



File in Section: 04 - Driveline/Axle

Bulletin No.: 12-04-21-001B

Date: April, 2013

Service Bulletin

INFORMATION

Subject: Transfer Case Identification First Design vs. Second Design

Models: 2007-2013 Cadillac Escalade Models
2007-2013 Chevrolet Avalanche, Silverado, Suburban, Tahoe
2007-2013 GMC Sierra, Yukon, Yukon Denali
Equipped with Magna X2T Transfer Case (RPOs NQF, NQG, NQH or NP0)

This bulletin is being revised to add the 2013 model year, clarify the information from the previous bulletin and to add data throughout. The document should be reviewed and treated as new information. Please discard Corporate Bulletin Number 12-04-21-001A (Section 04 – Driveline/Axle).

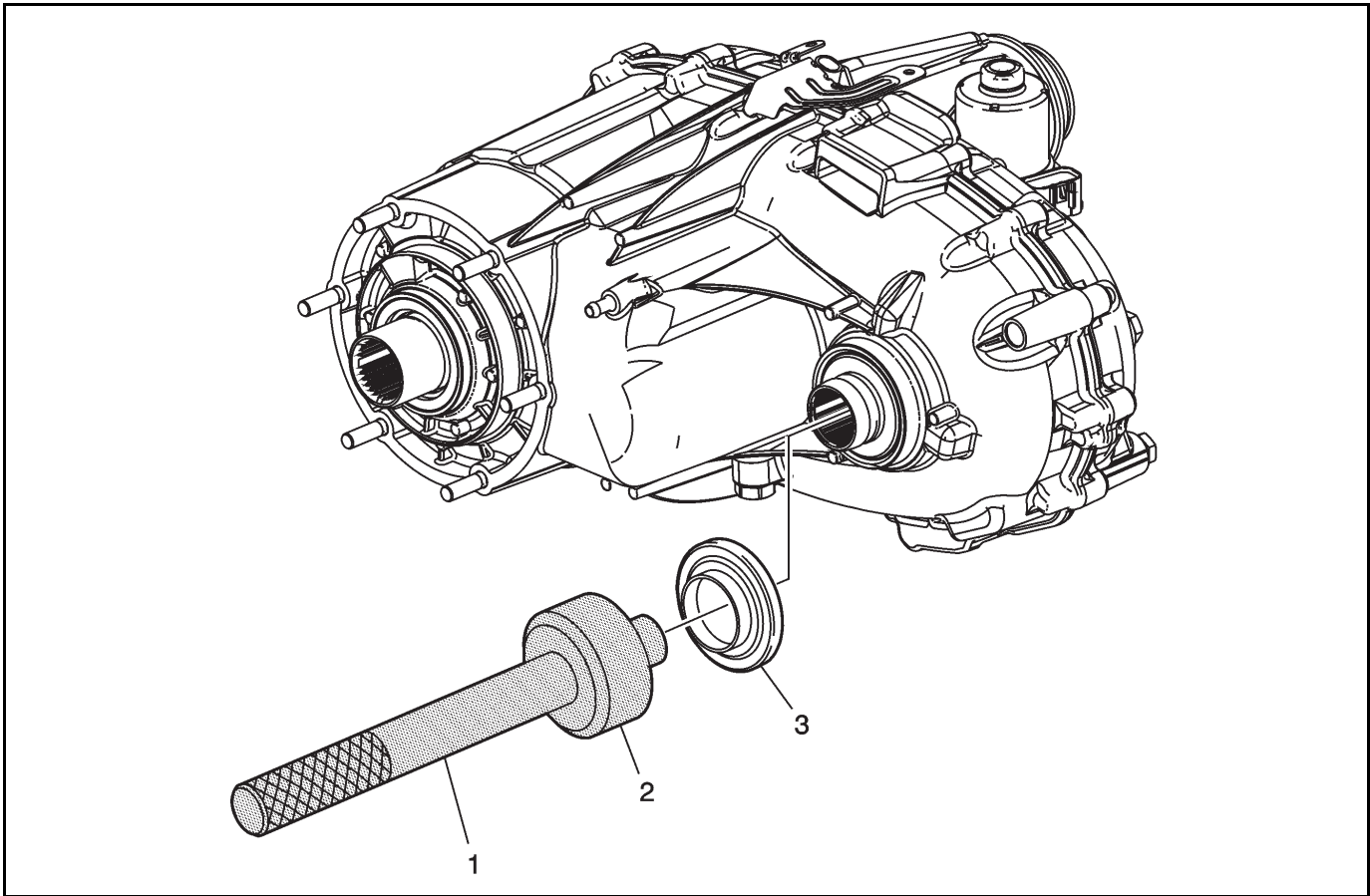
The purpose of new product information is to document important product changes that occur either model year-to-model year or interim model year.

Changes may include one or more of the following items:

- Specification changes
- New sealants and/or adhesives

- Disassembly and assembly procedure revisions
- Mechanical and diagnostic procedure revisions
- New special tools required
- Interim model year design changes
- A component comparison from the previous model year

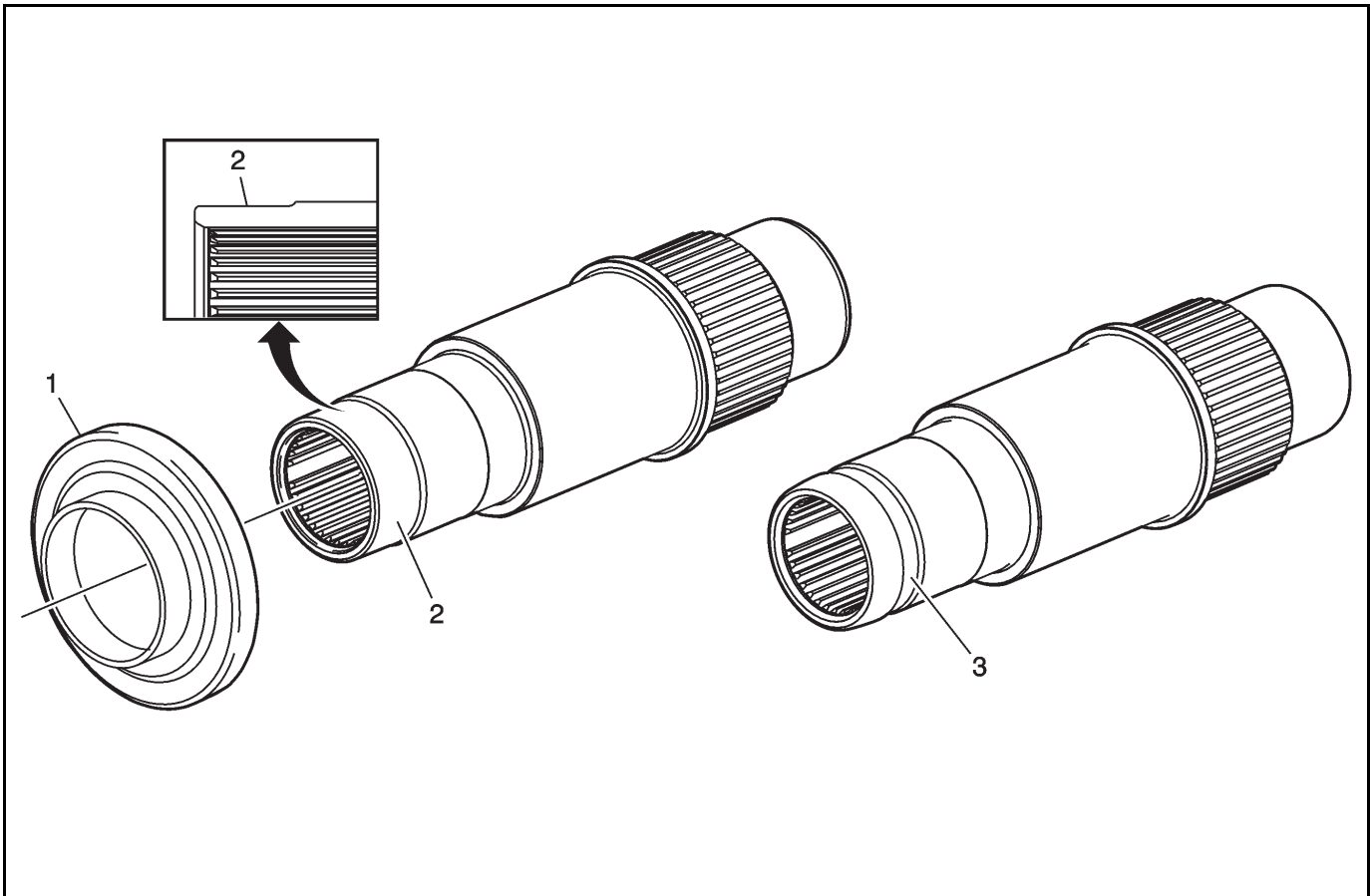
Interim Model Year Design Change – NQF/NQG/NQH/NPO Front Output Shaft, Deflector, Seal



2512401

Interim 2012 model year, a new design front output shaft deflector (3) was implemented into production for second design NQF-HD/SHD and NQG-HD applications. First design 2011 model year NQF and NQG applications can be identified as not having the deflector on the front output shaft.

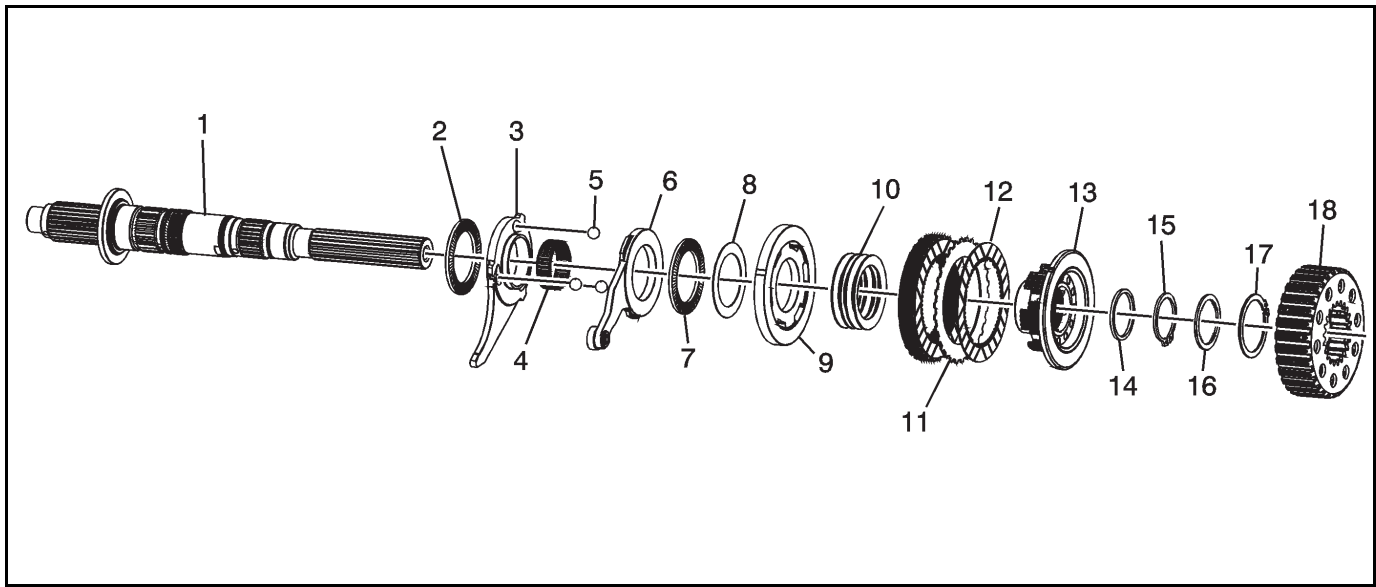
For service, the new design front output shaft, deflector and new design seal may be installed on current and prior model year Magna NQF-HD/SHD, NQG-LD/HD, NQH-LD/HD and NPO applications providing the new design front output shaft is also installed. The front output shaft deflector is to be installed using the *J 8092* driver handle (1) and *DT 50649* seal installer (2).



2512403

The new design deflector (1) can be installed onto all current and prior model year Magna RPOs NQF, NQG, NQH and NPO applications providing the new design front output shaft (2) is also installed. Second design front output shafts can be identified by the machined area on the OD output end of the shaft (2). First design front output shafts can be identified by the dust boot clamp groove (3) located at the OD output end of the shaft. The new design slinger will NOT install onto the first design shafts.

Service Parts Release Usage Change – NQH/NPO Control Actuator Levers



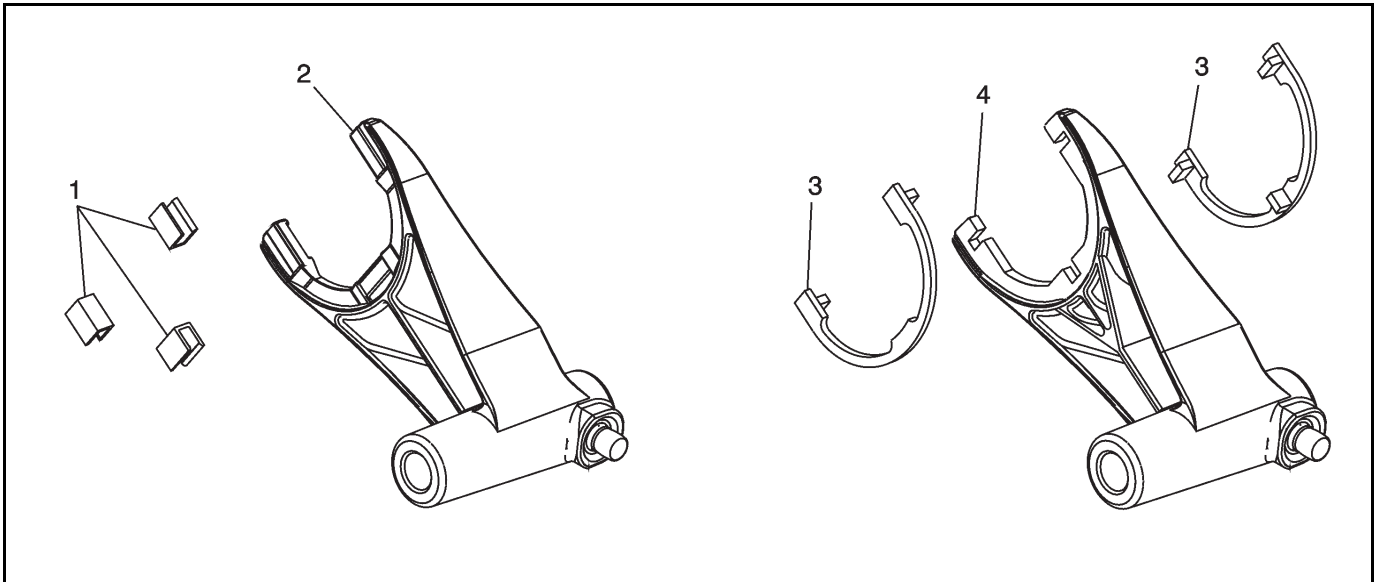
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Light Duty (LD) 2007-2010 MP3023-NQH and 2010 MP3010-NP0 production transfer cases are built with LD control actuator levers (3 and 6) and are used with 13 mm (0.52 in) diameter control actuator lever balls (5).

Heavy duty (HD) 2007-2010 MP3024-NQH production transfer cases are built with HD control actuator levers (3 and 6) and are used with Heavy 10 mm (0.39 in) control actuator lever balls.

When replacement of one or both of the LD control actuator levers is required, it is necessary to replace both of the levers and all three balls with the HD components as a set. It is also necessary to re-measure and adjust clutch pack clearances as required and to perform the Transfer Case High/Low Clutch Reset. Refer to Measuring/Adjusting Clutch Assembly Height in Transfer Case Assemble, Transfer Case Description and Operation and Transfer Case High/Low Clutch Reset. Heavy duty (HD) components are the only parts available for service.

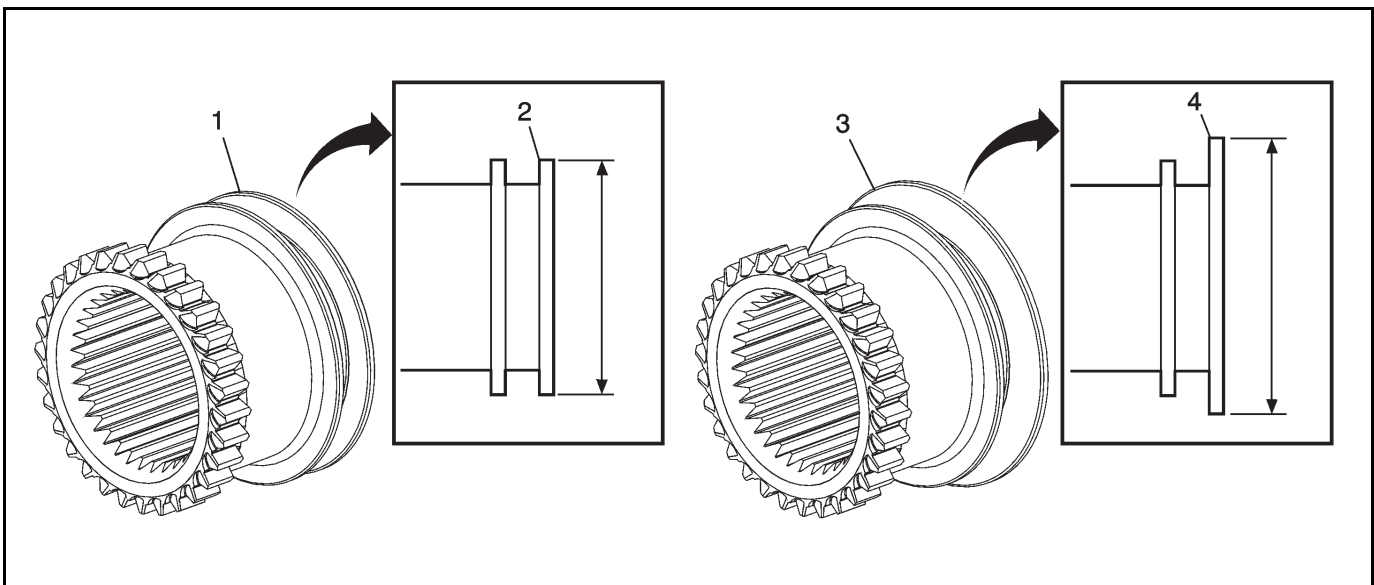
Interim Model Year Design Change – NQG High/Low Shift Fork, Fork Pad, and High/Low Clutch



2714413

Interim 2012 model year the High/Low shift fork, fork pad and High/Low clutch design changed. The first design forks (2) can be identified as having three flat un-notched fork pad areas with three separate fork pads (1). The second design forks (4) can be identified as having a half-round shaped pad area with three

notches for pad orientation and installation and upper and lower half-round fork pads (3). The second design shift fork (4) and pads (3) are the only design available for service and must be used with the second design High/Low clutch.



2714414

Interim 2012 model year the High/Low shift fork, fork pad and High/Low clutch design changed. The first design high/low clutch (1) can be identified by having a 73 mm (2.87 in) OD rear flange (2). The second design high/low clutch (3) can be identified by having a 76 mm (2.99 in) OD rear flange (4).

For service:

- The first design 73 mm (2.87 in) high/low clutch may NOT be used with the second design fork and pad.
- The second design 76 mm (2.99 in) high/low clutch must be used with the second design fork and fork pad.

- The second design 76 mm (2.99 in) high/low clutch may also be used with the first design fork and pad if first design fork replacement is not required.

Interim Model Year Design Change – NQF/NQG/NQH Front Case Half Assembly, Input Shaft, Planetary Carrier High/Low Clutch

Interim 2012 model year for Magna light-duty and heavy-duty transfer case RPOs NQF / NQG / NQH, a second-design front case half assembly, planetary internal gear, gear retaining ring, locking plate, thrust washer-front, input shaft, pilot bearing, thrust washer-rear, high/low planetary carrier and high/low clutch were implemented into second-design assemblies.

The second-design light duty (LD), heavy duty (HD), and super-heavy duty (SHD) applications have a reduced OD dimension carrier and the second-design planetary internal gear has a reduced ID dimension. The planetary internal gear is a press-fit non-serviceable component and must be serviced with the front case half assembly. In service it is possible that a new or remanufactured transfer case may contain first or second-design content.

If a second-design transfer case has been installed into a vehicle that originally contained a first-design assembly, TCCM reprogramming is not required.

For production, the following transfer cases variations were produced:

- 2007-12i Magna LD NQG/NQH – produced with first-design content. First design service components are available. A second-design assembly may be used for back-service in a first-design application.
- 2007-10 Magna HD NQF – produced with only first-design content. Service components are available.
- 2007-10 Magna HD NQG – produced with only first-design content. Service assemblies may contain either first or second design content. Both first and second design service components are available.
- 2007-12i Magna HD NQH – produced with first-design content. First design service components are available. A second-design assembly may be used for back-service in a first-design application.
- 2011-12i Magna SHD NQF/NQG – produced with first design content. First design service components are available. A second-design assembly may be used for back-service in a first-design application.
- 2012i-13 Magna LD NQG/NQH – produced with second-design content. Second design service components are available.
- 2012i-13 Magna HD NQH – produced with second-design content. Second design service components are available.
- 2012i-13 Magna SHD NQF/NQG – produced with second-design content. Second design service components are available.

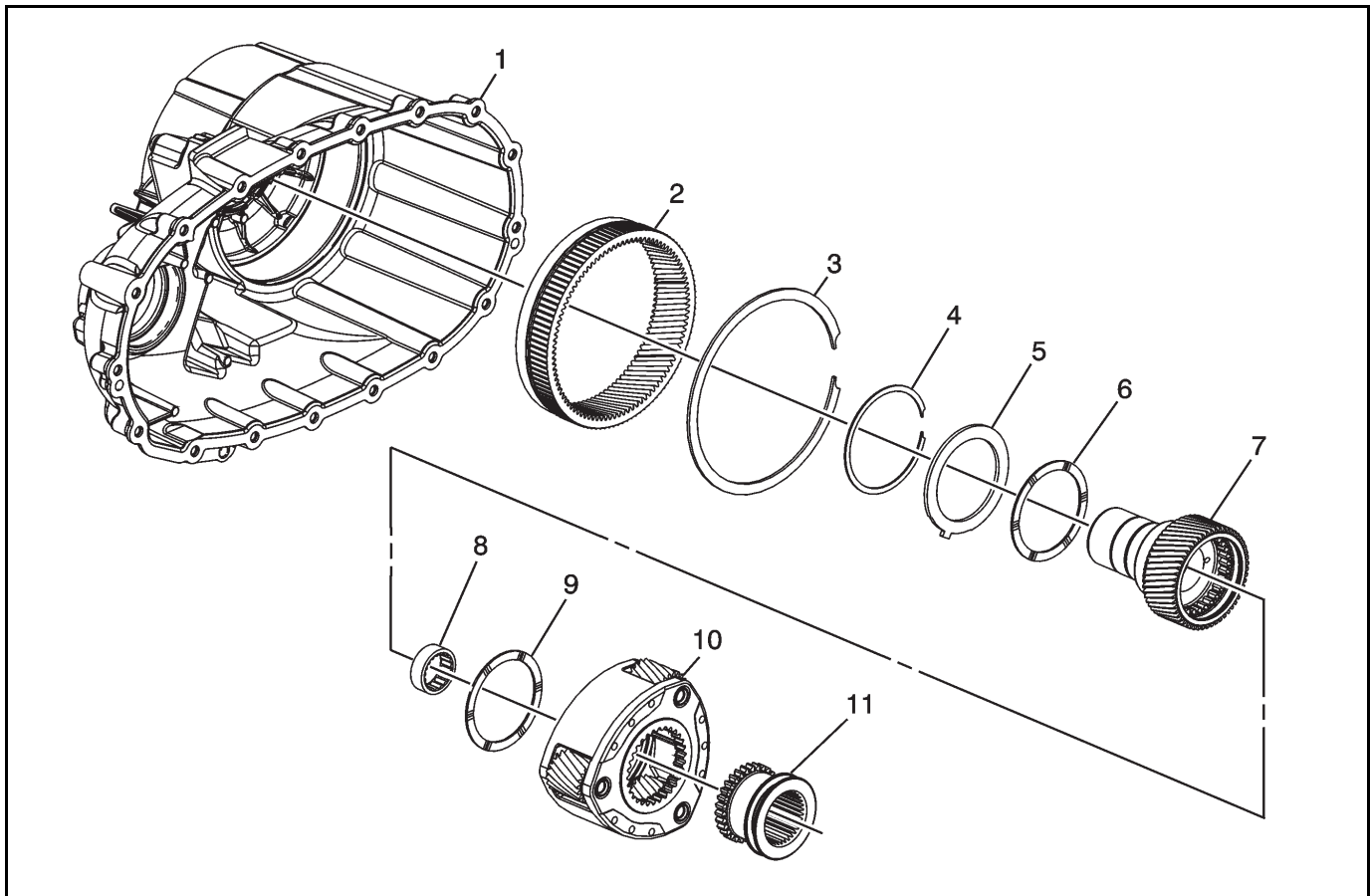
Production Assembly Breakpoints

The design level and component content of the transfer case can be determined by referencing the assembly part number located on the identification label.

Production Assembly Breakpoints

First Design Assembly PN	Second Design Assembly PN	RPO	Approximate Production Breakpoint	Vehicle/ Transmission RPO
24256476	24261560	NP0	March 2012	K100 / MYC
24256475	24261517	NQH	January 2012	K200 / MYD
24256474	24261516	NQH	January 2012	K100 / M99
24256473	24261515	NQH	January 2011	K100 / M30
24256472	24261514	NQH	December 2011	K100 / MYC
24257578	24261513	NQF	December 2011	K200 / MYD
24257577	24261512	NQF	January 2012	K200 / 300 / MW7
24257576	24261511	NQF	December 2011	K200 / 300 / MYD
24257581	24261510	NQG	January 2011	K200 / MYD / +Z49
24257580	24261509	NQG	January 2012	K200 / 300 / MW7
24257579	24261508	NQG	December 2011	K200 / 300 / MYD / -Z49
24252685	24261507	NQG	December 2011	K100 / M30
24252684	24261506	NQG	January 2011	K100 / MYC

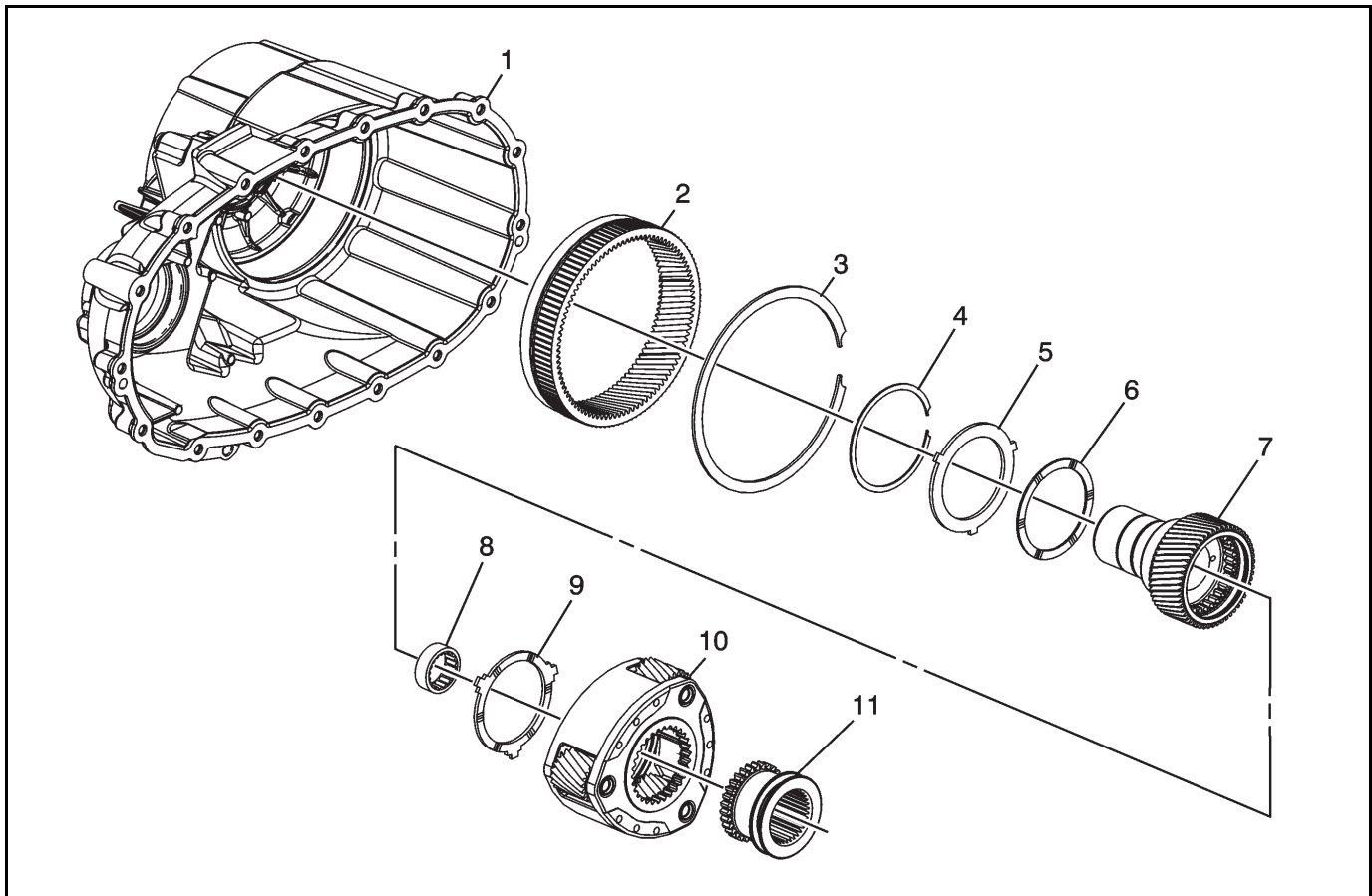
Service Parts List



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Magna Light Duty NQG/NQH/NP0 – First Design			
Callout	Description	GM PN	Service Usage
1	Front Case Half Assembly - w/gear (2) and ring (3)	19132998	NQH
1	Front Case Half Assembly - w/gear (2) and ring (3)	19133000	NQG
1	Front Case Half Assembly - w/o gear (2) and ring (3)	19255999	NP0
2	High/Low Internal Gear-Not serviceable-part of case assembly	NO/PN	NQG/NQH
3	High/Low Internal Gear Retaining Ring	19133009	NQG/NQH
4	High/Low Planetary Carrier Retaining Ring	19132997	NQG/NQH
5	High/Low Locking Plate-Single tab design	19132996	NQG/NQH
6	Thrust Washer-Front-No tab design	19132995	NQG/NQH
7	Input Shaft Assembly - w/pilot bearing	19132977	NQG/NQH-w/M30
7	Input Shaft Assembly-w/pilot bearing	19132978	NQH-w/M99
			NQG/ NQH-w/MYC

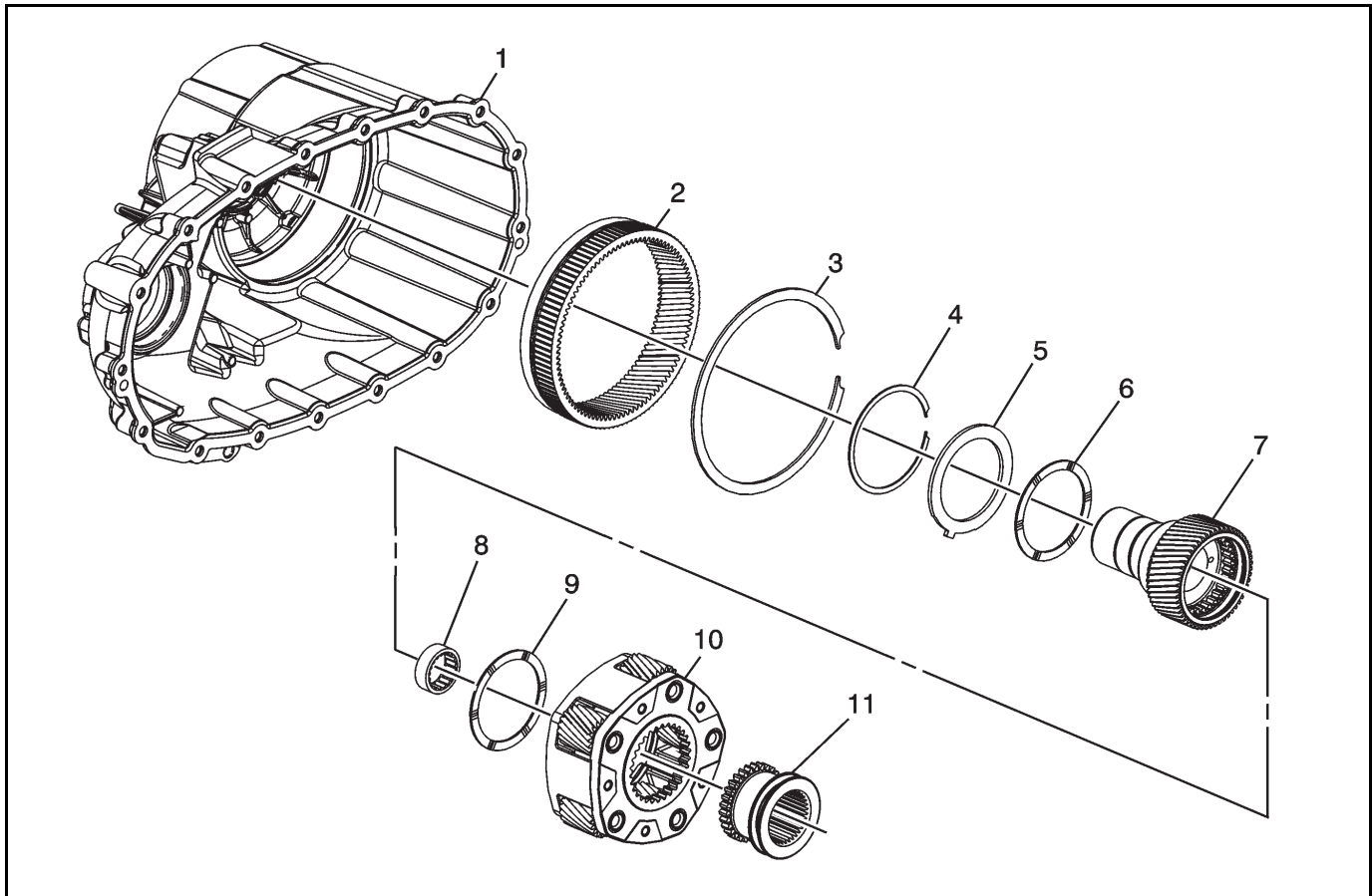
Magna Light Duty NQG/NQH/NP0 – First Design			
Callout	Description	GM PN	Service Usage
7	Input Shaft Assembly-w/pilot bearing	19255997	NP0-w/MYC
8	Pilot Bearing	19132983	NQG/NQH/NP0
9	Thrust Washer-Rear-No tab design	19132995	NQG/NQH
10	High/Low Planetary Carrier Assembly- Three pinion design	19132986	NQG/NQH
11	High/Low Clutch	19260068	NQG/NQH - w/M30
11	High/Low Clutch	19260067	NQG/NQH w/MYC and NQH w/M99



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Magna Light Duty NQG/NQH/NP0 – Second Design			
Callout	Description	GM PN	Service Usage
1	Front Case Half Assembly - w/gear (2) and ring (3)	19299077	NQH
1	Front Case Half Assembly - w/gear (2) and ring (3)	19299078	NQG
1	Front Case Half Assembly - w/o gear (2) and ring (3)	19299076	NP0 Note: The second design NP0 front case half assembly is interchangeable with first design

Magna Light Duty NQG/NQH/NP0 – Second Design			
Callout	Description	GM PN	Service Usage
2	High/Low Internal Gear-Not serviceable-part of case assembly	NO/PN	NQG/NQH
3	High/Low Internal Gear Retaining Ring	14037953	NQG/NQH
4	High/Low Planetary Carrier Retaining Ring	15547397	NQG/NQH
5	High/Low Locking Plate- three tab design	19300745	NQG/NQH
6	Thrust Washer-Front - No tab design	12470959	NQG/NQH
7	Input Shaft Assembly- w/pilot bearing	19299085	NQG/NQH-w/M30
7	Input Shaft Assembly - w/pilot bearing	19299088	NQH-w/M99
			NQG/NQH-w/MYC
7	Input Shaft Assembly-w/pilot bearing	19255997	NP0-w/MYC
8	Pilot Bearing	19132983	NQG/NQH/NP0
9	Thrust Washer-Rear- Three tab design	19300746	NQG/NQH
10	High/Low Planetary Carrier Assembly- Three pinion design	19299090	NQG/NQH
11	High/Low Clutch	19299092	NQG/NQH - w/M30
11	High/Low Clutch	19299093	NQG/NQH w/MYC and NQH w/M99

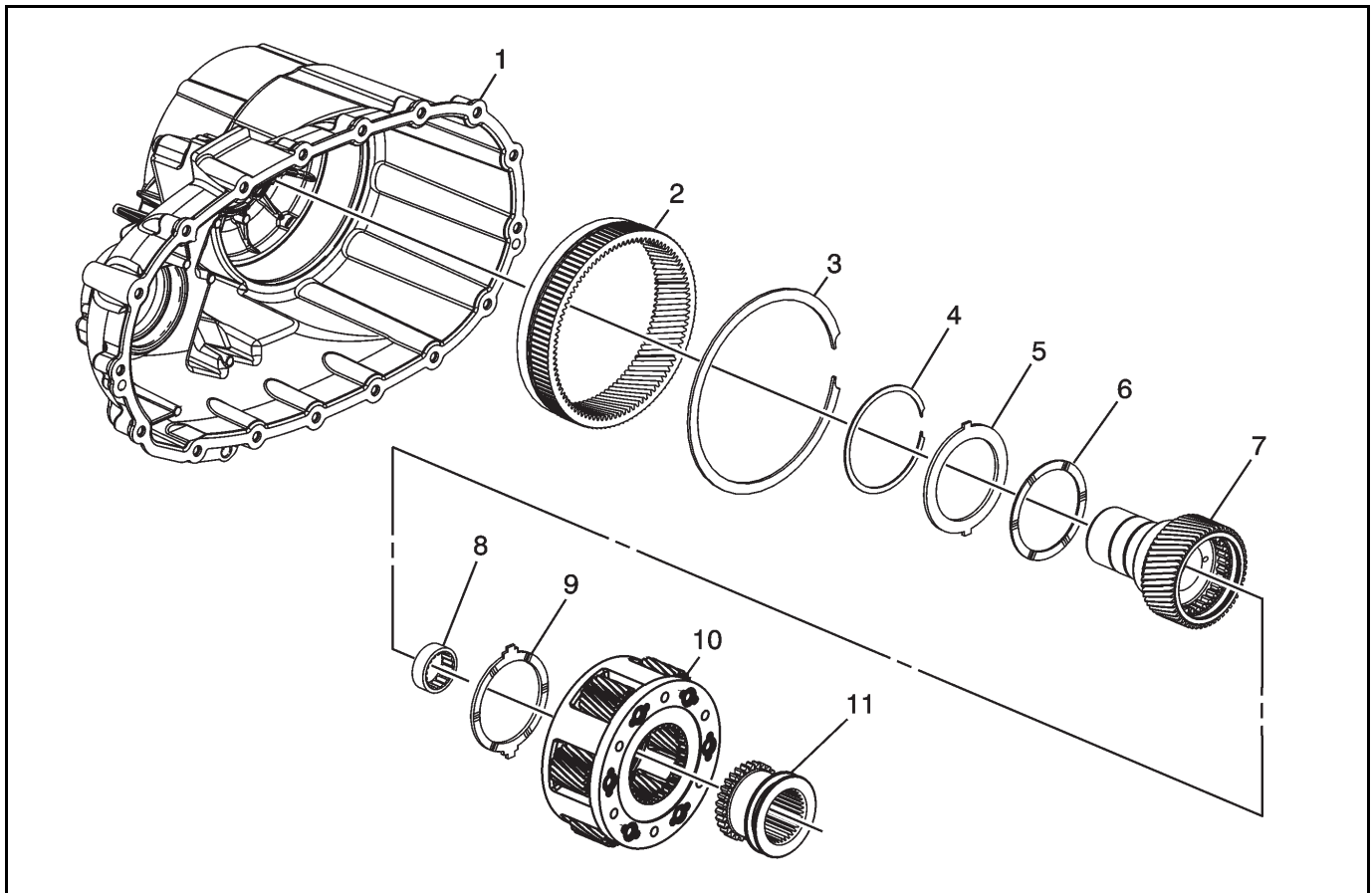


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Note: 2007-2010 MY Heavy Duty NQF transfer case assemblies were only produced with first-design content. Service 2007-2010 MY Heavy Duty NQG transfer case service assemblies may contain either first or second design content.

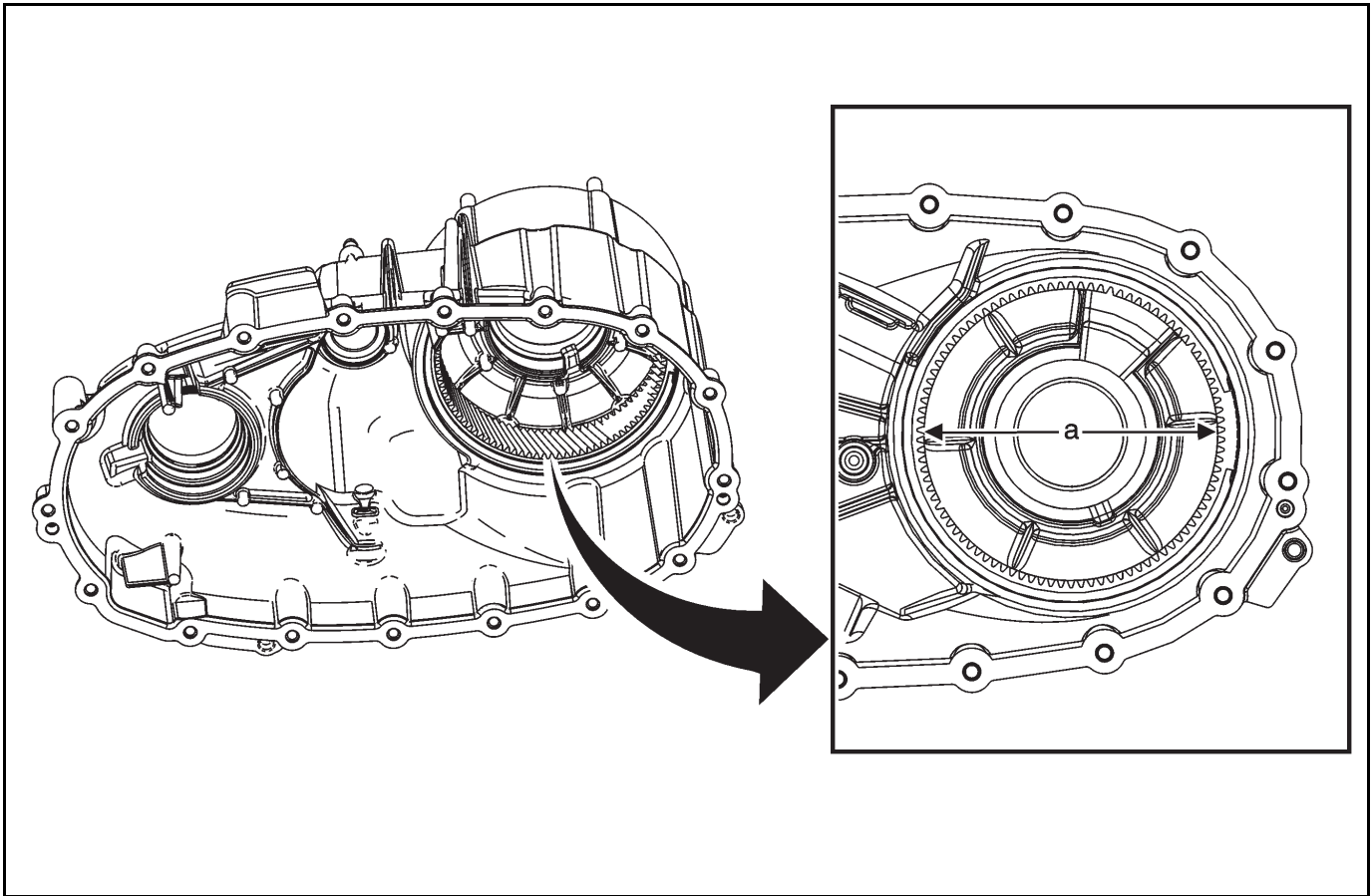
Magna Heavy Duty NQF/NQG/NQH – First Design			
Callout	Description	GM PN	Service Usage
1	Front Case Half Assembly w/gear (2) and ring (3)	19257420	2011-13 NQF
1	Front Case Half Assembly w/gear (2) and ring (3)	19133000	2007-10 NQG
1	Front Case Half Assembly w/gear (2) and ring (3)	19259038	2011-13 NQG
1	Front Case Half Assembly w/gear (2) and ring (3)	19132998	2007-13 NQH
2	High/Low Internal Gear-Not serviceable-part of case assembly	NO/PN	NQF/NQG/NQH
3	High/Low Internal Gear Retaining Ring	19133009	NQF/NQG/NQH
4	High/Low Planetary Carrier Retaining Ring	19132997	NQF/NQG/NQH
5	High/Low Locking Plate-Single tab design	19132996	NQF/NQG/NQH
6	Thrust Washer-No tab design - Front	19132995	NQF/NQGF/NQH

Magna Heavy Duty NQF/NQG/NQH – First Design			
Callout	Description	GM PN	Service Usage
7	Input Shaft Assembly w/pilot bearing	19132979	NQH w/MYD
			07-10MY NQF/NQG w/MYD and MW7
7	Input Shaft Assembly-w/pilot bearing	19257419	2007-13 NQF/NQG w/MYD
7	Input Shaft Assembly-w/pilot bearing	19259039	2011-13 NQF/NQG w/MW7
8	Pilot Bearing	19259040	2011-13MY NQF/NQG w/MW7
8	Pilot Bearing	19132984	2007-10MY NQF/NQG/NQH - w/ MW7 / MYD
			2007-13 NQH w/MYD
			2011-13 NQF/NQG w/ MYD
9	Thrust Washer-No tab design-Rear	19132995	NQG/NQH
			2011-13 NQF
10	High/Low Planetary Carrier Assembly-Five pinion design	19132987	NQG/NQH
			2011-13 NQF
11	High/Low Clutch	19260067	NQG/NQH
			2011-13 NQF



Magna Heavy Duty NQF/NQG/NQH – Second Design			
Callout	Description	GM PN	Service Usage
1	Front Case Half Assembly w/gear (2) and ring (3)	19299079	2011-13 NQF
1	Front Case Half Assembly w/gear (2) and ring (3)	19299078	2007-10 NQG
1	Front Case Half Assembly w/gear (2) and ring (3)	19299080	2011-13 NQG
1	Front Case Half Assembly w/gear (2) and ring (3)	19299077	2007-13 NQH
2	High/Low Internal Gear-Not serviceable-part of case assembly	NO/PN	NQF/NQG/NQH
3	High/Low Internal Gear Retaining Ring	14037953	NQF/NQG/NQH
4	High/Low Planetary Carrier Retaining Ring	15547397	NQF/NQG/NQH
5	High/Low Locking Plate-Two tab design	15664905	NQF/NQG/NQH
6	Thrust Washer-No tab design - Front	12470959	NQF/NQGF/NQH
7	Input Shaft Assembly-w/pilot bearing	19299086	NQH w/MYD
			07-10MY NQG w/MYD and MW7
7	Input Shaft Assembly-w/pilot bearing	19299087	2011-13 NQF/NQG w/MYD
7	Input Shaft Assembly-w/pilot bearing	19299089	2011-13 NQF/NQG w/MW7
8	Pilot Bearing	19259040	2011-13MY NQF/NQG w/MW7
8	Pilot Bearing	19132984	2007-10MY NQF/NQG/NQH - w/ MW7 / MYD
			2007-13 NQH w/MYD
			2011-13 NQF/NQG w/ MYD
9	Thrust Washer-Two tab design-Rear	15547390	NQG/NQH
			2011-13 NQF
10	High/Low Planetary Carrier Assembly-Six pinion design	19299091	NQG/NQH
			2011-13 NQF
11	High/Low Clutch	19299093	NQG/NQH
			2011-13 NQF

Front Case Half Identification

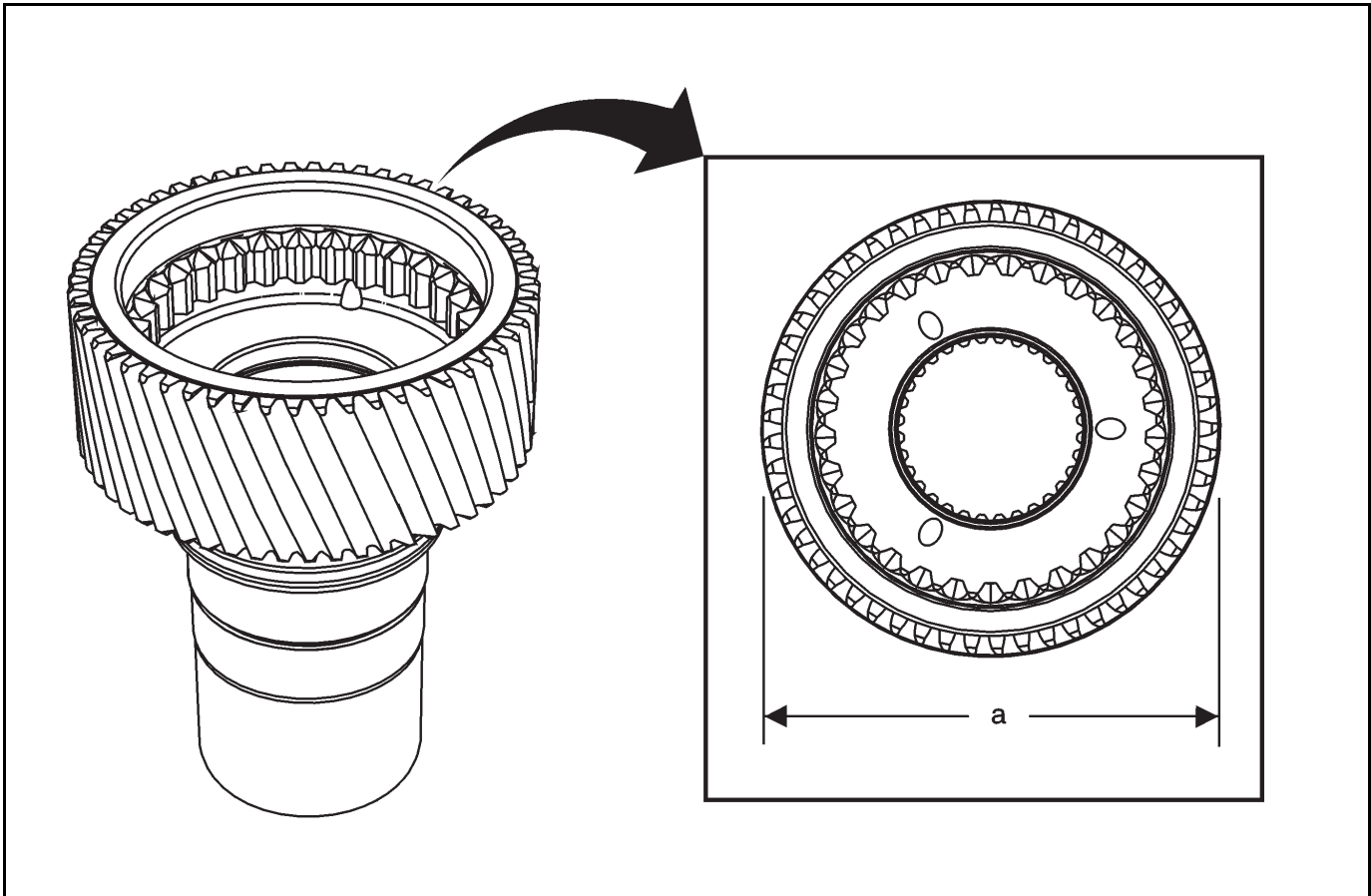


The first design front case half assembly can be identified as having an internal gear that is a 94 tooth design with an inside diameter (a) of 148.5 mm (5.85 in).

The second design front case half assembly can be identified as having an internal gear that is a 91 tooth design with an inside diameter (a) of 142 mm (5.59 in).

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Input Shaft Identification

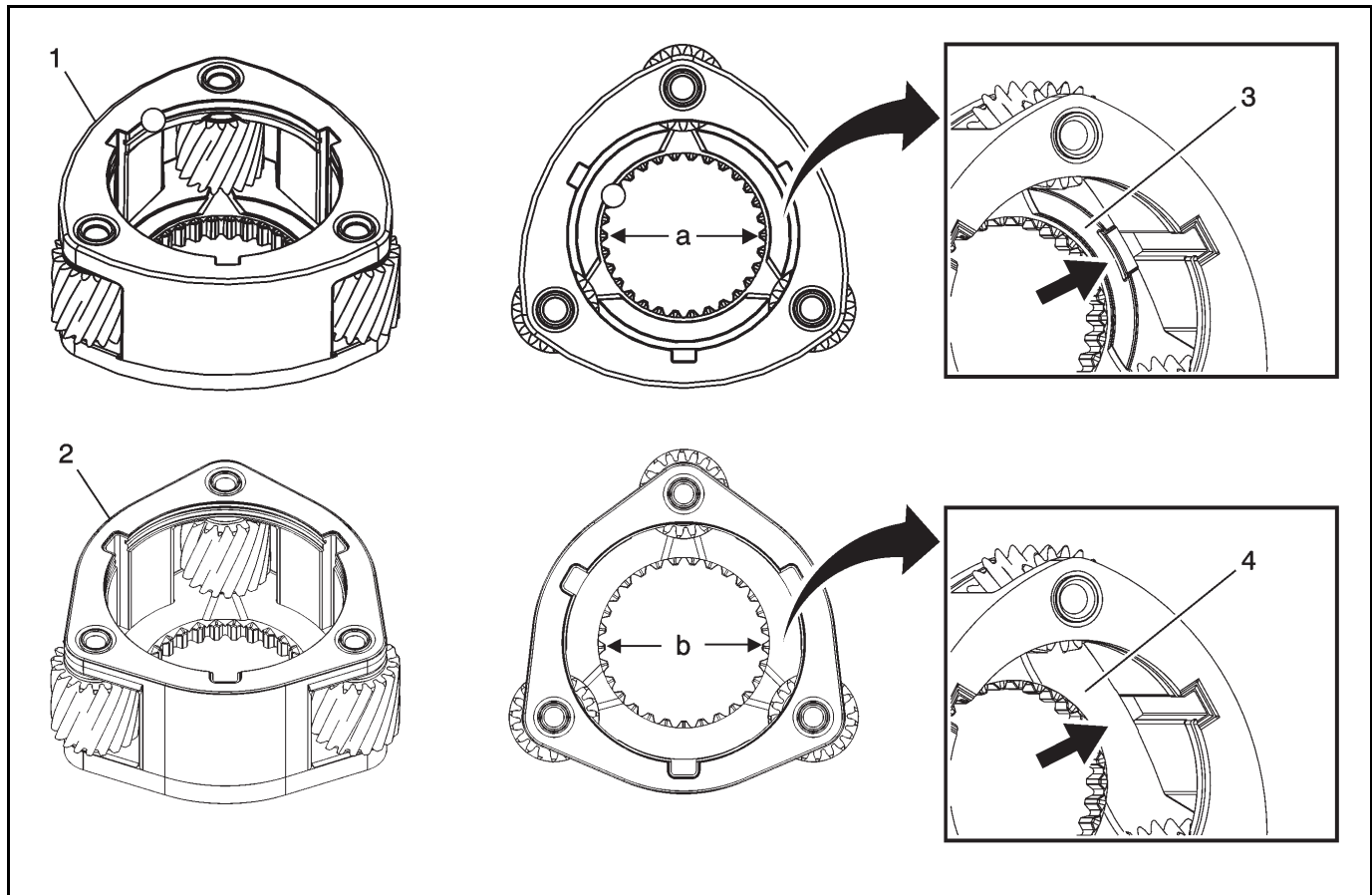


The first design input shaft can be identified as a 56 tooth design with an outside diameter (a) of 91.4 mm (3.60 in).

The second design input shaft can be identified as a 53 tooth design with an outside diameter (a) of 87.50 mm (3.44 in).

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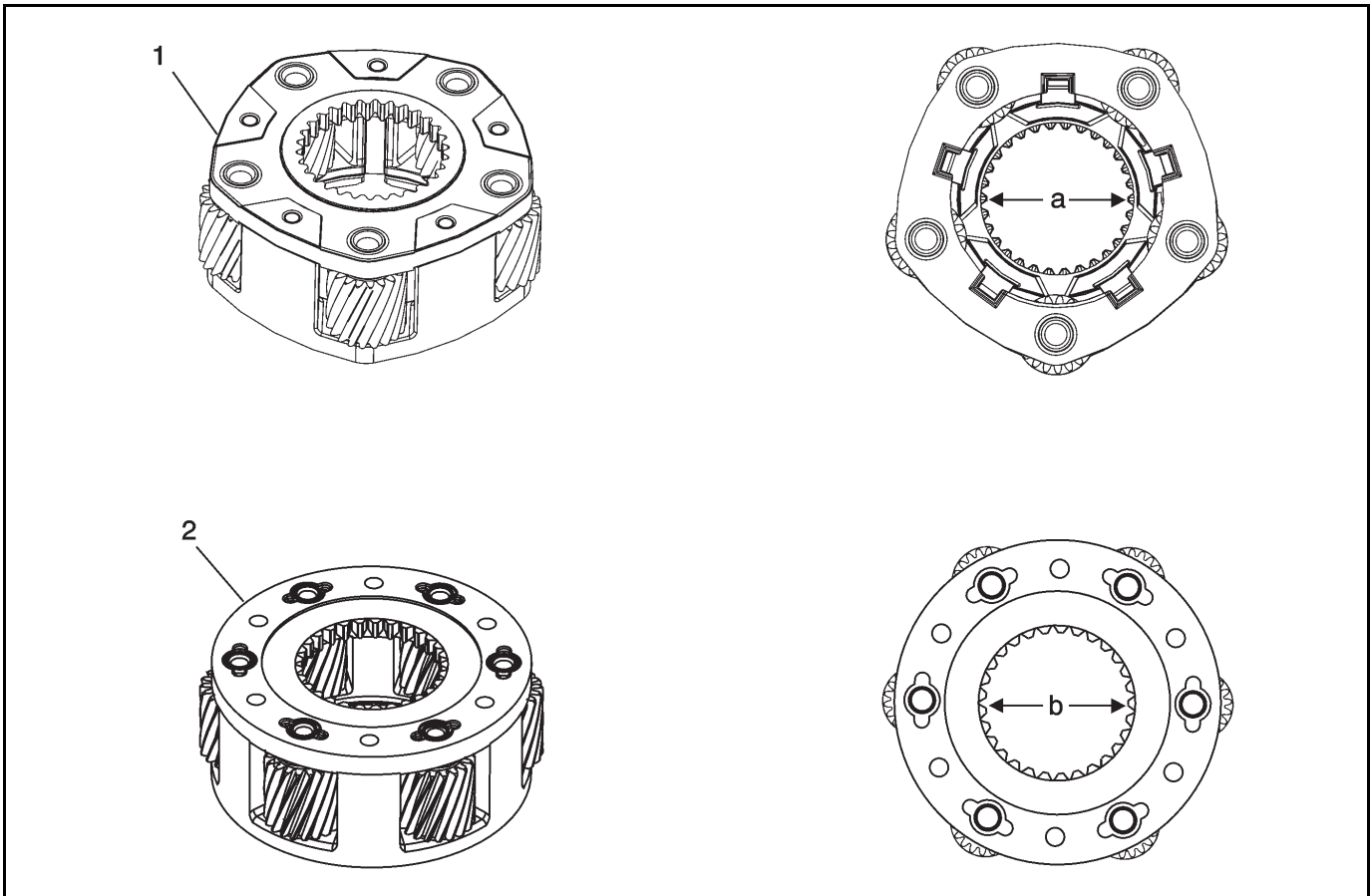
High/Low Planetary Carrier Assembly Identification



3216481

The first-design light-duty 3-pinion high/low planetary carrier (1) can be identified as having a 30 tooth design with an inside diameter (a) of 61.3 mm (2.41 in). In addition, the first-design carrier can also be identified by the presence of a recessed washer pocket (3) at the rear thrust washer location.

The second-design light-duty 3-pinion high/low planetary carrier (2) can be identified as having a 29 tooth design with an inside diameter (b) of 60.2 mm (2.37 in). In addition, the second-design carrier can also be identified by the lack of a recessed washer pocket (4) at the rear thrust washer location.

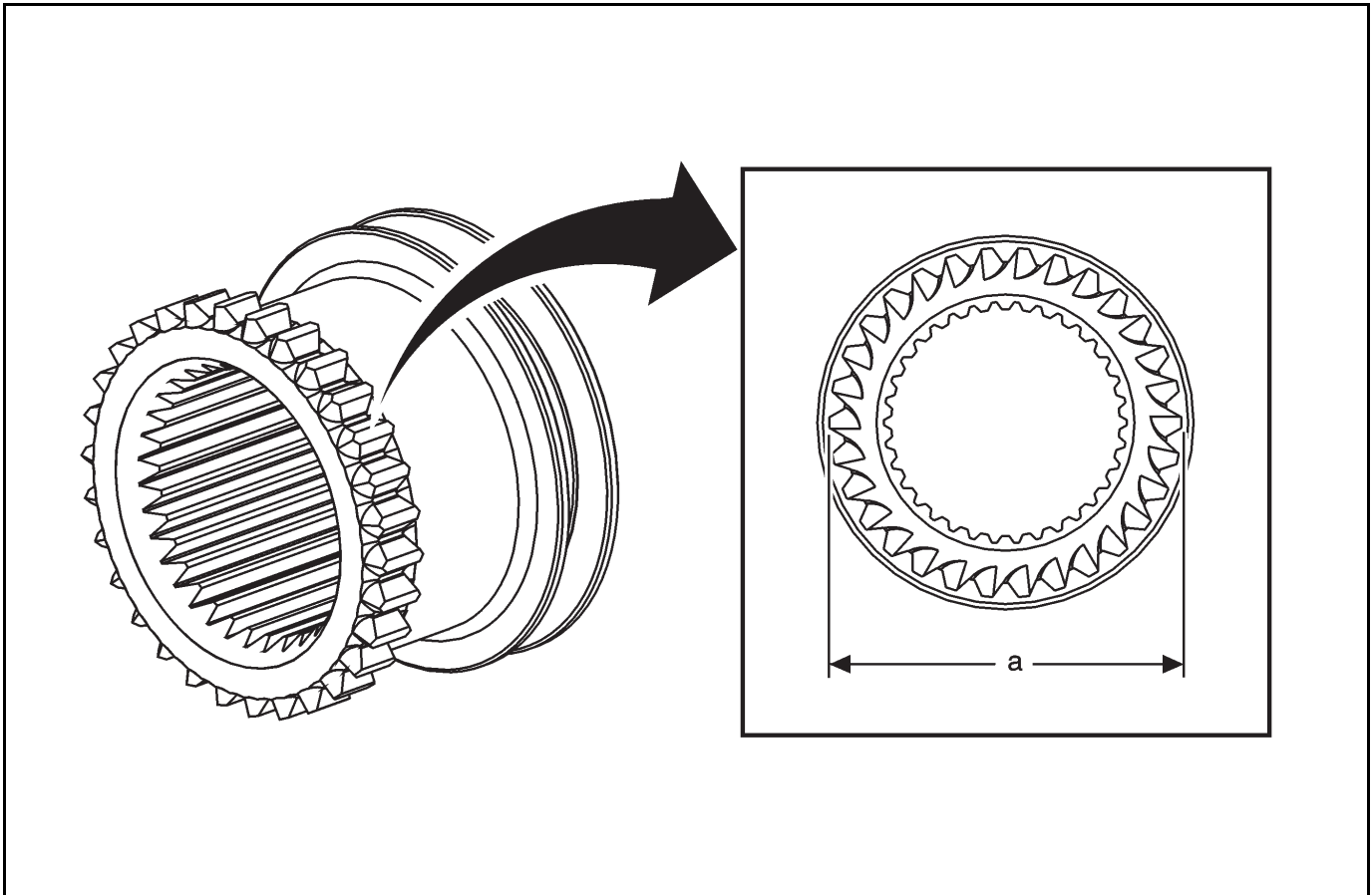


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The first-design heavy-duty 5-pinion high/low planetary carrier (1) can be identified as having 5 pinions and a 30 tooth design with an inside diameter (a) of 61.3 mm (2.41 in).

The second-design heavy-duty 6-pinion high/low planetary carrier (2) can be identified as having 6 pinions and a 29 tooth design with an inside diameter (b) of 60.2 mm (2.37 in).

High/Low Clutch

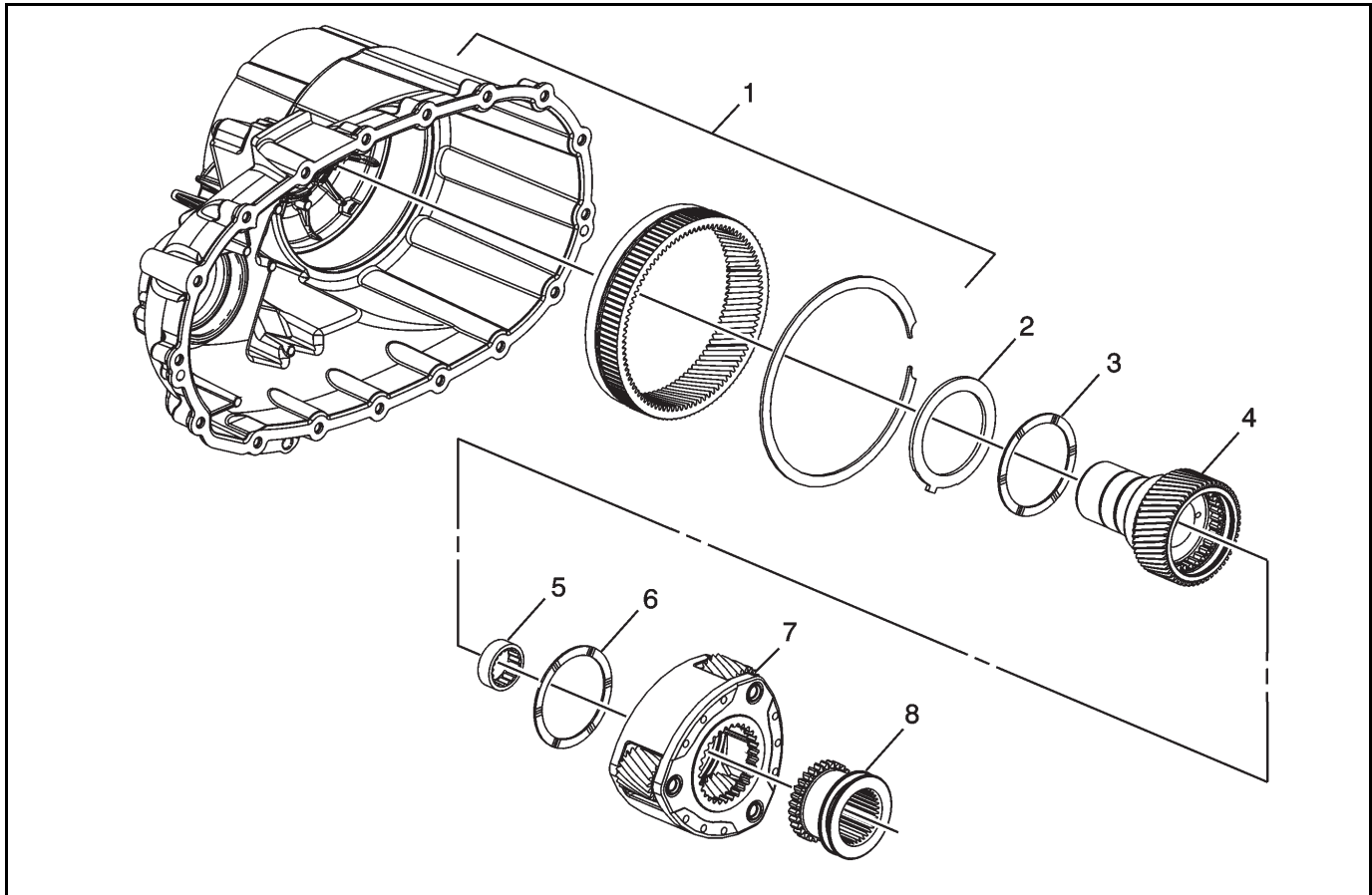


The first design high/low clutch can be identified as having a 30 tooth design with a gear tooth outside diameter (a) of 65.50 mm (2.58 in).

The second design high/low clutch can be identified as having a 29 tooth design with a gear tooth outside diameter (a) of 63.25 mm (2.49 in).

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Component Replacement – Conversion from First Design to Second Design



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It is possible to repair a first-design assembly using second-design components. Refer to the parts catalog and the tables above for component part number clarification.

Note: First-design LD components are shown in the view above.

When servicing a first-design assembly with second-design components, the following components **MUST** be replaced as a group:

1. Front Case Half Assembly – with internal gear and retaining ring
2. Locking Plate

3. Thrust Washer (front)
4. Input Shaft
5. Pilot Bearing
6. Thrust Washer (rear)
7. Planetary Carrier Assembly
8. High/Low Clutch