



SI B33 04 16
Rear Axle

August 2016
Technical Service

SERVICE ACTION: REPLACE REAR-AXLE DIFFERENTIAL

This Service Information bulletin supersedes SI 33 04 16 **dated August 2016**

UPDATE! The vehicle delivery stop has been lifted. Please perform the procedure the next time the vehicle is in the shop.

MODEL

F06 (M6 Gran Coupe)	F10 (M5)	F12 (M6 Convertible)	F13 (M6 Coupe)
F80 (M3)	F82 (M4)	F83 (M4 Convertible)	F87 (M2 Coupe)

SITUATION

The rear differential emits a loud noise.

CAUSE

Manufacturing defect in the rear differential limited slip clutch pack. This may cause, in certain driving situations, excessive noise from the rear differential.

AFFECTED VEHICLES

This Service Action involves certain M2 Coupe, M3 Sedan, M4 Coupe and Convertible, M5 and M6 (Gran Coupe, Convertible, and Coupe) produced from May 12, 2016 through July 4, 2016.

Vehicles which require this Service Action to be completed will show it as "Open" when checked either in AIR, the "Service Menu" of DCSnet (Dealer Communication System) or with the Key Reader.

UPDATE! You may receive some vehicles from the ports affected by this campaign that show the campaign as still open.

CORRECTION

Replace the rear axle differential.

UPDATE! Alternatively, the center may release the vehicle to the customer prior to repairs, provided the customer signs the disclosure attached to this bulletin. This repair will have to be performed at the 1,200 mile service.



Note: When applicable, this repair will have to be performed when an affected

vehicle arrives at your center for their Running-in Check at 1,200 Miles

PROCEDURE

Step One

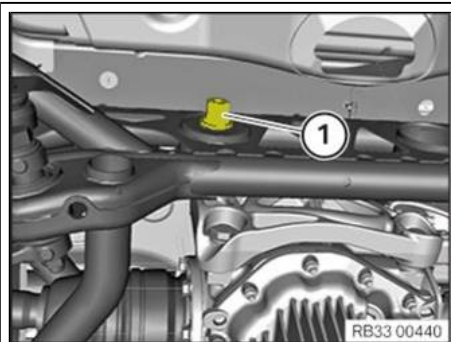
Refer to the following attached repair instruction information:

- M5 and M6: RA REP 33 10 016 - Replacing the rear axle differential.
- M2, M3 and M4: Refer to the attached repair procedure (REP 33 10 017 R&R Diff F8x Updated 8-22.pdf) in this SIB (do not use ISTA)



Note: This Repair procedure has been modified to expedite repairs.

UPDATE!



During the repair, when releasing rear differential Hexagonal collar bolt M14x1.5x125 (PN 33 17 7 852 488), make sure that the bolt's hex head does not show any marks indicating previous removal. In case bolt M14x1.5x125 (1) has been removed (torque released) previously, it needs to be replaced together with 4 sub-frame Torx screws M12x60 (PN 33 30 2 284 642).



Note: Use the following Repair Instructions in ISTA for the preliminary repair work:

- 18 00 018 Removing and installing complete exhaust system (S55)
- 33 21 000 Removing and installing/replacing left or right output shaft
- 33 32 175 Removing and installing/ replacing left or right rear reinforcement strut

Step Two



Attention: Rear Axle Differential Follow-up Fluid Service after Assembly

Replacement

These vehicles require “follow-up” fluid replacement service after the replacement of the rear axle differential assembly, please perform and submit as outlined below:

A. Rear axle differential is replaced “before” vehicle delivery to the first customer (New in-stock Vehicle)

- After vehicle delivery, the rear axle differential fluid replacement service is included in with performing the “Service - running-in check” at 1,200 miles (Labor operation 00 00 600).
- Claim this (“A”) under the BMW Maintenance Program.
- BMW recommends not exceeding the first 2,400 miles before performing the Service - running-in check.

B. Rear axle differential replaced “after” the Service – running-in check has already been performed

- Please notify the customer when they pick-up their vehicle they will need to bring the vehicle back to have a follow-up rear axle differential fluid service performed after the next 1,200 miles have elapsed.
- Invoice this rear axle differential fluid service (“B”) under the original Service Action Campaign Defect Code (“00 33 99 01 00”) as described in the Warranty Information section below.
- Certain F80, F82, F83 and F87 (M2, M3 and M4) will also need to have the four rear sub frame bolts (**PN 33 30 2 284 642**) replaced during this additional 1200 rear axle differential fluid service. Reference Attachment: VIN List Rear Sub Frame Bolts.pdf. Invoice these bolts under situation (“B”) under the original Service Action Campaign Defect Code (“00 33 99 01 00”) as described in the Warranty Information section below.



Note: Defect Code 00 33 99 01 00 **will not show “open”** after the prerequisite repair for replacing the rear axle differential is “submitted and credited.”

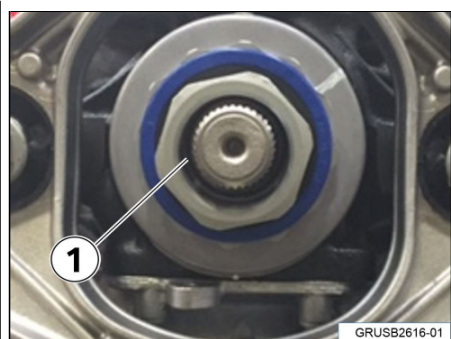
PARTS INFORMATION



Please monitor the DCS messages for the parts ordering procedure.

F8x produced up to 06/28/2016

	<p>Identifying the 8 090 464 differential: Check the number of splines on the old/new differential. The correct differential has 35 splines (1)</p>
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UPDATE!

COMMON PARTS F8X (M2/M3/M4) produced up to 06/28/2016

Part number	Description	Quantity
33 10 8 090 464	Rear-axle differential with lock	1
46 53 8 534 589	ISA bolt with washer	1
33 32 6 760 380	Multi-purpose nut	4
31 10 6 769 907	Bolt with washer	2
18 30 7 613 551	External Torx	2
07 11 9 904 024	Hexagon nut	4
07 11 9 904 793	Hexagon screw with washer	2
33 41 1 133 785	Collar nut	2
33 14 1 206 439	Circlip	2
33 32 6 760 668	Self-locking collar nut M12X125-10ZNS3	2
31 10 6 768 886	Hexagon nut with collar M14X1.5-10 ZNS3	2
33 32 6 779 785	Eccentric bolt M14X105-10.9	1
33 30 6 784 802	Eccentric bolt M12X1.5-10 ZNS3	1

F87 (M2) ADDITIONAL PARTS

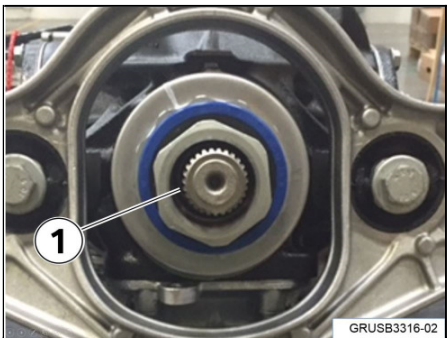
18 30 7 620 349	V-clamp (M2)	1
33 30 7 857 294	Torx bolt with washer (M2)	2

F80, F82, F83 (M3, M4) ADDITIONAL PARTS

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18 30 7 597 650	Collar nut M8 (M3/M4)	4
18 30 7 851 168	Seal (M3/M4)	2
07 11 9 906 292	Hex bolt M12X1.5X80 10.9 (M3 M4)	4

F8x produced from 06/29/2016

	<p>Identifying the 8 090 473 differential: Check the number of splines on the old/new differential. The correct differential has 27 splines (1)</p>
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UPDATE! COMMON PARTS F8X (M2/M3/M4) produced from 06/29/2016

Part number	Description	Quantity
33 10 8 090 473	Rear-axle differential with lock	1
31 10 6 769 907	Bolt with washer	2
18 30 7 613 551	External Torx	2
33 14 1 206 439	Circlip	2
33 41 1 133 785	Collar nut	2
07 11 9 904 793	Hexagon screw with washer	2
07 11 9 904 024	Hexagon nut	4
33 32 6 760 380	Multi-purpose nut	4
46 53 8 534 589	ISA bolt with washer	1
33 32 6 760 668	Self-locking collar nut M12X125-10ZNS3	2
31 10 6 768 886	Hexagon nut with collar M14X1.5-10 ZNS3	2
33 32 6 779 785	Eccentric bolt M14X105-10.9	1
33 30 6 784 802	Eccentric bolt M12X1.5-10 ZNS3	1

F87 (M2) ADDITIONAL PARTS

18 30 7 620 349	V-clamp (M2)	1
33 30 7 857 294	Torx bolt with washer (M2)	2

F80, F82, F83 (M3, M4) ADDITIONAL PARTS

18 30 7 597 650	Collar nut M8 (M3/M4)	4
18 30 7 851 168	Seal (M3/M4)	2
07 11 9 906 292	Hex bolt M12X1.5X80 10.9 (M3 M4)	4

F06, F1x

Part number	Description	Quantity
33 10 8 090 474	Rear-axle differential with lock	1
33 32 6 760 374	Collar nut	2
07 11 9 906 460	Bolt with washer	2
26 11 7 526 322	External Torx screw with ribbed teeth	6
33 17 6 760 336	Hexagon screw with washer	1
31 20 6 795 249	Collar bolt with compression spring	2
33 32 6 768 354	Hexagon screw with collar	8
33 14 1 206 439	Circlip	2
18 30 7 597 650	Collar nut M8	4
26 11 7 527 475	Hex bolt M12X1.5X71-ZNS3	3
26 12 7 536 563	Self-locking nut M12X1.5-10 ZNS3	3
07 11 9 906 034	Screw 8X35	4
07 11 9 902 906	Hex bolt with washer M8X18-Z1-ZNS3	4
07 11 9 905 147	Hex bolt with washer M10X25-10-9ZNS3	4
07 11 9 905 655	Hex bolt M10X40-10-9ZNS3	6
33 30 6 787 062	Combination nut M14X1.5-10ZNNV	1
33 50 6 779 488	Hex bolt M14X105 ZNS3	1
33 20 7 572 719	Reinforcement D=10.5MM/ZNS3	3

Bulk Materials

Part number	Description	Quantity
83 22 2 357 992	Final-Drive Gear Oil MSP/A (1000ml)	As needed

WARRANTY INFORMATION

Reimbursement for this Service Action will be via normal claim entry utilizing the following information:

Part One - Replacing the Rear Axle Differential

Defect Code:	0033990100
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Completion “before” vehicle delivery to the customer or the vehicle is already in the workshop

Labor Operation:	Labor Allowance:	Description:
00 64 671	(F10) 48 FRU; (F06) 50 FRU; (F12) 52 FRU; (F13) 53 FRU	Replacing the rear axle differential (Plus work)
00 64 671	(F87) 59 FRU; (F80; F82, F83) 64 FRU	Replacing the rear axle differential (Includes wheel alignment) (Plus work)

Or:

Completion after vehicle delivery to the customer

Labor Operation:	Labor Allowance:	Description:
00 64 147	(F10) 50 FRU; (F06) 52 FRU; (F12) 54 FRU; (F13) 55 FRU	Replacing the rear axle differential (Main work)
00 64 147	(F87) 60 FRU; (F80, F82, F83) 66 FRU	Replacing the rear axle differential (Includes wheel alignment) (Main work)

Part Two - Rear Differential Fluid Service

Situation “A” (Under the BMW Maintenance Program after the First 1,200 Miles)

Defect Code:	85 99 05 01 MP	Standard Scope
Labor Operation:	Labor Allowance:	Description:
		Service – standard scope (Main

00 00 105	Refer to KSD2	work)
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And:

Defect Code:	85 99 00 88 MP	Running-in Check at 1,200 Miles
Labor Operation:	Labor Allowance:	Description:
00 00 600	Refer to KSD2	Service – running-in check (includes oil change in rear final drive/rear axle differential) (Center oil chamber)

BMW recommends not exceeding the first 2,400 miles before performing the Service - running-in check.

Or:

Situation “B” (Under the original Service Action Campaign/ Running-In Check Previously Performed and Claimed)

Defect Code:	00 33 99 01 00*	
Labor Operation:	Labor Allowance:	Description:
00 11 259	Refer to KSD2	Oil change in rear final drive (Center oil chamber) (Main work) and replace the rear sub frame bolts*
Or:		
00 11 559	Refer to KSD2	Oil change in rear final drive (Center oil chamber) (Plus work – Vehicle is already in the workshop) and replace the rear sub frame bolts*

* Replace sub frame bolts according to VIN list only.



Note: *Campaign Defect Code 00 33 99 01 00 will not show “open ” after the prerequisite repair for replacing the rear axle differential is submitted and credited.

However, this follow-up fluid service can still be claimed and submitted under the special Campaign Defect Code as outlined above. Performed this service after the next 1,200 miles have elapsed.

And:

Sublet – Bulk Materials (For Part One and Two)

Sublet Code 4	See sublet reimbursement calculation below	Reimbursement for the repair-related bulk materials (BMW part numbers, please do not use the part numbers for claim submission)
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Sublet reimbursement calculation for claiming the “used quantities” of repair-related bulk materials (BMW part numbers) is at dealer net plus your center’s handling.

Enter this material cost in sublet and itemize the amount on the repair order and in claim comment section.

Overlapping Labor – Associated and/or Other Repairs

If invoicing KSD2 flat rate labor operation codes for the additional repair work results in overlapping labor being claimed, please invoice work time labor operation 00 50 000 for the additional time (FRU) minus the overlap instead.

When work time labor operation 00 50 000 is used for work that will be claimed under a different defect code, separate punch times are required.

Work time labor operation code 00 50 000 is not considered a Main labor operation.

On the repair order and in the claim comment section, please identify the labor operations that labor operation code 00 50 000 replaces and itemize the claimed FRU amount.

CUSTOMER INFORMATION

FOR CUSTOMERS WHOSE VEHICLES ARE EITHER AT THE PORT OR AT THE DEALER AND CANNOT BE DELIVERED

As part of ongoing quality control, BMW has initiated a service campaign to replace the rear differential in certain BMW M models. Under extreme driving conditions it was determined that a noise may originate from the vehicle’s limited slip clutch pack.

FOR CUSTOMERS WHO HAVE TAKEN DELIVERY AND HAVE QUESTIONS

Can I drive my vehicle aggressively before the repair? You can use your vehicle in all driving conditions. In case of an excessive, groaning noise coming from the area of rear differential during aggressive (tight) turns, contact your BMW service center.

Details about the wearing out prematurely (time/mileage/noise, etc) - what details can we share? We do not have a defined time/mileage for a discs wear to start developing. It depends on

a driving style and road conditions.

How many vehicles have had premature wear? Only one known case from factory testing

Is this a safety issue? Not a safety issue

How will I be made aware when the parts are available for my car? Parts = Your Dealer will contact you to schedule an appointment.

How long will it take for the parts arrive? Parts = We are receiving parts on a weekly basis. To complete all vehicles it might take two months.

What's going on? At BMW, we are committed to maintaining a level of automotive excellence that exceeds your expectations. As part of ongoing quality control, BMW has initiated a service campaign to replace to rear differential in certain BMW M models. Under extreme driving conditions it was determined that a noise may originate from the vehicle's limited slip clutch pack.

Can I continue to drive my car? YES

When will it be repaired? Due to a unforeseen delay in obtaining replacement parts, we anticipate that vehicle repairs will be completed by the end of October. We greatly appreciate your patience!

Is this a recall? This is a Technical Campaign to be implemented at the next customer visit to the workshop.

If customer complains about noise from rear of vehicle: Suggest that the customer have the vehicle looked at by their authorized local BMW center.

ATTACHMENTS

View PDF attachment [B330416RearAxleDifferentialDisclosure](#).

View PDF attachment [REP 33 10 017 R&R Diff F8x Updated 8-25](#).

View PDF attachment [VIN List Rear Sub Frame Bolts](#).

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