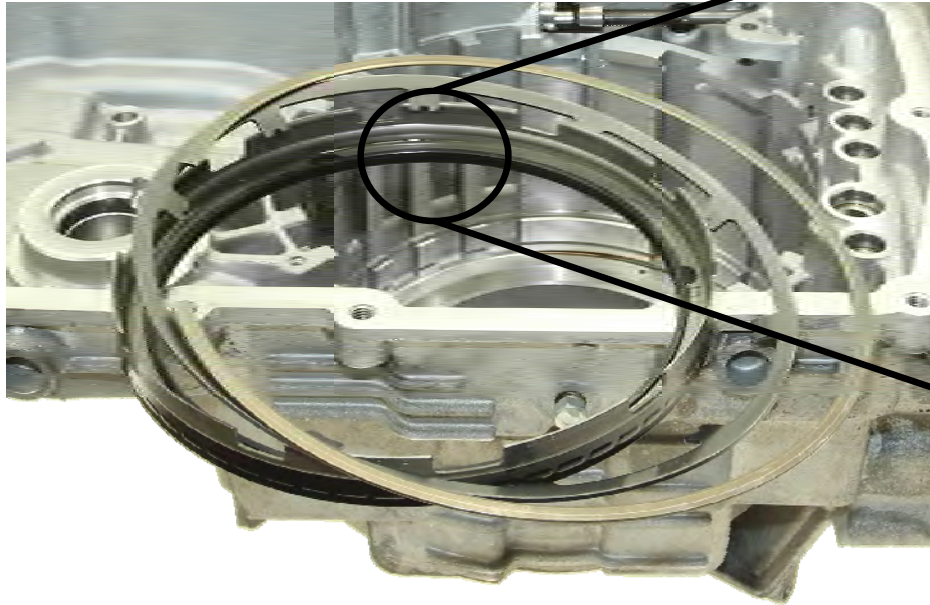
6T40 Internal Quick Review



TRANStec®



6T40 Internal
2-6 Piston Orientation



With the valve body channel casting to the right,
the air bleed hole in the piston goes to the top of
the case.

TRANstec®



Install the thrust bearing with the flat side up



6T40 Internal

Case Assembly



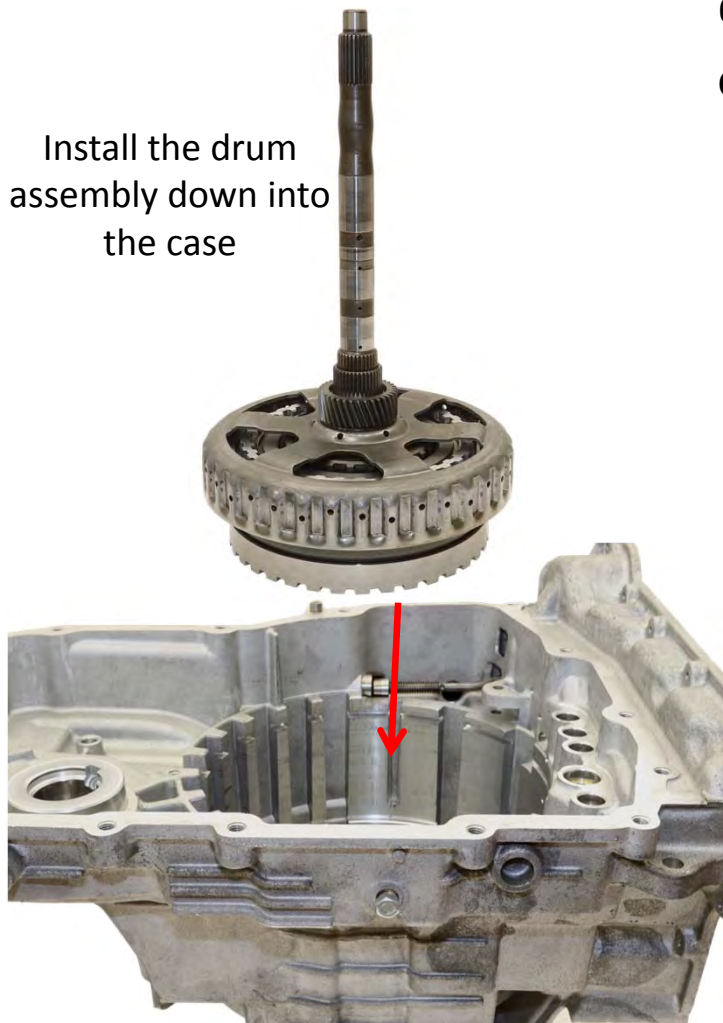
Install the thrust bearing onto the clutch hub, flat side down. Place the sun shell onto the 3,5,rev. clutches.



TRANstec®



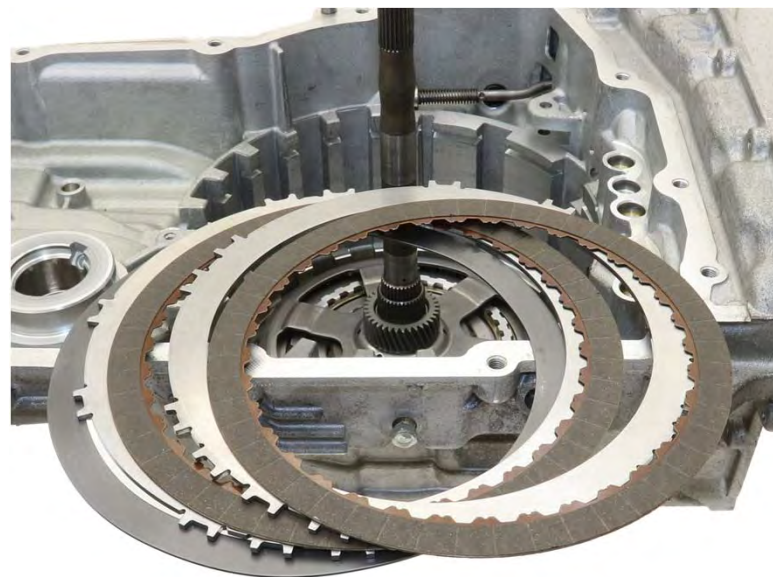
Install the drum
assembly down into
the case



6T40 Internal

Case Assembly

2 – 6 Clutch stack up



Install the 2-6 cushion plate and 2
steels and 2 friction plates

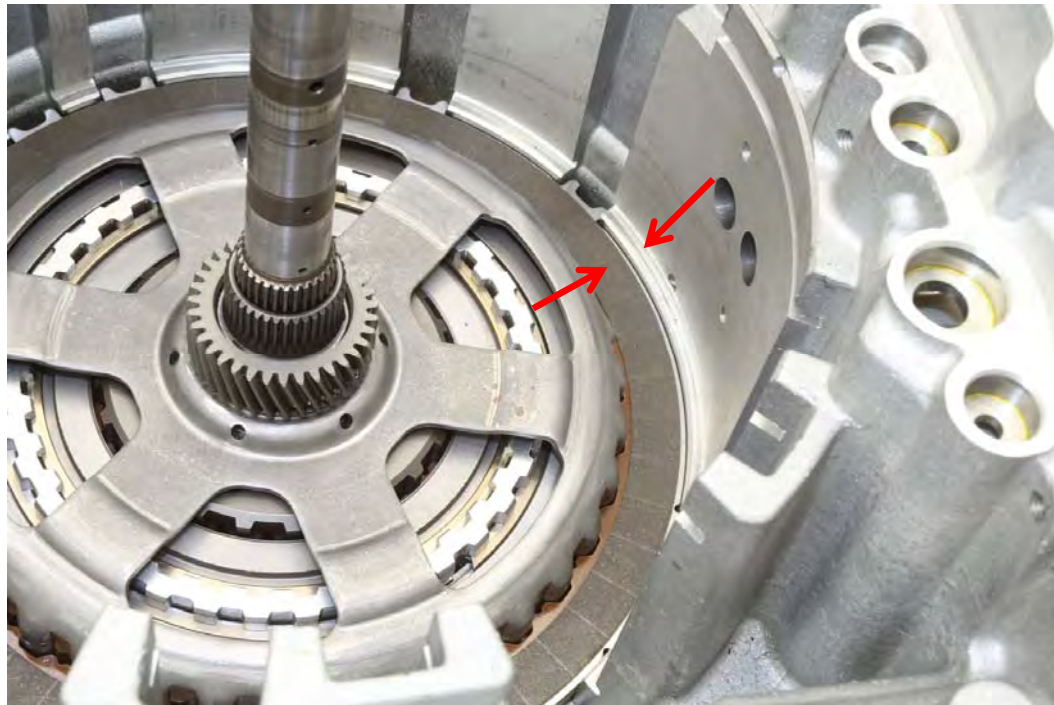
TRANstec®



6T40 Internal

Case Assembly

Typically GM does not publish clutch clearances. As we go through this unit and look at clutch clearances we are not so concerned with the exact measurement as much as we are about the correct stack up. If the stack up is wrong the clearance will be wrong. On the unit we are working on here the clearance was about .059 inch

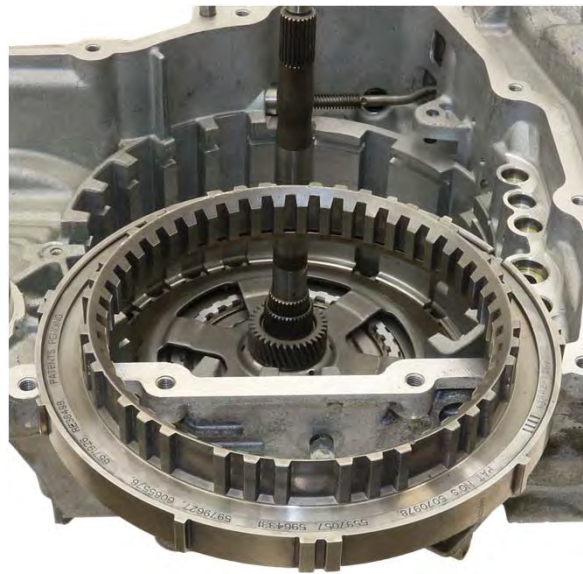


Here the clearance is checked from the step in the case down to the face of the friction plate.

TRANstec®



Load the L&R one way clutch
into the case



6T40 Internal

Case Assembly

Low/Reverse stack up clearance

Prior to installing the L/R clutches into the case the clutch clearance can be checked with the clutches stacked on the piston support. There must some clearance here. The measurement here is .058 in,



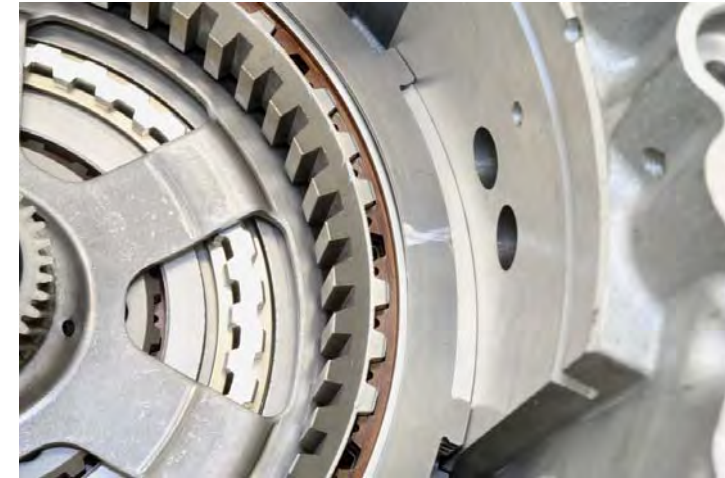
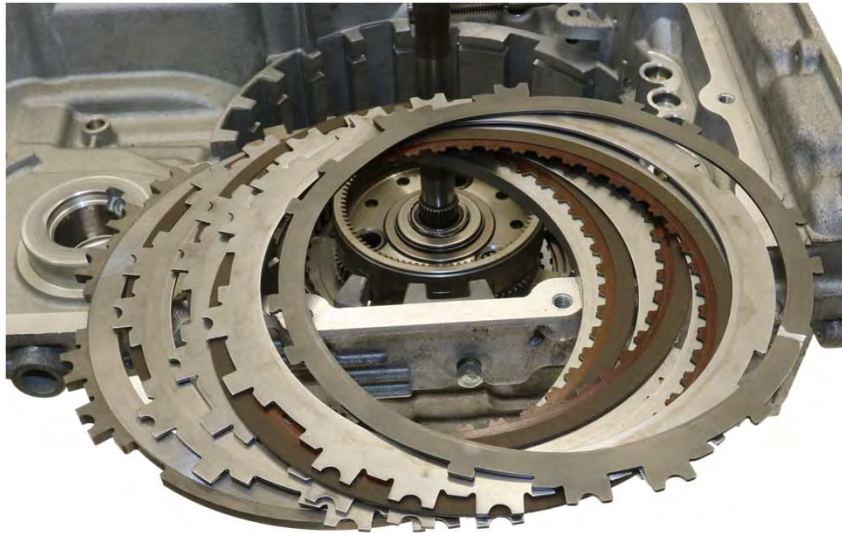
TRANstec®



6T40 Internal

Case Assembly

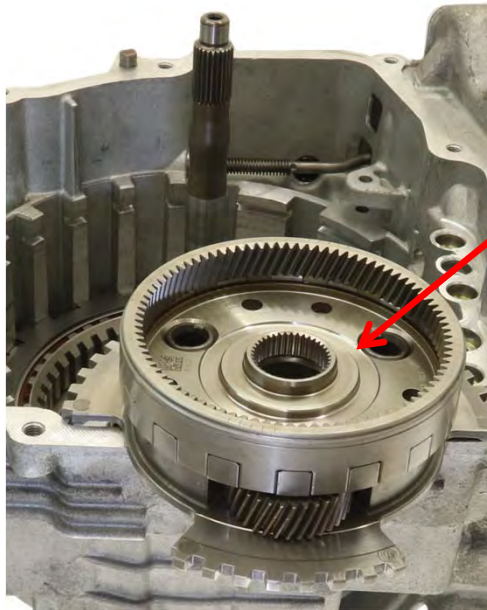
Starting with the pressure plate and ending with the waved cushion plate install the L & R clutch pack into the case. Notice the grind mark made during disassembly. This mark faces the VB channel casting.



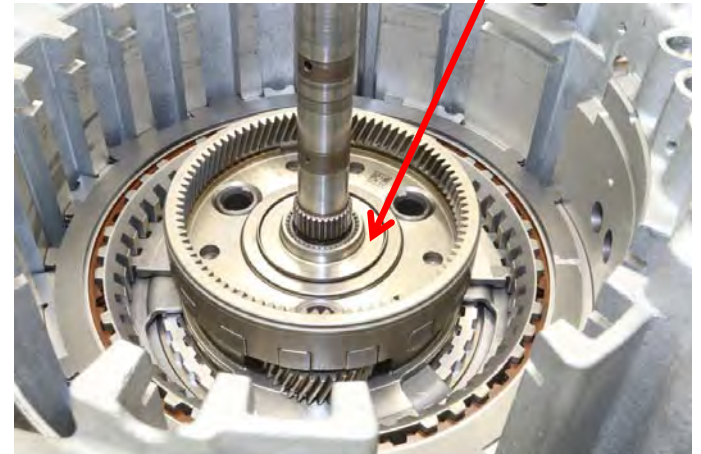
TRANstec®



6T40 Internal Case Assembly



Install the thrust bearing onto the reaction carrier and install the carrier down onto the sun gear/L&R housing.

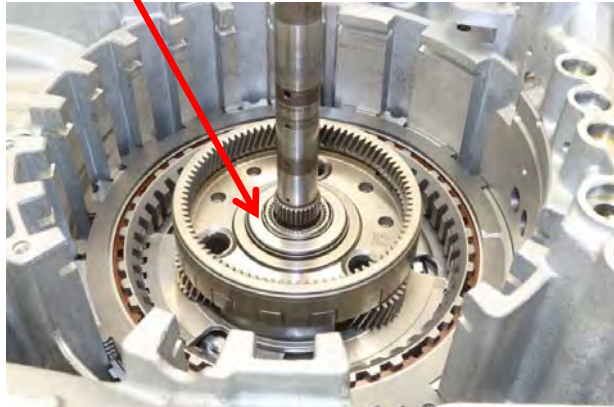


Install the sun gear thrust bearing onto the planet.

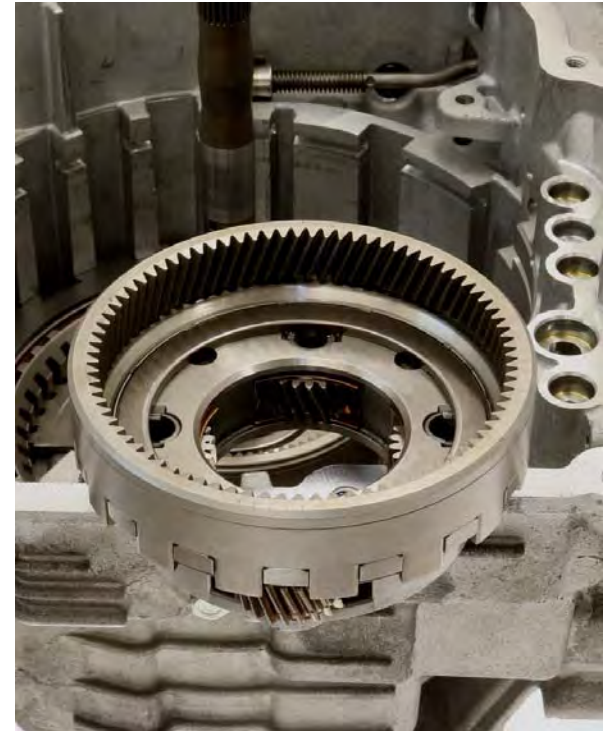
TRANstec®



6T40 Internal Case Assembly



Install the sun gear onto the input shaft splines with the ID groove facing up.



Install the input carrier

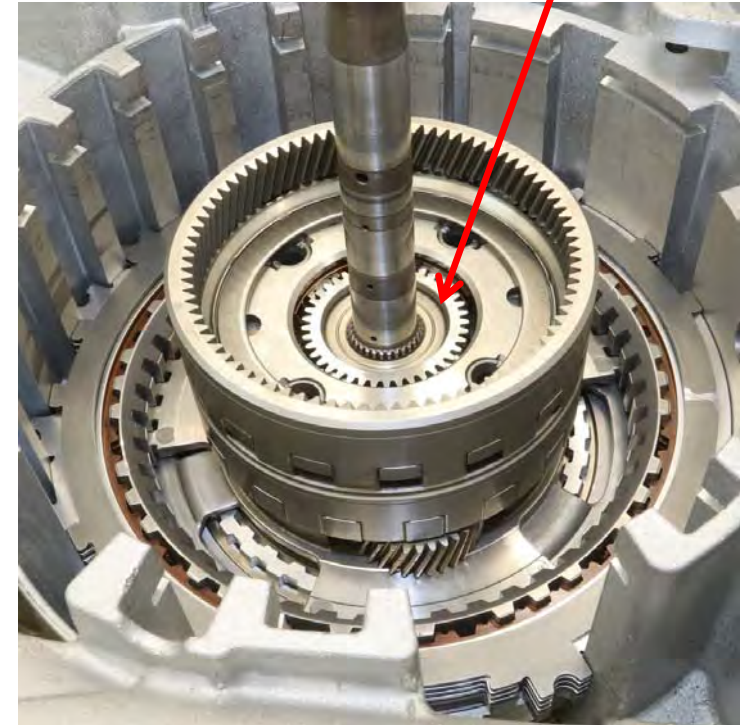
TRANstec®



6T40 Internal

Case Assembly

Install the large thrust washer into the planet and the sun gear thrust bearing onto the sun gear. Note: The skirt on the bearing faces up.

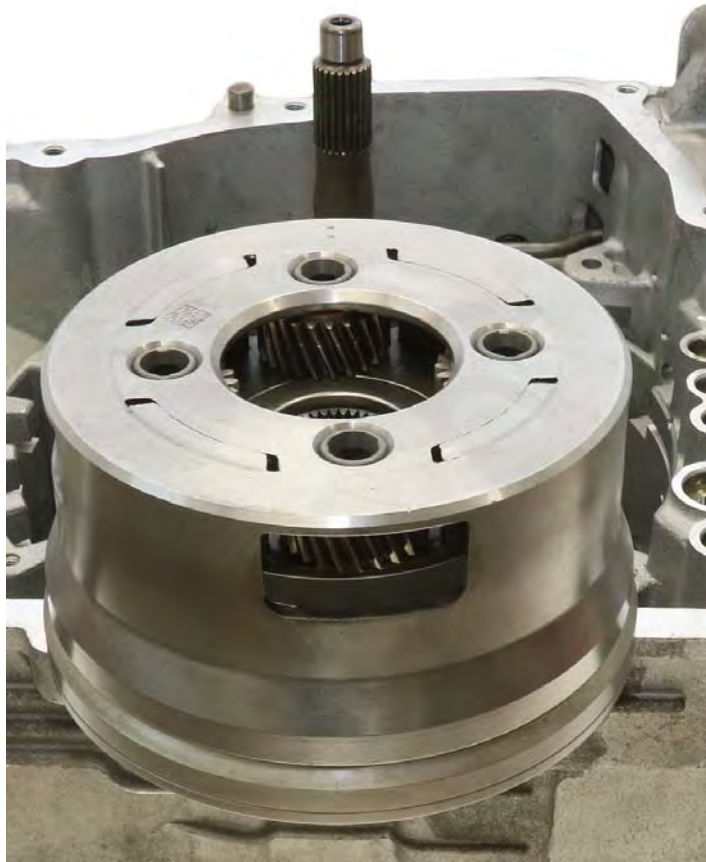


TRANstec®



Install the output carrier

6T40 Internal Case Assembly



TRANstec®



6T40 Internal

Case Assembly

Prior to installing the piston housing check the 1,2,3,4 clutch clearance. The clearance here is .040 as measured on our unit. If there is no clearance check for improper stack up.



TRANstec®

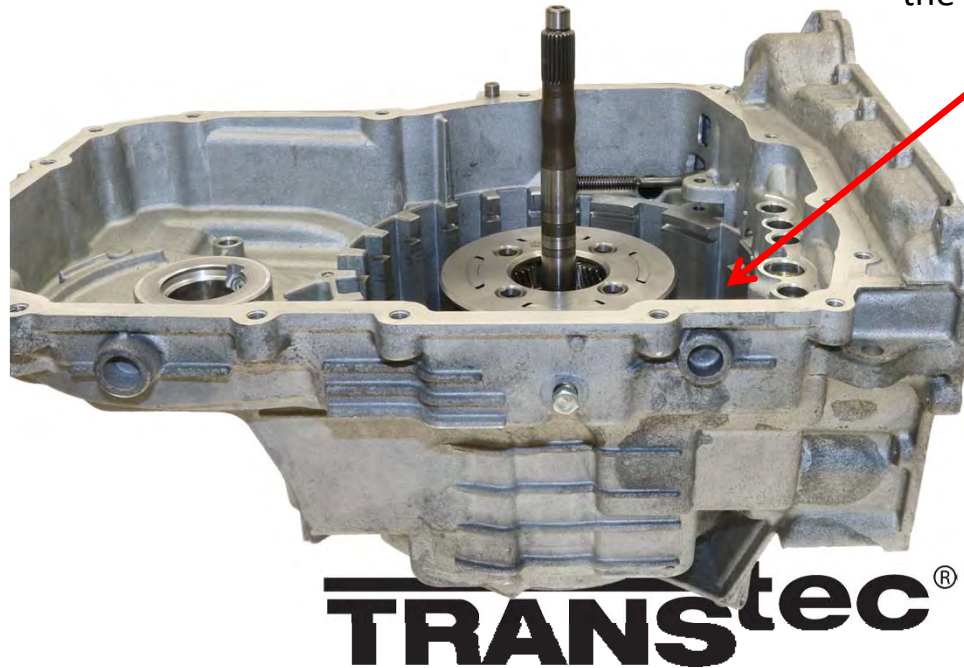


6T40 Internal Case Assembly

Install the piston housing into
the case



Be sure to align the feed
holes in the piston
housing with the holes in
the case





6T40 Internal Case Assembly

Install the 1,2,3,4 clutch assembly

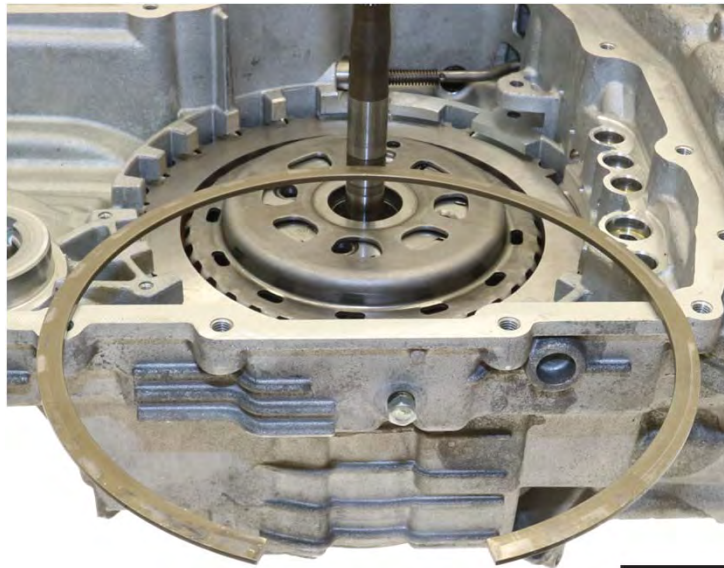
The grind mark made during disassembly makes it easier to index the cushion plate.



TRANstec®



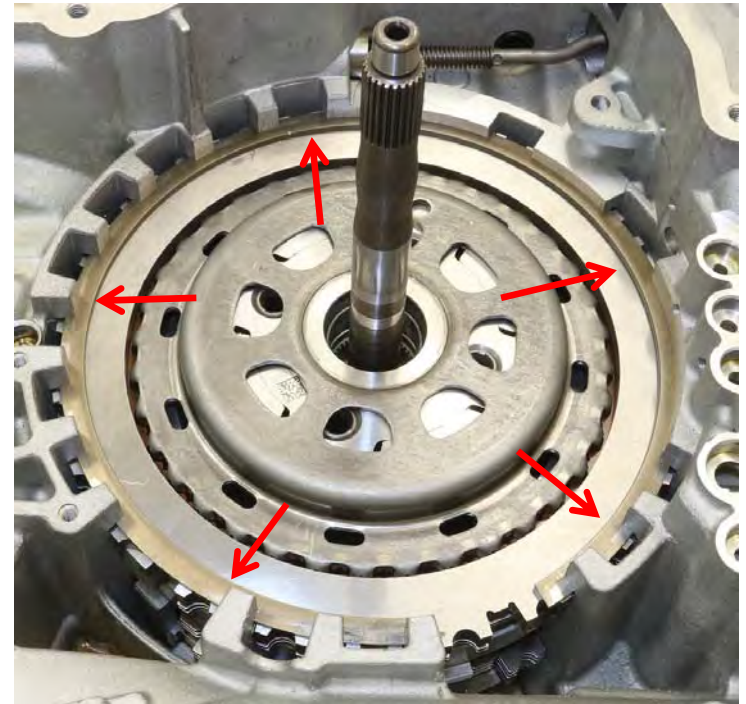
Install the 1234 retaining snap ring flat side down. The factory manual states "the opening of the snap ring should be installed towards the bottom of the case".



6T40 Internal

Case Assembly

Tap the snap ring at various location to seat it into the groove



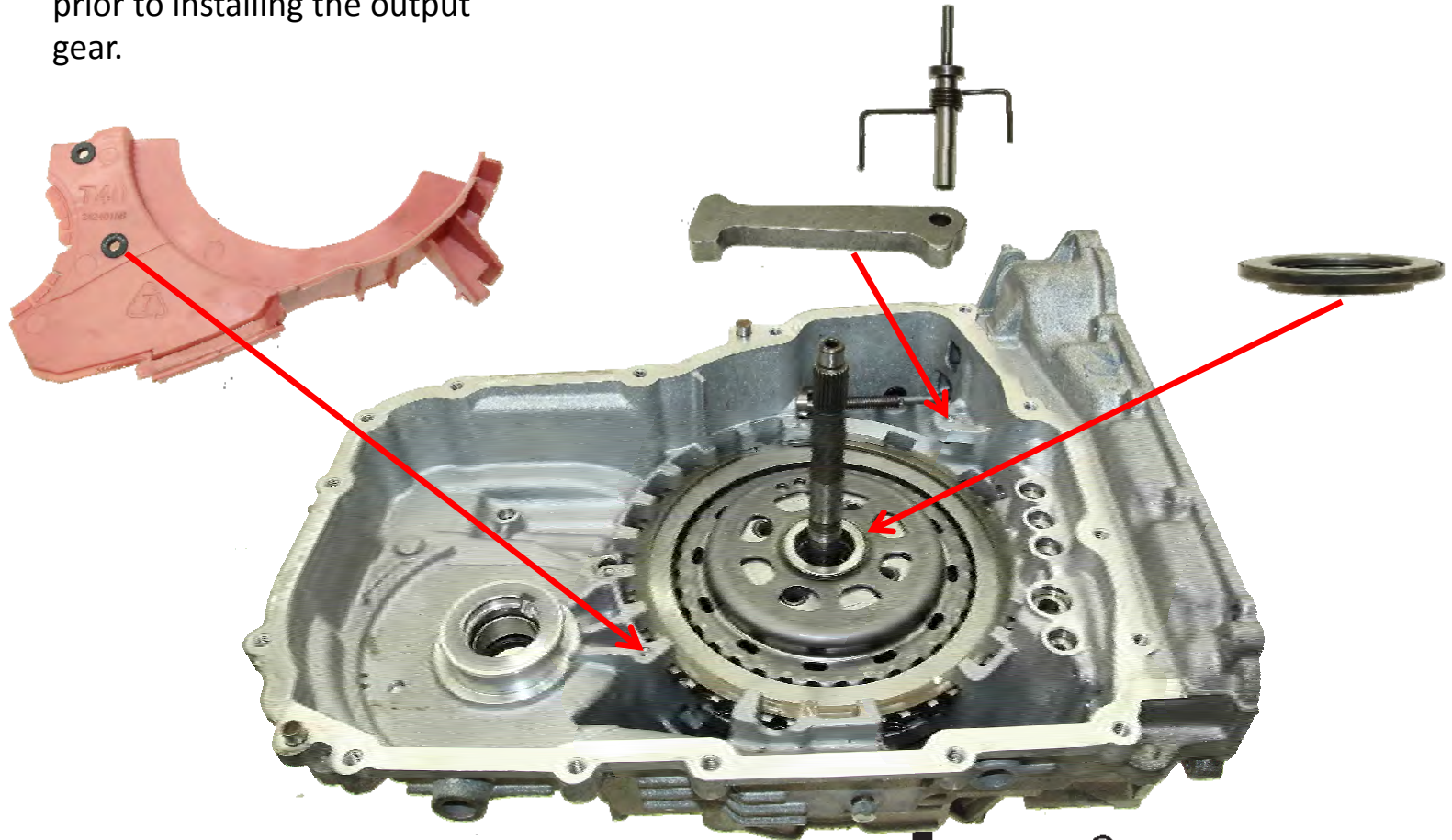
TRANstec®



These parts must be installed prior to installing the output gear.

6T40 Internal

Case Assembly



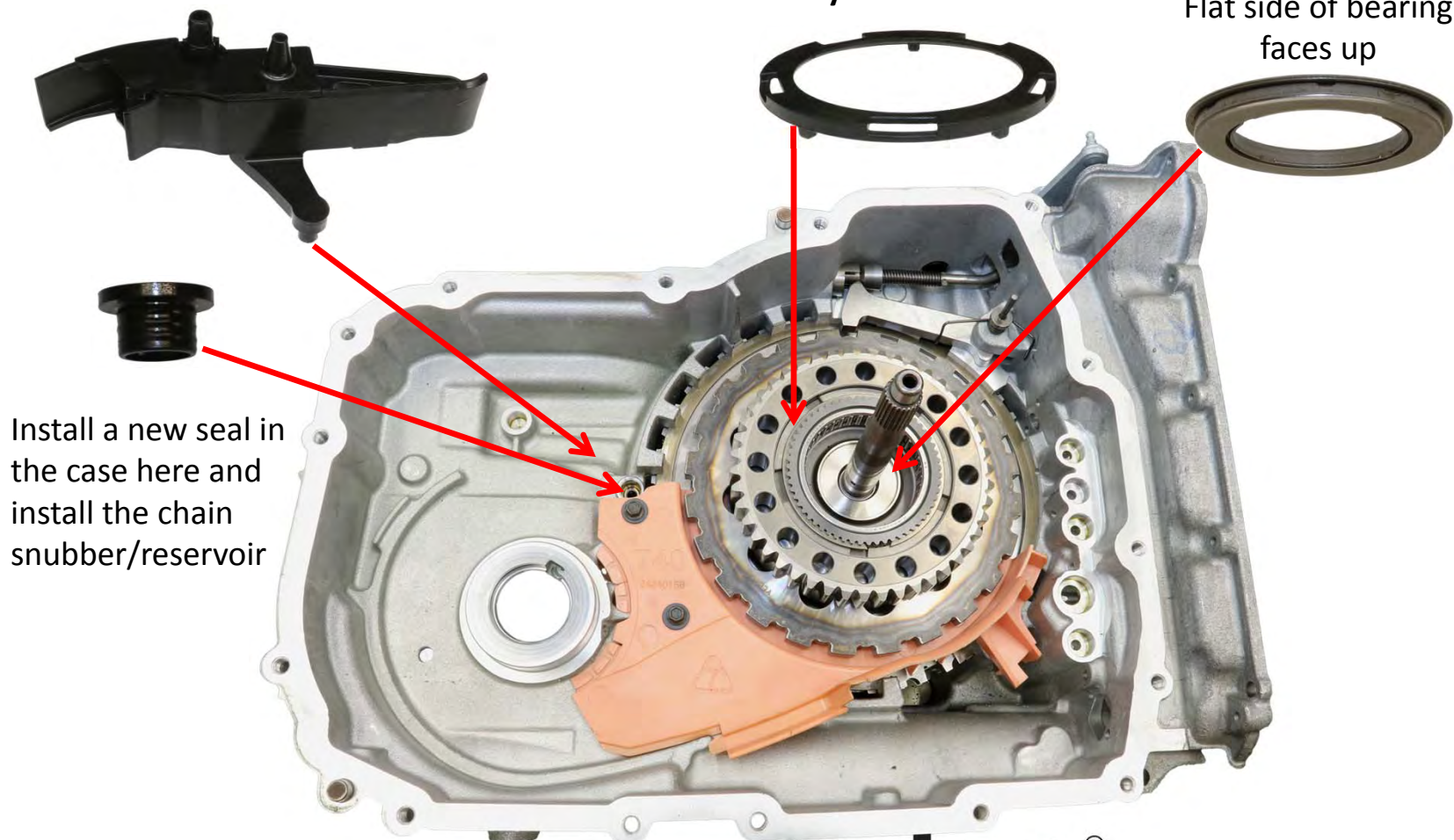
TRANstec®



6T40 Internal

Case Assembly

Flat side of bearing
faces up



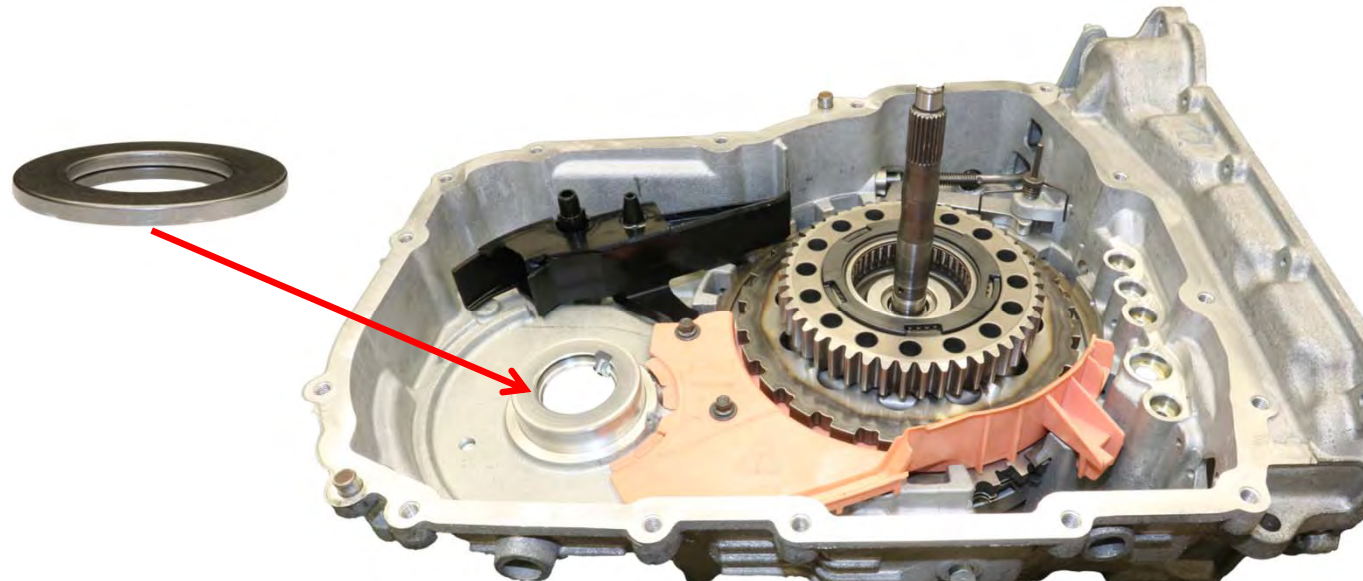
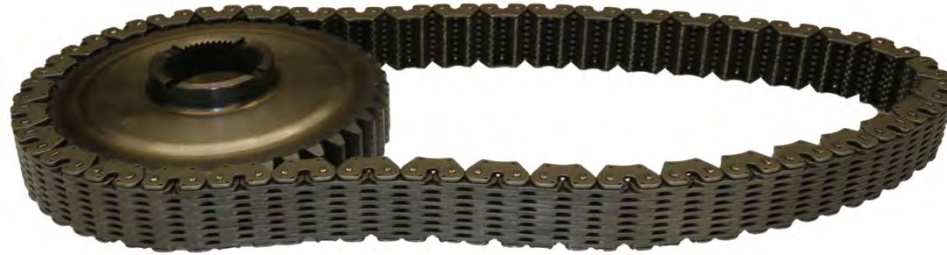
TRANstec®



Place the thrust bearing on the case and install the driven gear and the chain.

6T40 Internal

Case Assembly



TRANStec®



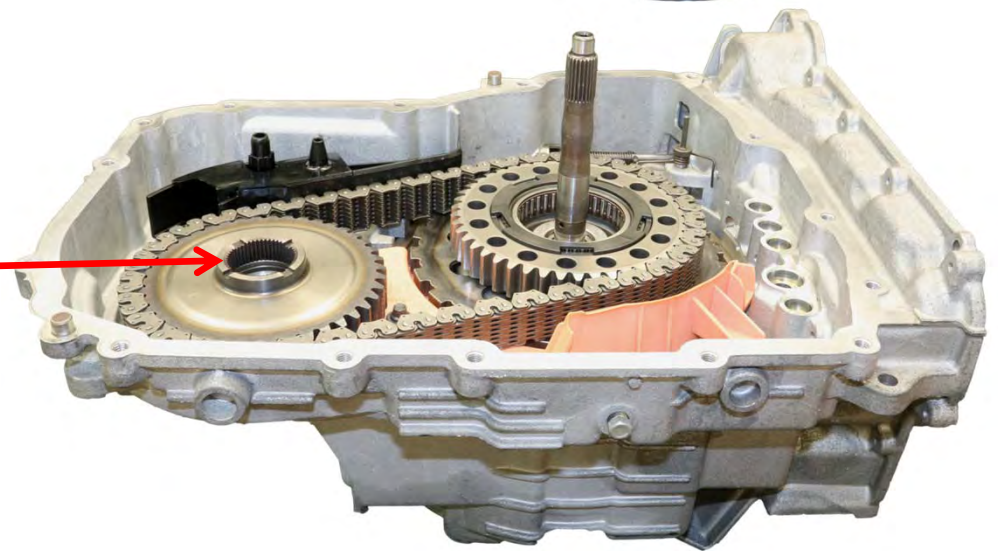
6T40 Internal

Case Assembly

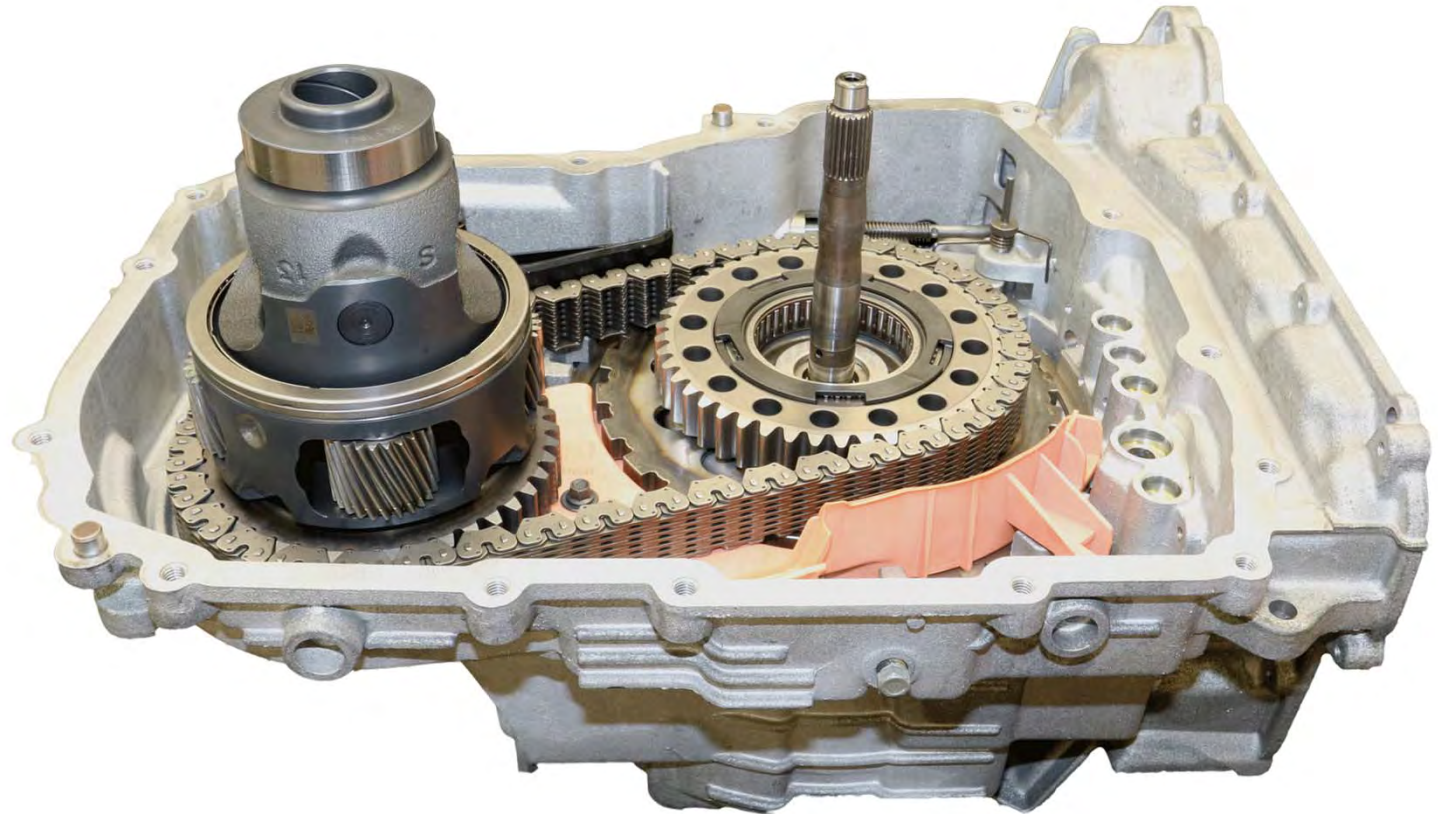
The diff sun gear splines to the output gear. The thrust bearing rides between the diff and the sun gear.



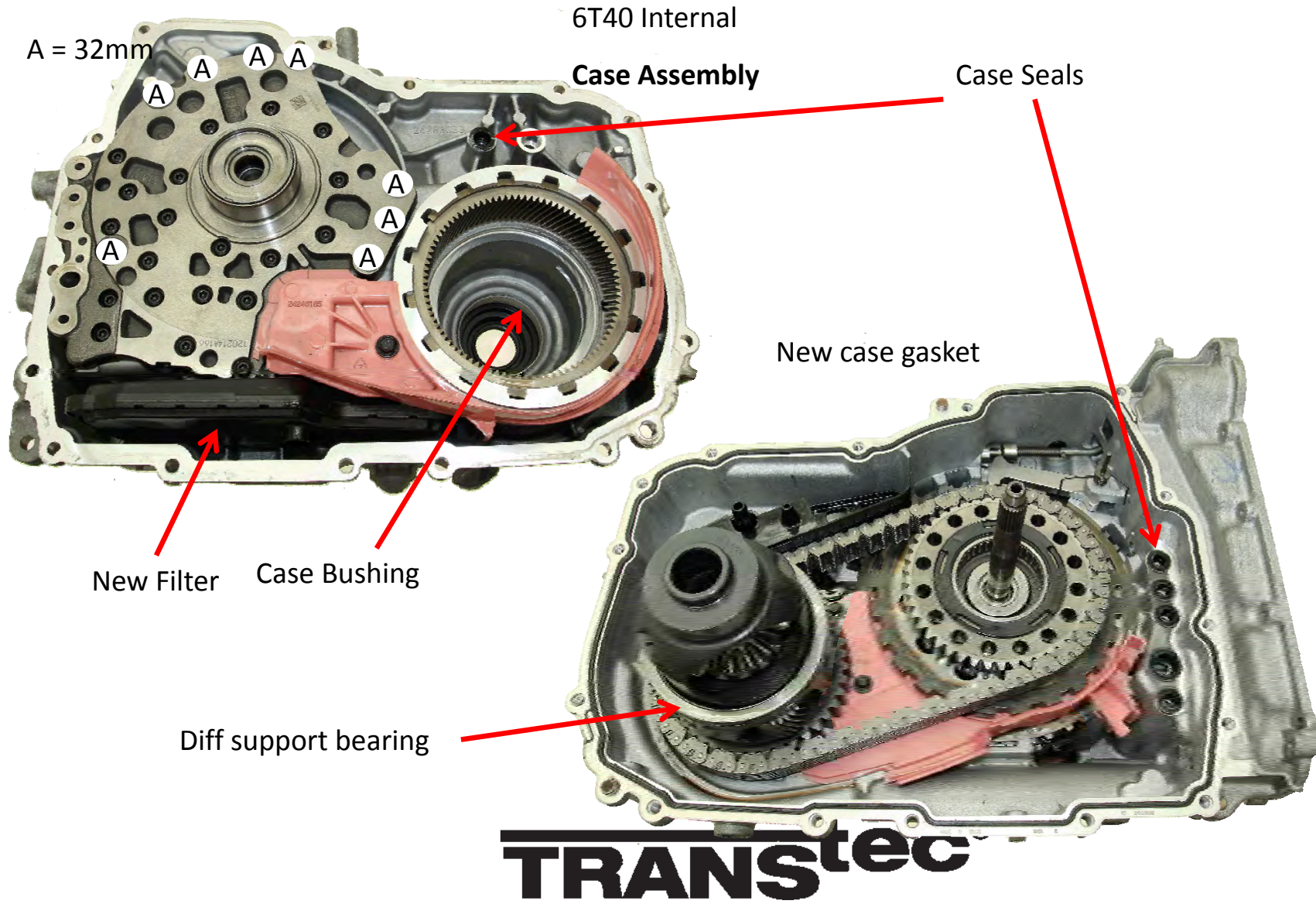
Large thrust bearing installed on diff housing.



TRANstec®



TRANstec®



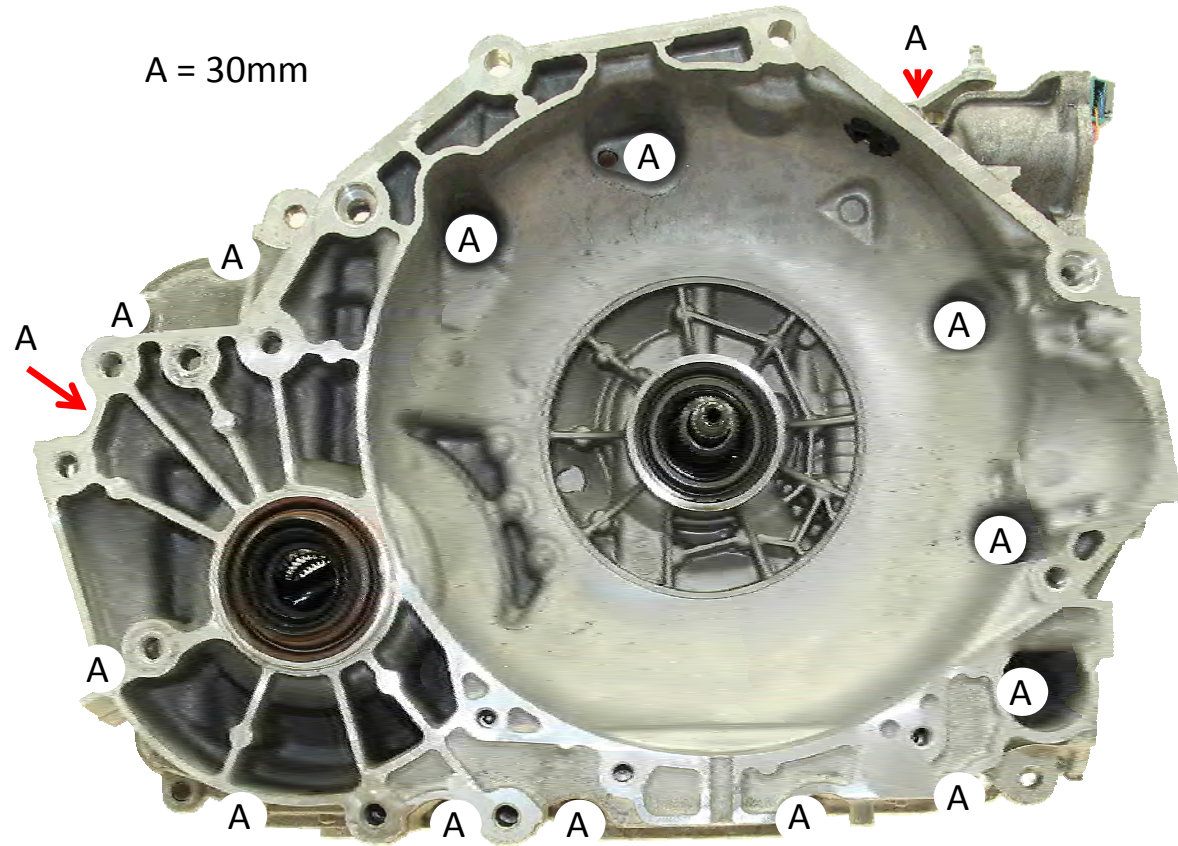


6T40 Internal

Case Assembly

Bell housing onto the main case

A = 30mm



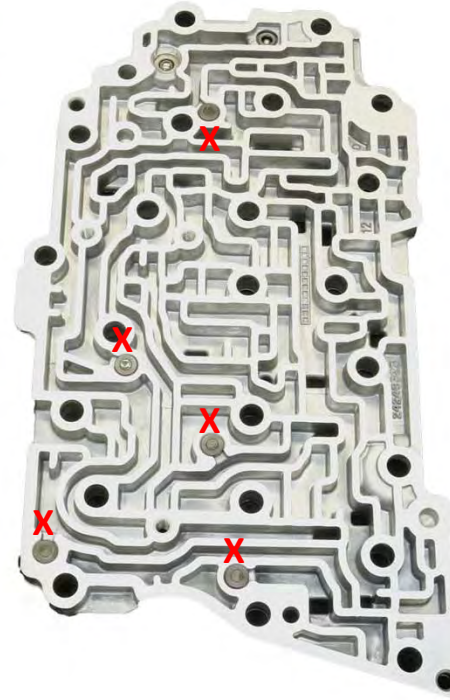
TRANstec®



6T40 Internal

Valve body breakdown

7mm head
40mm long



Channel plate and separator plate

TRANstec®

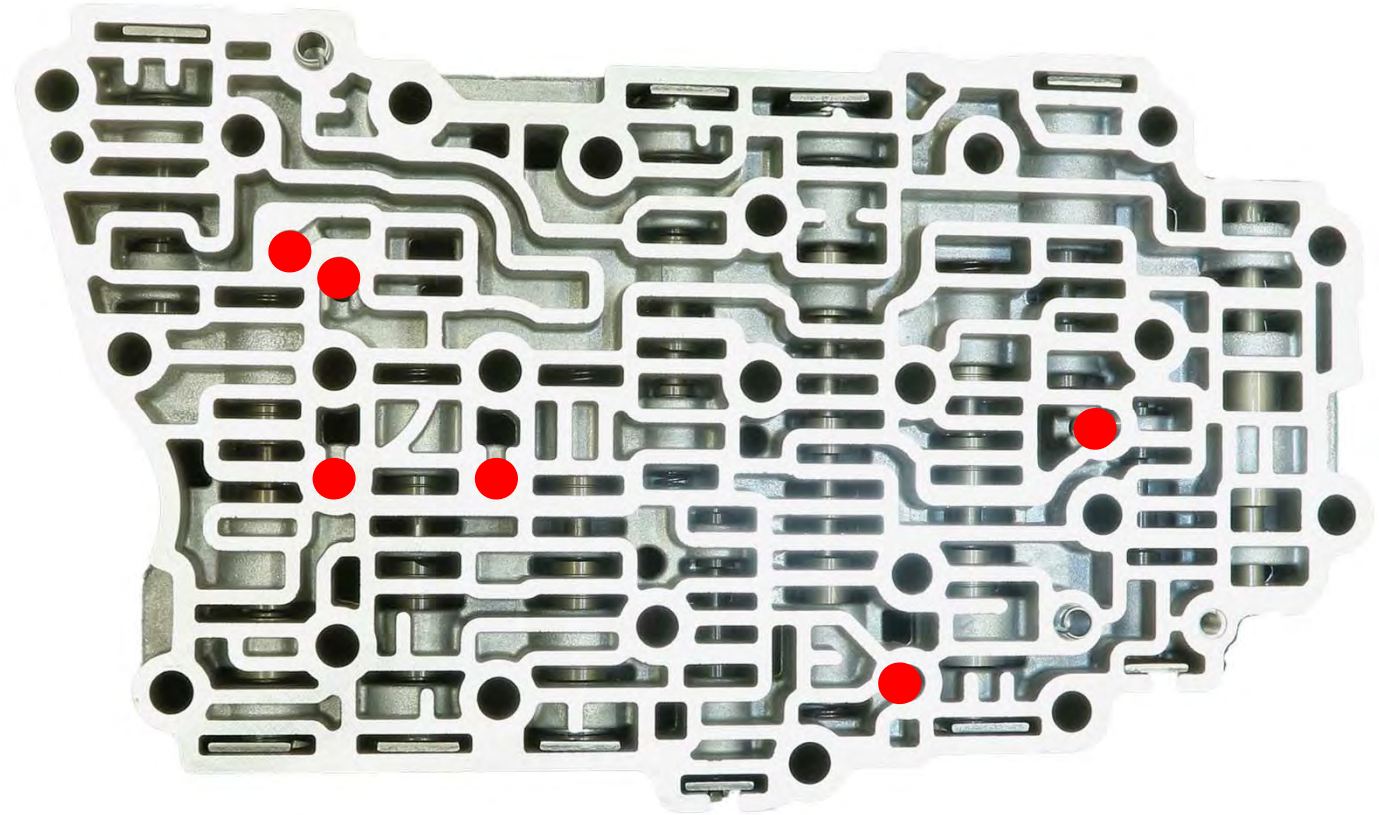


6T40 Internal

Valve body breakdown

Check ball locations

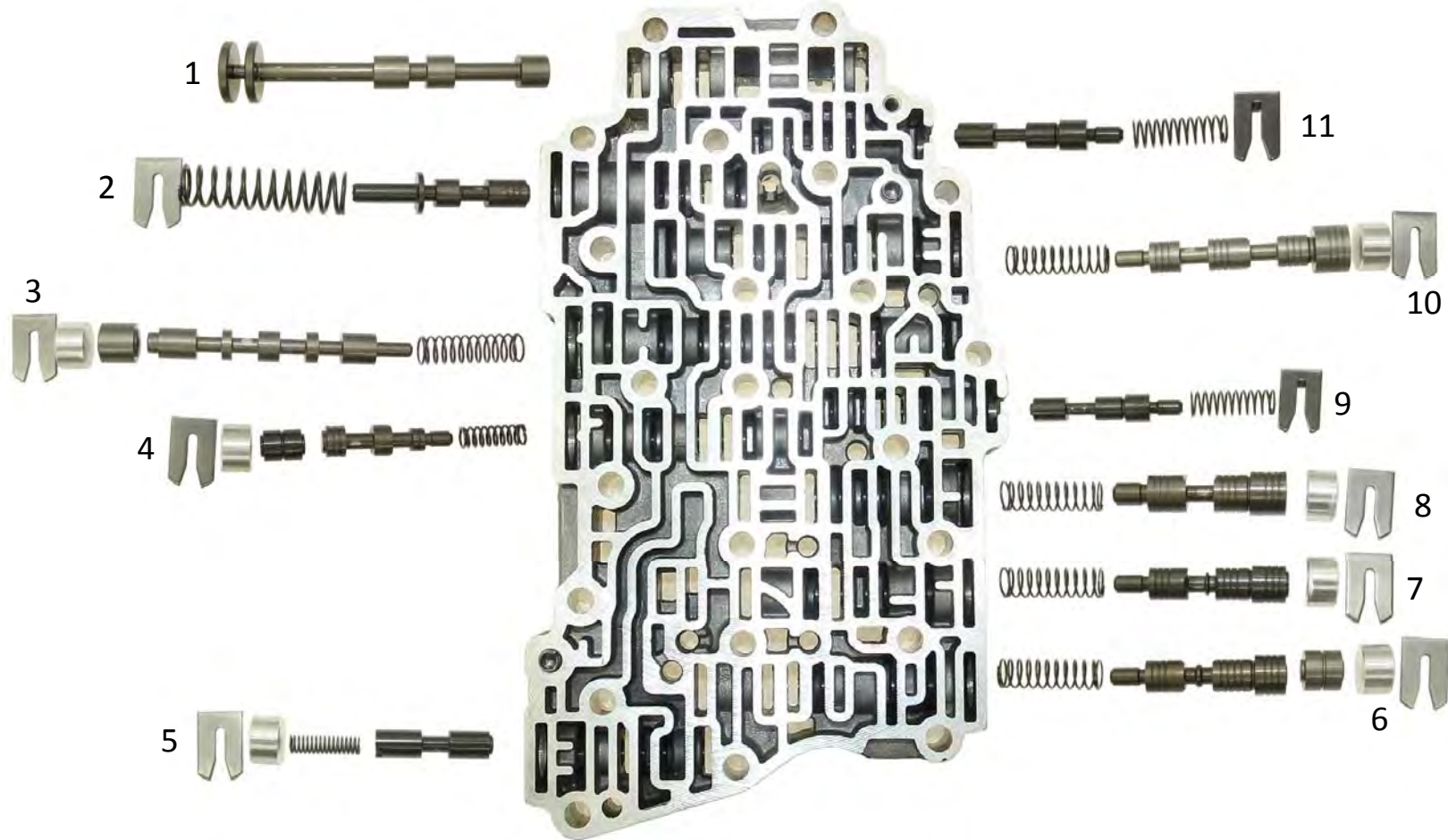
Six Check balls are all .250



TRANstec®



6T40 Internal Valve body breakdown



Identification Table Next Page

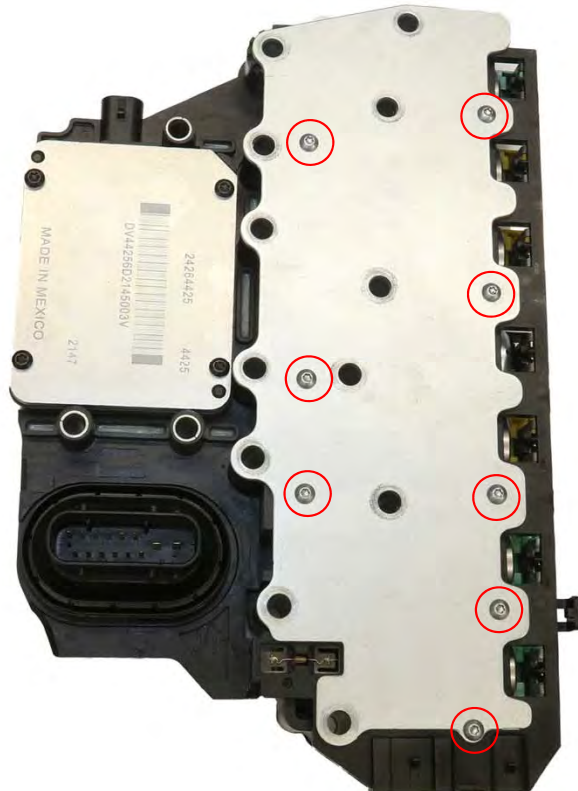
TRANstec®



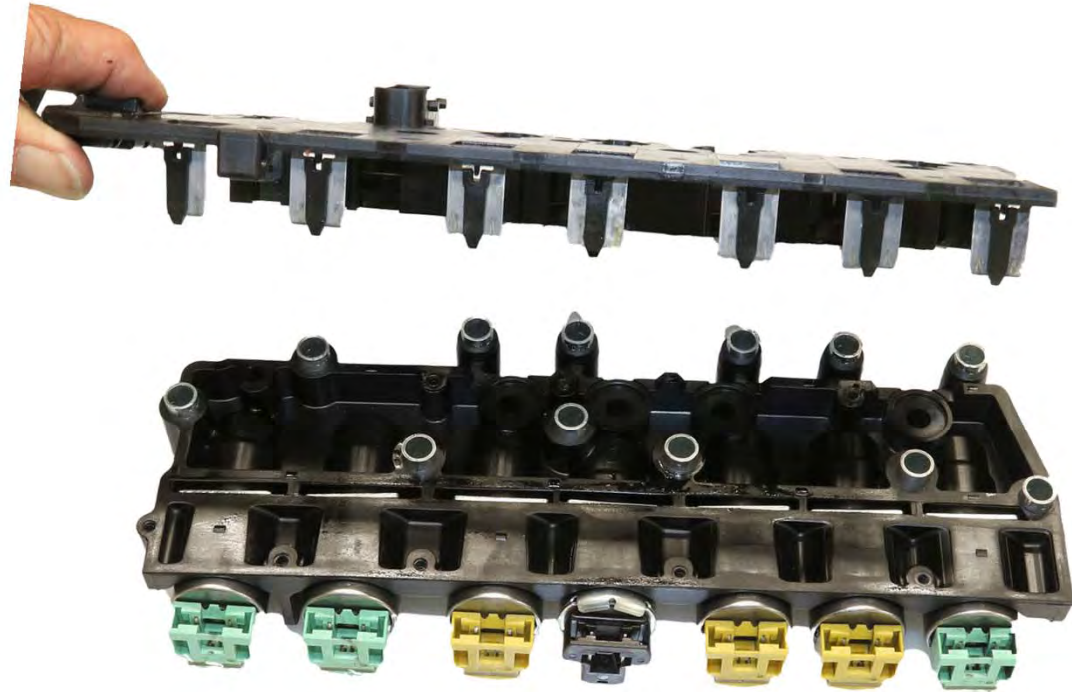
6T40 Internal

6T40 Valve Body Identification Spring Measurements	
1	Manual Valve
2	Actuator Feed Limit Valve 1.909 X .525 X .053
3	Clutch Select Valve 1.215 X .369 X .028
4	TCC Regulator Valve .781 X .254 X .031
5	Default Override Valve .869 X .235 X .027
6	3-5-Reverse Clutch Regulator Valve 1.213 X .369 X .028
7	2-6 Clutch Regulator Valve 1.192 X .369 X .028
8	1-2-3-4 Clutch Regulator Valve 1.193 X .369 X .028
9	1-2-3-4 Clutch Boost Valve 1.004 X .318 X .028
10	L/R and 4-5-6 Clutch Regulator Valve 1.209 X .368 X .028
11	L/R and 4-5-6 Clutch Boost Valve 1.003 X .317 X .028

TRANstec®



6T40 Internal Solenoid Assembly/Disassembly

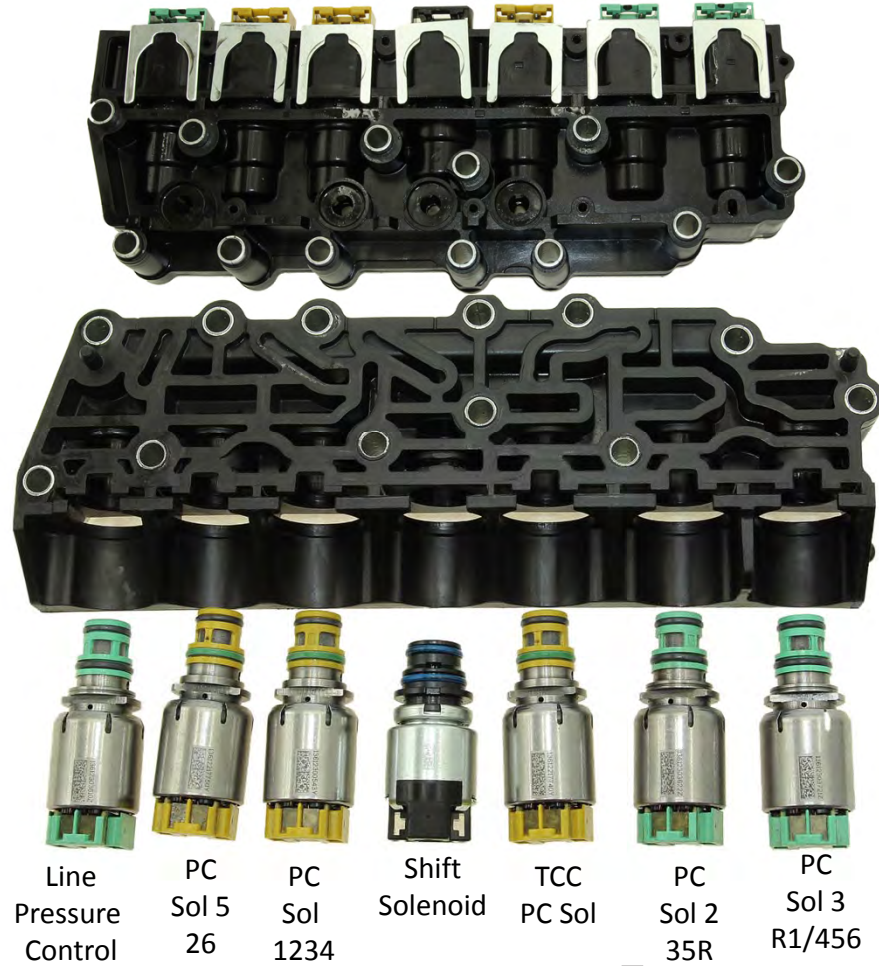


To separate the sol body from plate take out the small # 10 torx bolts. Once the plate of the body comes away from the plate very easily.

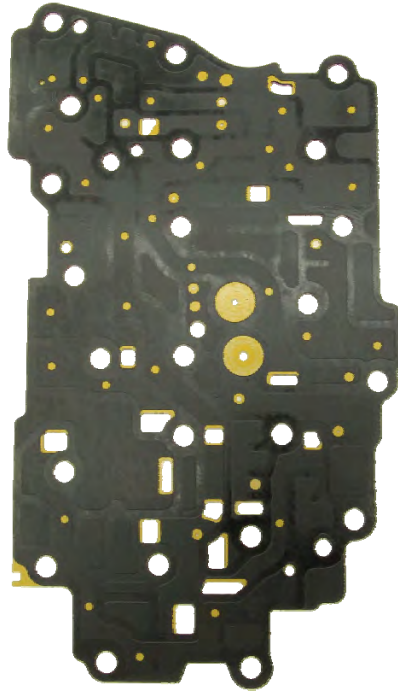
TRANstec®



6T40 Internal Solenoid Identification



TRANstec®

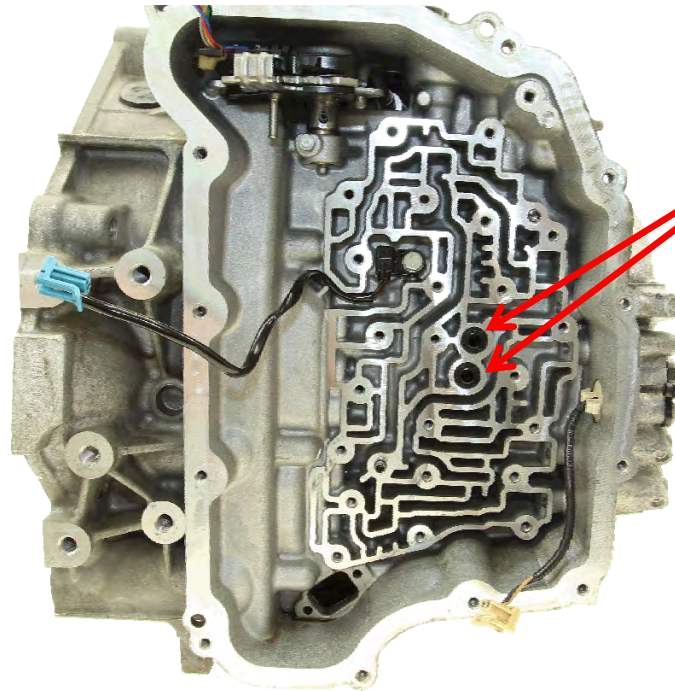


Separator Plate
Part #24267597

If the gaskets in the kit do not match the plate, best bet is to go to your local dealer and get a plate. Cost about \$10.00

6T40 Internal
Case Assembly

Output Speed Sensor



Piston Housing Seals



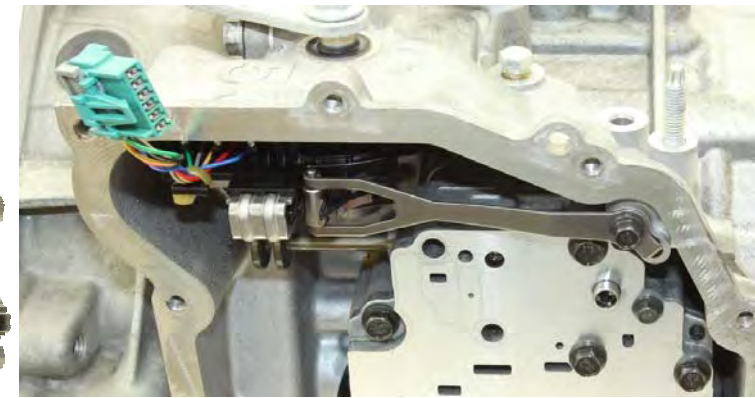
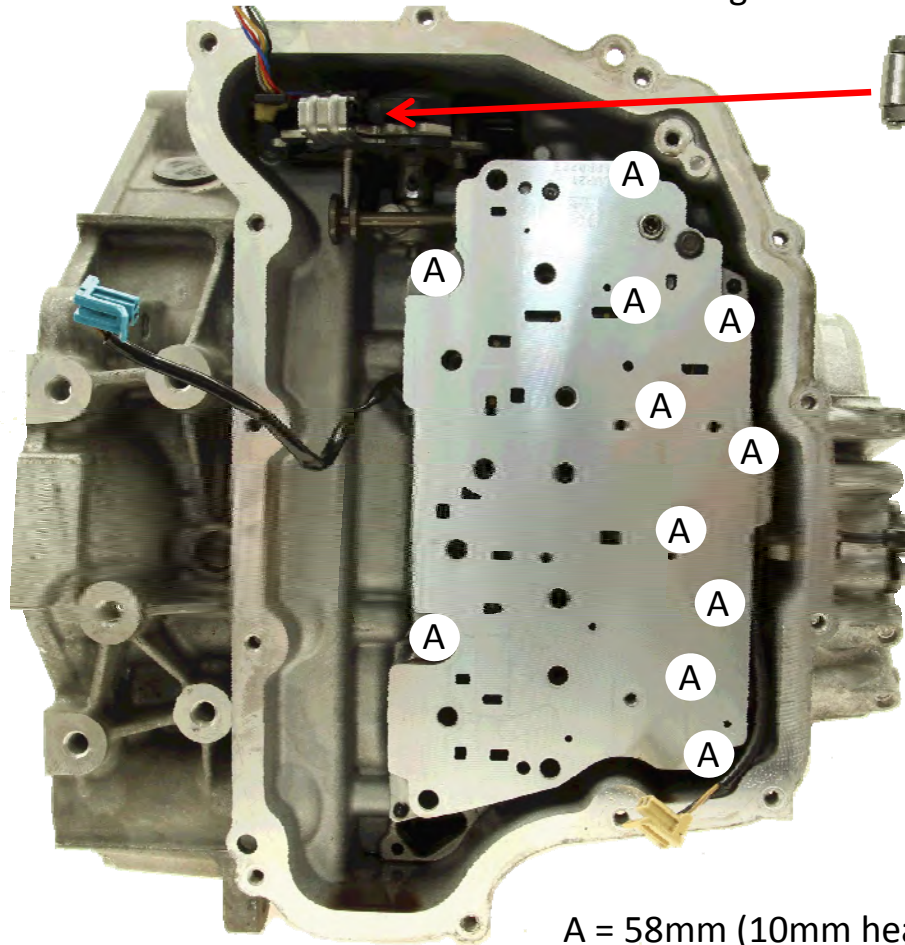
Input Speed Sensor



TRANstec®



Installing the valve body into the main case.



Note how the detent is indexed into the MLP.

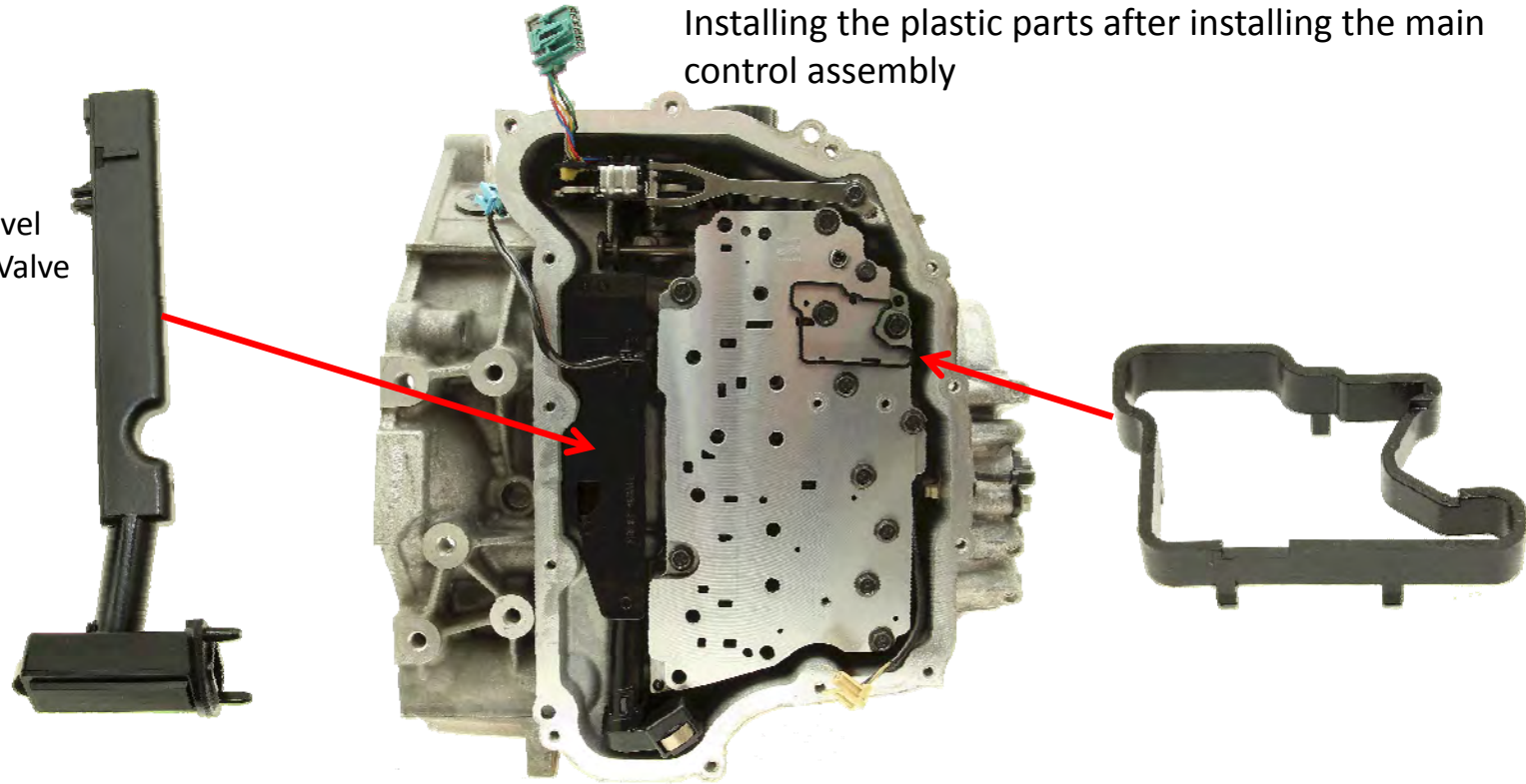
Failure to index the detent properly can lead to engagement issues

A = 58mm (10mm head)

TRANstec®



ATF Level
Control Valve



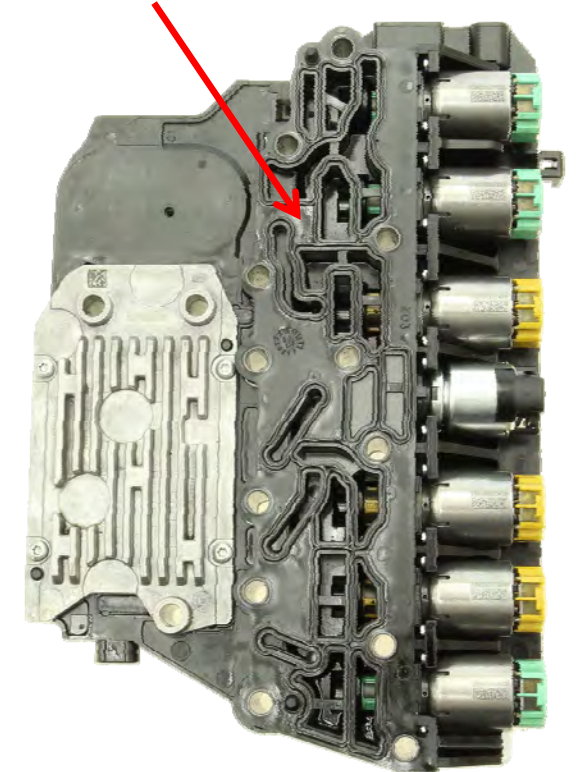
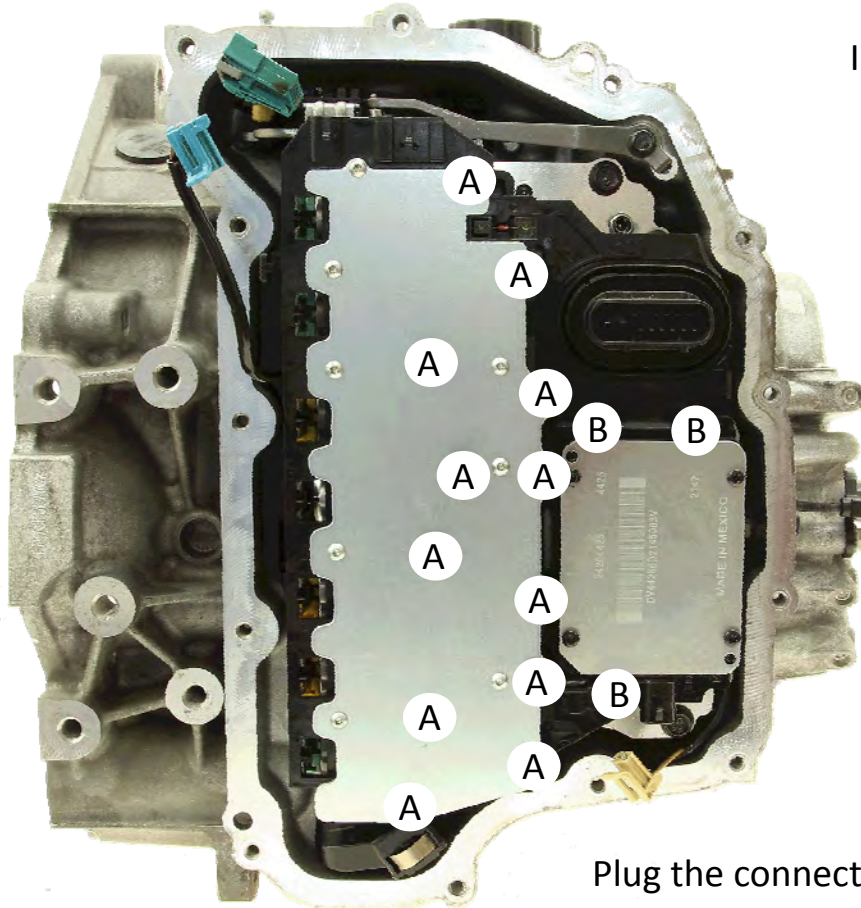
TRANStec®



A = 96mm (10mm head)
B = 40mm (7mm head)

Installing the TECHM

Install a new solenoid filter plate



Plug the connectors in and install the pan

TRANstec®



*Thank you for attending
today's presentation. If you
haven't had one of these units
you will soon!*

TRANStec®



*Today's Presentation Sponsored
By:*

TRANStec®

*Any Questions?
Thank You For Attending*

TRANStec®



TRANStec®