



Technical Service Bulletin

SEDVICE MANUAL DEVISION DEVISED			No:	TSB-12-26-001
			DATE	June, 2012
			MODE	L: See below
CIRCULATE TO:	[] GENERAL MANAGER	[X] PARTS MANAGER		[X]TECHNICIAN
[X] SERVICE ADVISOR	[X] SERVICE MANAGER	[] WARRANTY PROCESSOR		[] SALES MANAGER

This bulletin supercedes TSB-11-26-002, issued July, 2011, to revise the order certain steps are performed. Changes are italicized and indicated by \triangleleft .

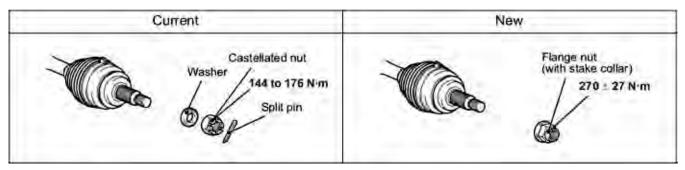
TSB Revision: TSB-12-26-001

PURPOSE

The front axle nut has been changed in production from castellated type to flanged type with a staked collar. This TSB contains new service manual procedures for vehicles related to this change.

Details:

- Front drive shaft (split pin hole at ends → groove (keyway) in threads)
- Front drive shaft nuts (castellated nuts → staked nuts)
- Tightening torque for staked nuts (144 176 Nm → 270 ± 27 Nm)



AFFECTED VEHICLES

2011 Lancer (built from the end of September, 2010)

2011 Lancer Ralliart (built from the start of October, 2010)

2011 Lancer Sportback (built from the end of September, 2010)

2011 Lancer Sportback Ralliart (built from the start of October, 2010)

2011 Lancer Evolution (built from the start of October, 2010)

AFFECTED SERVICE MANUALS

2011 Lancer/Lancer Sportback: Group 26-Front Axle

2011 Lancer Evolution: Group 26-Front Axle

(continued)

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(3870)

2011 Lancer, 2011 Lancer Sportback, 2011 Lancer Evolution: Add the following information to the Special Tools section in Group 26 – Front Axle.

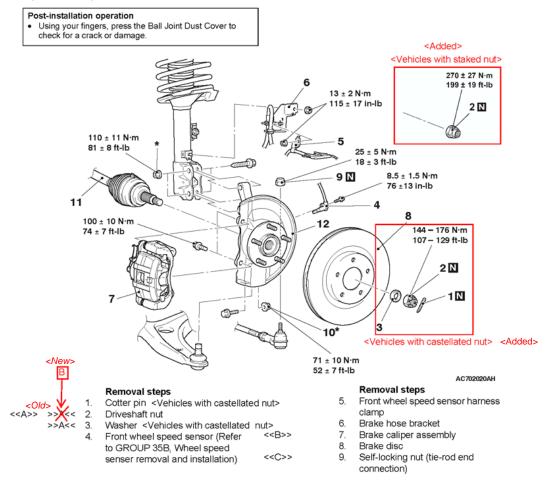


2011 Lancer, Lancer Sportback, page 26-12

REMOVAL AND INSTALLATION

A CAUTION

- The magnetic encoder collects metallic particles easily, because it is magnetized. Make sure that
 the magnetic encoder should not collect metallic particles. Check that there is not any trouble
 prior to reassembling it.
- When removing and installing the front wheel hub assembly, make sure that the magnetic encoder for wheel speed detection (integrated with the inner oil seal) does not contact with surrounding parts to avoid damage.
- When removing and installing the front wheel speed sensor, make sure that the pole piece at the
 end does not contact with surrounding parts to avoid damage.
- The parts indicated by * are the nuts with friction coefficient stabilizer. In removal, ensure there is
 no damage, clean dust and soiling from the bearing and thread surfaces, and tighten them to the
 specified torque.





Removal steps

- Flange nut (lower arm ball joint connection)
- Driveshaft and hub knuckle assembly connection
- 12. Hub knuckle assembly

Required Special Tools:

- MB990242: Puller Shaft
- MB990244: Puller Bar

- MB990767: Front Hub and Flange Yoke Holder
- MB991354: Puller Body
- MB991897 or MB992011: Ball Joint Remover

REMOVAL SERVICE POINTS

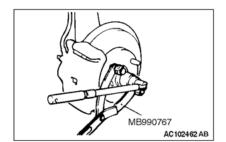
<<a>> DRIVESHAFT NUT REMOVAL

▲ CAUTION

Do not apply the vehicle weight on the front wheel hub assembly with the driveshaft nut loosened. Otherwise, the wheel bearing may be broken.

<Vehicles with castellated nut> <Added>

Use special tool MB990767 to counter the hub as shown in the figure to remove the driveshaft nut.



<> BRAKE CALIPER ASSEMBLY REMOVAL

- 1. Remove the brake caliper assembly with brake hose.
- Secure the removed brake caliper assembly with a wire or other similar material at a position where it will not interfere with the removal and installation of the hub knuckle assembly.

<New>

From page 4

Insert the following where indicated on page 26-13.

<Added>

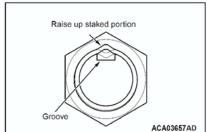
<Vehicles with staked nut>

1. The staked portion of the driveshaft nut must face upwards.

- Make sure that the lock nut chisel is set in the correct direction. Otherwise, the groove or thread in the front driveshaft may be broken, or the tip of the chisel may
- · Never use a chisel which tip is damaged.
- For how to use the lock nut chisel, refer to the manufacturer's operating instructions.
- 2. Set the special tool MB992700 in the groove of the front driveshaft with its "上" mark facing upwards. Then strike the staked portion of the front driveshaft nut with the chisel and a hammer to raise up.

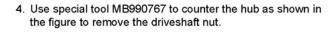


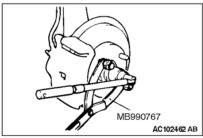
Be careful not to damage the thread of the front driveshaft.

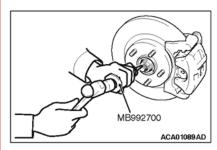


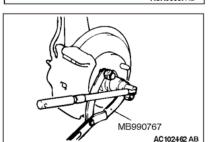
3. Raise up the staked portion of the front driveshaft nut until it does not interfere with the shaft thread.

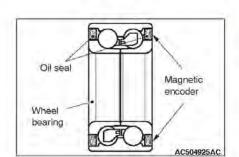
- Never use a impact wrench to loosen the driveshaft nut.
- . Do not apply the vehicle weight on the wheel bearing with the driveshaft nut loosened. Otherwise, the wheel bearing may be broken.







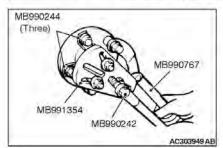




<<>>> DRIVESHAFT AND HUB KNUCKLE ASSEMBLY DISCONNECTION

A CAUTION

- The magnetic encoder collects metallic particles easily, because it is magnetized. Make sure that the magnetic encoder does not collect metallic particles.
- When removing the driveshaft, make sure that it does not contact with the magnetic encoder (integrated with the inner oil seal) to avoid damage.



If the driveshaft is seized, use special tools MB990242 and MB990244, MB991354 and MB990767 to push the driveshaft out from the hub.

>>E<< DRIVESHAFT AND HUB KNUCKLE ASSEMBLY CONNECTION < Vehicles with staked nut>

↑ CAUTION

Insert the driveshaft so that no hub bolt is vertically above the groove of the front driveshaft assembly.

<Added>

New> INSTALLATION SERVICE POINT

<Old> >>X<< WASHER (w/CASTELLATED NUT ONLY)/DRIVESHAFT NUT INSTALLATION

A CAUTION

<New>

В

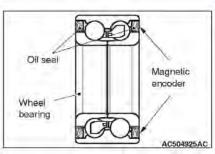
- The magnetic encoder collects metallic particles easily, because it is magnetized. Make sure that the magnetic encoder should not collect metallic particles. Check that there is not any trouble prior to reassembling it.
- When installing the driveshaft, make sure that it does not contact with the magnetic encoder (integrated with the inner oil seal) to avoid damage.
- Do not apply the vehicle weight on the wheel bearing before fully tightening the driveshaft nut. Otherwise, the wheel bearing may be broken.

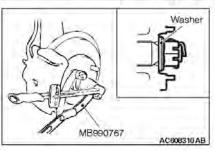
<Vehicles with castellated nut> <Added>

- Be sure to install the driveshaft washer in the illustrated direction.
- Using special MB990767, tighten the driveshaft nut. At this time, tighten the nut to the specified lower limit torque so that the pin hole may align with cotter pin.

Tightening torque: 144 - 176 N·m (107 - 129 ft-lb)

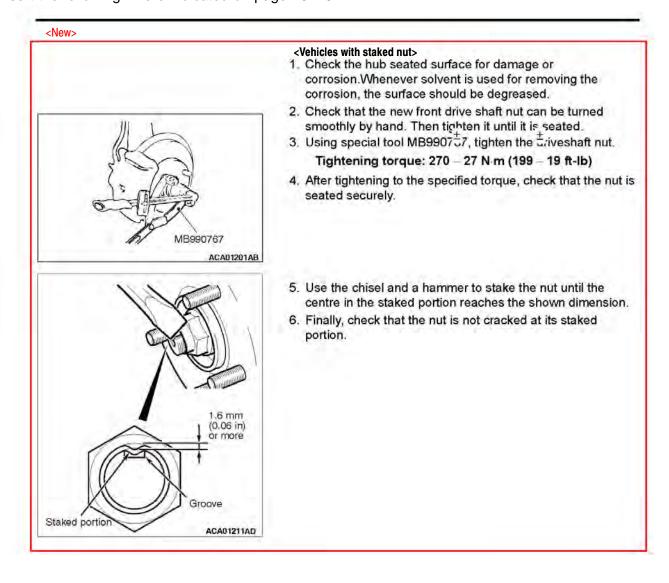
 If the pin hole does not align with the pin, tighten the driveshaft nut [less than 176 N·m (129 ft-lb)] and find the nearest hole, then fit the cotter pin.

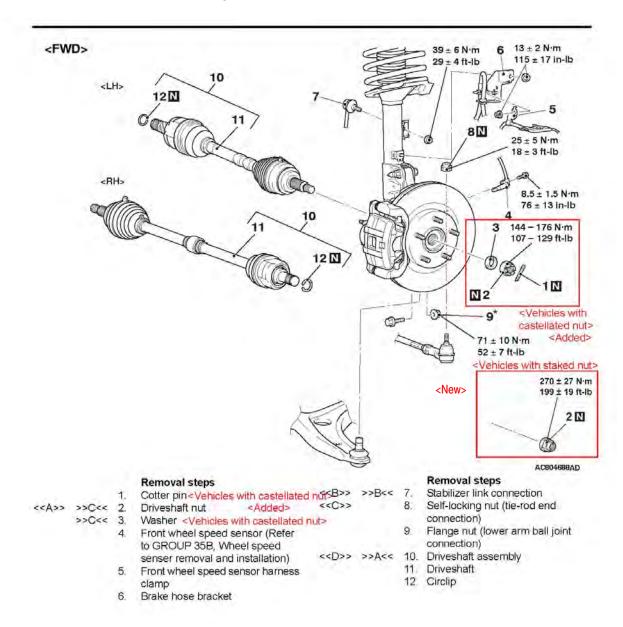


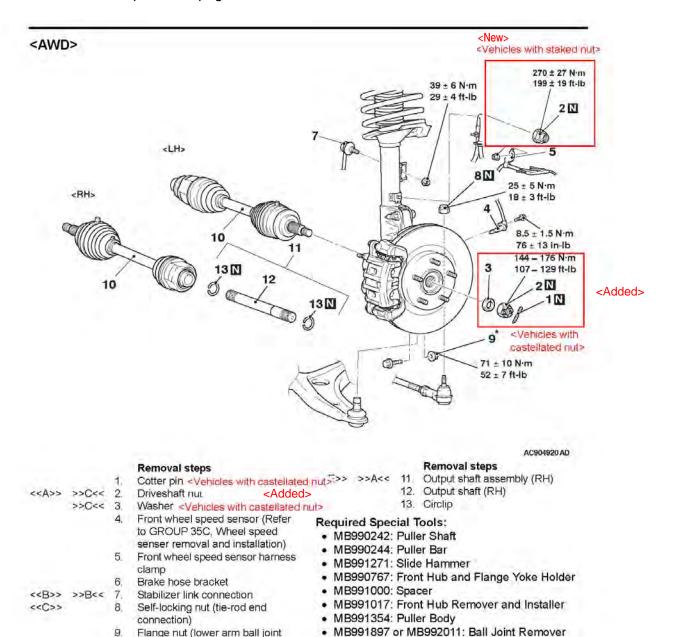




Insert the following where indicated on page 26-15.







Flange nut (lower arm ball joint

connection)

Driveshaft assembly

<<D>> >>A<< 10.

REMOVAL SERVICE POINTS

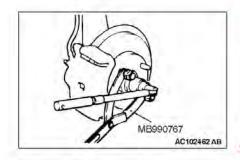
<<A>> DRIVESHAFT NUT REMOVAL

A CAUTION

Do not apply the vehicle weight on the wheel bearing with the driveshaft nut loosened. Otherwise, the wheel bearing may be broken.

<Vehicles with castellated nut> <Added>

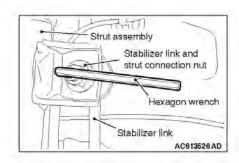
Use special tool MB990767 to counter the hub as shown in the figure to remove the driveshaft nut.



< B>> STABILIZER LINK DISCONNECTION

Use a hexagon wrench to remove the stabilizer link and strut cornection nut as shown in the figure.

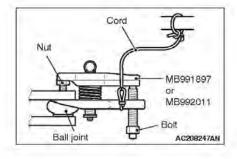




<<c>> SELF-LOCKING NUT (TIE-ROD END CONNECTION) REMOVAL

A CAUTION

- Loosen the self-locking nut (tie-rod end connection) from the ball joint, but do not remove here. Use the special tool.
- To prevent the special tool from dropping off, suspend it with a cord.
- Install special tool MB991897 or MB992011, as shown in the figure.



Insert the following where indicated on page 26-24.

<New>

<Vehicles with staked nut>

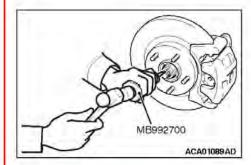
1. The staked portion of the driveshaft nut must face upwards.

⚠ CAUTION

- Make sure that the lock nut chisel is set in the correct direction. Otherwise, the groove or thread in the front driveshaft may be broken, or the tip of the chisel may be chipped.
- · Never use a chisel which tip is damaged.
- For how to use the lock nut chisel, refer to the manufacturer's operating instructions.
- Set the special tool MB992700 in the groove of the front driveshaft with its " ± " mark facing upwards. Then strike the staked portion of the front driveshaft nut with the chisel and a hammer to raise up.



Be careful not to damage the thread of the front driveshaft.



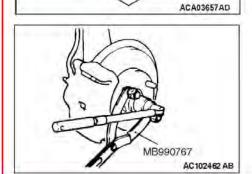
Raise up staked portion

Groove

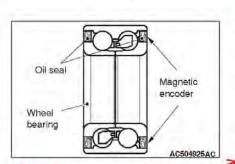
3. Raise up the staked portion of the front driveshaft nut until it does not interfere with the shaft thread.

⚠ CAUTION

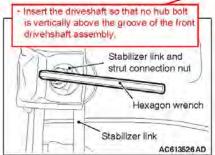
- Never use a impact wrench to loosen the driveshaft nut.
- Do not apply the vehicle weight on the wheel bearing with the driveshaft nut loosened. Otherwise, the wheel bearing may be broken.



 Use special tool MB990767 to counter the hub as shown in the figure to remove the driveshaft nut.



< Added> < Vehicles with staked nut>



ASSEMBLY INSTALLATION

A CAUTION

- The magnetic encoder collects metallic particles easily, because it is magnetized. Make sure that the magnetic encoder should not collect metallic particles. Check that there is not any trouble prior to reassembling it.
- When installing the driveshaft, make sure that it does not contact with the magnetic encoder (integrated with the inner oil seal) to avoid damage.
- Care must be taken to ensure that the oil seal of the transaxle is not damaged by the spline part of the driveshaft assembly.

>>B<< STABILIZER LINK CONNECTION

Use a hexagon wrench to install the stabilizer link and strut connection nut as shown in the figure.

>>A<< WASHER (w/CASTELLATED NUT ONLY)/DRIVESHAFT NUT INSTALLATION

A CAUTION

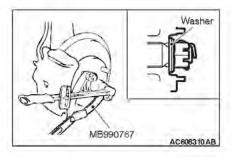
Do not apply the vehicle weight on the front wheel hub assembly before fully tightening the driveshaft nut. Otherwise, the wheel bearing may be broken.

<Vehicles with castellated nut> <Added>

- Be sure to install the driveshaft washer in the illustrated direction.
- Using special MB990767, tighten the driveshaft nut. At this time, tighten the nut to the specified lower limit torque so that the pin hole may align with cotter pin.

Tightening torque: 144 - 176 N·m (107 - 129 ft-lb)

If the pin hole does not align with the pin, tighten the driveshaft nut [less than 176 N m (129 ft-lb)] and find the nearest hole, then fit the cotter pin.





Insert the following where indicated on page 26-25.

Groove

ACA01211AD

Staked portion

<New> <Vehicles with staked nut> 1. Check the hub seated surface for damage or corrosion.Whenever solvent is used for removing the corrosion, the surface should be degreased. 2. Check that the new front drive shaft nut can be turned smoothly by hand. Then tighten it until it is seated. 3. Using special tool MB9907 57, tighten the 5 riveshaft nut. Tightening torque: 270 - 27 N·m (199 - 19 ft-lb) 4. After tightening to the specified torque, check that the nut is seated securely. MB990767 ACA01201AB 5. Use the chisel and a hammer to stake the nut until the centre in the staked portion reaches the shown dimension. 6. Finally, check that the nut is not cracked at its staked portion. 1.6 mm (0.06 in)

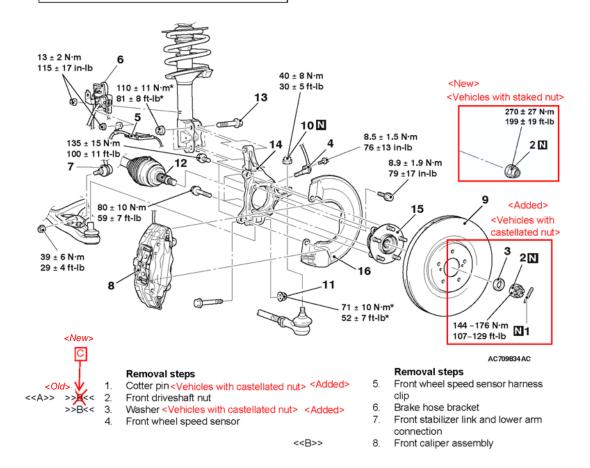
REMOVAL AND INSTALLATION

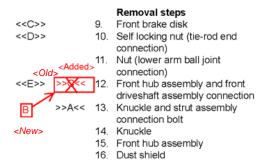
A CAUTION

- The magnetic encoder collects metallic particles easily, because it is magnetized. Make sure that
 the magnetic encoder should not collect metallic particles. Check that there is not any trouble
 prior to reassembling it.
- When removing and installing the front wheel hub assembly, make sure that the magnetic encoder (integrated with the inner oil seal) does not contact with surrounding parts to avoid damage.
- When removing and installing the front wheel speed sensor, make sure that the sensor head at the
 end does not contact with surrounding parts to avoid damage.
- During maintenance, take care not to contact the parts or tools to the caliper because the paint of caliper will be scratched. And if there is brake fluid on the caliper, wipe off quickly.
- The parts indicated by * are the bolt and nuts with friction coefficient stabilizer. In removal, ensure
 there is no damage, clean dust and soiling from the bearing and thread surfaces, and tighten them
 to the specified torque.

Post-installation operation

 Using your fingers, press the Ball Joint Dust Cover to check for a crack or damage.





Required Special Tools:

- MB990242: Puller Shaft
- MB990244: Puller Bar

- MB990767: Front Hub and Flange Yoke Holder
- MB991354: Puller Body
- MB991897 or MB992011: Ball Joint Remover

REMOVAL SERVICE POINTS

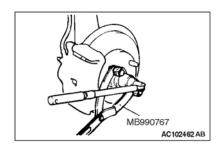
<<A>> FRONT DRIVESHAFT NUT REMOVAL

A CAUTION

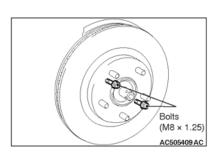
Do not apply the vehicle weight on the front wheel hub assembly with the driveshaft nut loosened. Otherwise, the wheel bearing may be broken.

<Vehicles with castellated nut> <Added>

Use special tool MB990767 to counter the hub as shown in the figure to remove the front driveshaft nut.







<> FRONT CALIPER ASSEMBLY REMOVAL

- 1. Remove the front caliper assembly with brake hose.
- Retain the removed front caliper assembly with a wire and the like in a place not to disturb the front hub assembly and knuckle removal.

<<>>> FRONT BRAKE DISK REMOVAL

If the front brake disk removal is difficult, install bolts (M8 \times 1.25) shown in the figure, and tighten them evenly and gradually to remove the front brake disk.

Insert the following where indicated on page 26-11.

<New>

<Vehicles with staked nut>

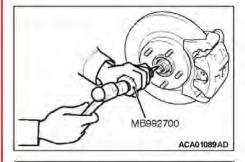
1. The staked portion of the driveshaft nut must face upwards.

A CAUTION

- Make sure that the lock nut chisel is set in the correct direction. Otherwise, the groove or thread in the front driveshaft may be broken, or the tip of the chisel may be chipped.
- Never use a chisel which tip is damaged.
- For how to use the lock nut chisel, refer to the manufacturer's operating instructions.
- Set the special tool MB992700 in the groove of the front driveshaft with its " L " mark facing upwards. Then strike the staked portion of the front driveshaft nut with the chisel and a hammer to raise up.



Be careful not to damage the thread of the front driveshaft.

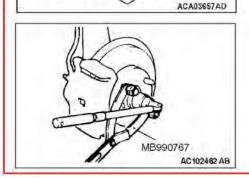


Raise up staked portion

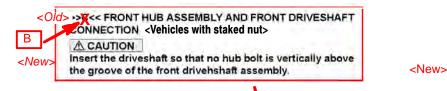
Raise up the staked portion of the front driveshaft nut until it does not interfere with the shaft thread.

⚠ CAUTION

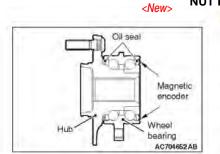
- Never use a impact wrench to loosen the driveshaft nut.
- Do not apply the vehicle weight on the wheel bearing with the driveshaft nut loosened. Otherwise, the wheel bearing may be broken.



 Use special tool MB990767 to counter the hub as shown in the figure to remove the driveshaft nut.



C < WASHER (w/CASTELLATED NUT ONLY)/DRIVESHAFT NUT INSTALLATION



A CAUTION

<New>

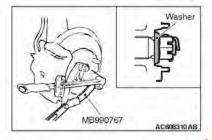
- The magnetic encoder collects metallic particles easily, because it is magnetized. Make sure that the magnetic encoder should not collect metallic particles. Check that there is not any trouble prior to reassembling it.
- When installing the front driveshaft, make sure that it does not contact with the magnetic encoder (integrated with the inner oil seal) to avoid damage.
- Do not apply the vehicle weight on the wheel bearing before fully tightening the front driveshaft nut.
 Otherwise, the wheel bearing may be broken.



- Be sure to install the front driveshaft washer in the illustrated direction.
- Using special tool MB990767, tighten the driveshaft nut. At this time, tighten the nut to the specified lower limit torque so that the pin hole may align with cotter pin.

Tightening torque: 144 - 176 N·m (107 - 129 ft-lb)

 If the pin hole does not align with the pin, tighten the driveshaft nut [less than 176 N·m (129 ft-lb)] and find the nearest hole, then fit the cotter pin.



Insert the information from page 17.

Insert the following where indicated on page 26-13.

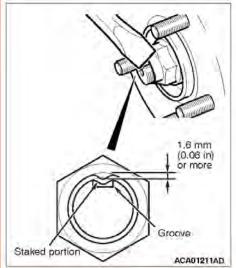
<New>

MB990767 ACA01201AB

<Vehicles with staked nut>

- 1. Check the hub seated surface for damage or corrosion. Whenever solvent is used for removing the corrosion, the surface should be degreased.
- 2. Check that the new front drive shaft nut can be turned
- smoothly by hand. Then tighten it until it is seated.

 3. Using special tool MB9907-7, tighten the driveshaft nut. Tightening torque: 270 - 27 N·m (199 - 19 ft-lb)
- 4. After tightening to the specified torque, check that the nut is seated securely.



- 5. Use the chisel and a hammer to stake the nut until the centre in the staked portion reaches the shown dimension.
- 6. Finally, check that the nut is not cracked at its staked portion.

REMOVAL AND INSTALLATION

A CAUTION

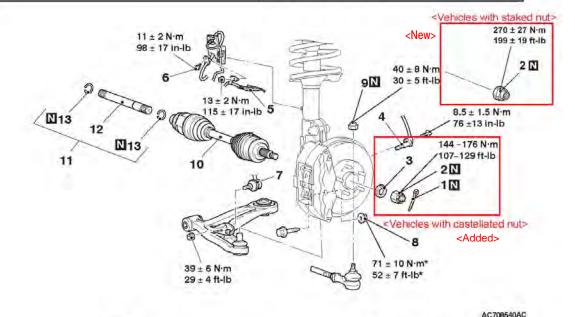
- The magnetic encoder collects metallic particles easily, because it is magnetized. Make sure that
 the magnetic encoder should not collect metallic particles. Check that there is not any trouble
 prior to reassembling it.
- When removing and installing the front driveshaft assembly, make sure that the magnetic encoder (integrated with the inner oil seal) does not contact with surrounding parts to avoid damage.
- When removing and installing the front wheel speed sensor, make sure that the pole piece at the end does not contact with surrounding parts to avoid damage.
- The part indicated by is the nut with friction coefficient stabilizer. In removal, ensure there is no damage, clean dust and soiling from the bearing and thread surfaces, and tighten them to the specified torque.

Pre-removal operation

- Transmission Oil Draining (Refer to GROUP 22A, Onvehicle Service, Transmission Oil Change.)
- Engine Room Under Cover Front Removal (Refer to GROUP51, Under Cover.)

Post-installation operation

- Using your fingers, press the Ball Joint Dust Cover to check for a crack or damage.
- Transmission Oil Filling (Refer to GROUP 22A, On-vehicle Service, Transmission Oil Change.)
- Engine Room Under Cover Front Installation (Refer to GROUP51, Under Cover.)



<<C>> >>A<<

>>A<<

<<D>>>

Removal steps

<<д>>>B<< 2 >>B<< 3

- Cotter pin < Vehicles with castellated nut>
 Front driveshaft nut < Added>
- Washer
 Vehicles with castellated nut
 ✓B>>
- 4. Front wheel speed sensor
- Front wheel speed sensor harness clip
- 6. Brake hose fixing bolt
- Front stabilizer link and lower arm connection.

Removal steps

- Nut (lower arm ball joint connection)
- Self locking nut (tie-rod end connection)
- 10. Front driveshaft assembly
- 11. Output shaft assembly <M/T>
- 12. Output shaft
- 13. Circlip

Required Special Tools:

- MB990242: Puller Shaft
- MB990244: Puller Bar

- . MB990767: Front Hub and Flange Yoke Holder
- MB991354: Puller Body
- . MB991897 or MB992011: Ball Joint Remover

REMOVAL SERVICE POINTS

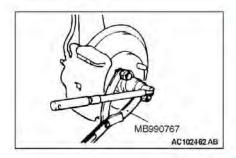
<<A>> FRONT DRIVESHAFT NUT REMOVAL

A CAUTION

Do not apply the vehicle weight on the front wheel hub assembly with the driveshaft nut loosened. Otherwise, the wheel bearing may be broken.

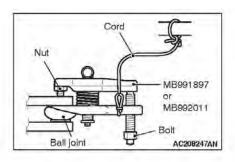
<Vehicles with castellated nut> <Added>

Use special tool MB990767 to counter the hub as shown in the figure to remove the front driveshaft nut.



<New>

Insert the attachment from page 20



<> SELF-LOCKING NUT (TIE-ROD END CONNECTION) REMOVAL

A CAUTION

- Loosen the self-locking nut (tie-rod end connection) from the ball joint, but do not remove here. Use the special tool.
- To prevent the special tool from dropping off, suspend it with a cord.
- If the dust cover is damaged during operation, replace the tie-rod end. (Refer to GROUP 37 – Power Steering Gear and Linkage Disassembly and Reassembly.)
- Install special tool MB991897 or MB992011 as shown in the figure.

Insert the following where indicated on page 26-17.

<New>

<Vehicles with staked nut>

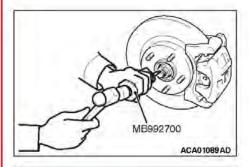
1. The staked portion of the driveshaft nut must face upwards.

△ CAUTION

- Make sure that the lock nut chisel is set in the correct direction. Otherwise, the groove or thread in the front driveshaft may be broken, or the tip of the chisel may be chipped.
- · Never use a chisel which tip is damaged.
- For how to use the lock nut chisel, refer to the manufacturer's operating instructions.
- Set the special tool MB992700 in the groove of the front driveshaft with its "L" mark facing upwards. Then strike the staked portion of the front driveshaft nut with the chisel and a hammer to raise up.



Be careful not to damage the thread of the front driveshaft.

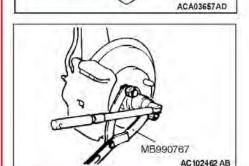


Raise up staked portion

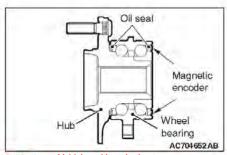
Raise up the staked portion of the front driveshaft nut until it does not interfere with the shaft thread.

△ CAUTION

- . Never use a impact wrench to loosen the driveshaft nut.
- Do not apply the vehicle weight on the wheel bearing with the driveshaft nut loosened. Otherwise, the wheel bearing may be broken.

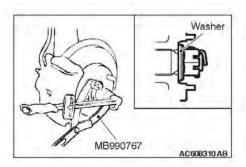


Use special tool MB990767 to counter the hub as shown in the figure to remove the driveshaft nut.



Added> < Vehicles with staked nut>

 Insert the driveshaft so that no hub bolt is vertically above the groove of the front drivehshaft assembly.



ASSEMBLY INSTALLATION

A CAUTION

- The magnetic encoder collects metallic particles easily, because it is magnetized. Make sure that the magnetic encoder should not collect metallic particles. Check that there is not any trouble prior to reassembling it.
- When installing the front driveshaft, make sure that it does not contact with the magnetic encoder (integrated with the inner oil seal) to avoid damage.
- Care must be taken to ensure that the oil seal of the transaxle is not damaged by the spline part of the output shaft assembly or front driveshaft assembly.

>>B<< WASHER (w/CASTELLATED NUT ONLY)/DRIVESHAFT NUT INSTALLATION

A CAUTION

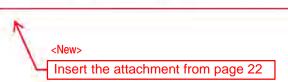
Do not apply the vehicle weight on the front wheel hub assembly before fully tightening the front driveshaft nut. Otherwise, the wheel bearing may be broken.

<Vehicles with castellated nut> <Added>

- Be sure to install the front driveshaft washer in the illustrated direction.
- Using special tool MB990767, tighten the driveshaft nut. At this time, tighten the nut to the specified lower limit torque so that the pin hole may align with cotter pin.

Tightening torque: 144 - 176 N-m (107 - 129 ft-lb)

3. If the pin hole does not align with the pin, tighten the driveshaft nut [less than 176 N·m (129 ft-lb)] and find the nearest hole, then fit the cotter pin.



Insert the following where indicated on page 26-20.

