AEN8RW016201001 Page 1 of 1

Steering Wheel and Column Construction



This double tube type steering column has the following three important features in addition to the steering function:

- The column is energy absorbing, designed to compress in a front-end collision.
- The ignition switch and lock are mounted conveniently on this column.
- With the column mounted lock, the ignition and steering operations can be locked to inhibit theft of the vehicle.

To insure the energy absorbing action, it is important that only the specified screws, bolts and nuts be used as designated, and that they are tightened to the specified torque. When the column assembly is removed from the vehicle, special care must be taken in handling it. Use of a steering wheel puller or a sharp blow on the end of the steering shaft, leaning on the assembly, or dropping the assembly could shear the plastic shear pins which maintain column length and position.

The driver air bag (inflator) module is one of the supplemental restraint (air bag) system components and is mounted to the center of the steering wheel. During certain frontal crashes, the air bag system supplements the restraint of the driver's and passenger's seat belts by deploying the air bags. The air bag (inflator) module should be handled with care to prevent accidental deployment. When servicing, be sure to observe <u>Precautions on Service and Diagnosis of Air Bag System:Except advanced Air Bag</u> or <u>Precautions on Service and Diagnosis of Air Bag System:Advanced Air Bag</u>.

AEN8RW016311003 Page 1 of 1

P/S Pump Description



The power steering pump is a vane type and is driven by the V-ribbed belt from the crankshaft.

Power steering (P/S) pump specifications

Model		Vane type	
Hydraulic	Relieved pressure	10400 kPa (106 kg/cm², 1508 psi)	
pressure control	Control device	Flow control valve and relief valve	
Power steering pressure switch		Switch turns on (closes) when the pressure is higher than 2500 - 3000 kPa (25 - 30 kg/cm ² , 356 - 427 psi). ECM uses this signal for idle speed control.	

Flow Control Valve (Relief Valve)

As the discharge rate of the P/S pump increases in proportion to the pump revolution speed, a flow control valve is added to control it so that the optimum amount of fluid for steering operation is supplied according to the engine speed (driving condition).

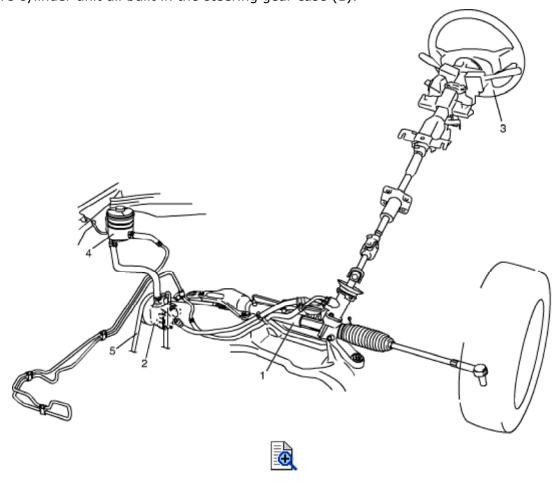
AEN8RW016311001 Page 1 of 1

P/S System Description



The power steering (P/S) system in this vehicle reduces the driver's effort needed in turning the steering wheel (3) by utilizing the hydraulic pressure generated by the power steering (P/S) pump (2) which is driven by the engine.

It is an integral type with the rack and pinion gears and the control valve unit, hydraulic pressure cylinder unit all built in the steering gear case (1).



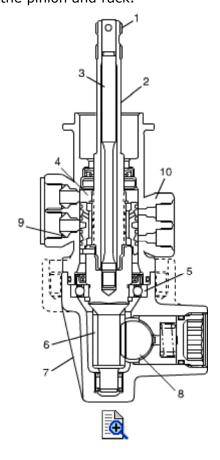
- 4. P/S fluid reservoir
- 5. P/S pump drive belt

AEN8RW016311002 Page 1 of 1

Steering Gear Case Description



The steering gear case consists of two sections: one including a cylinder and the other a valve. Main components of the cylinder section are a gear case (7), a rack (8) and a tube and those of the valve section are a valve case (10), a sleeve (4) and a stub shaft (2). The sleeve is linked with the pinion (6) through a pin (1) and the valve and stub shaft are integrated into one unit. Then the pinion and the stub shaft are linked to each other by means of the torsion bar (3). Thus, when the stub shaft moves, the valve changes its position, thereby switching the hydraulic passage from the pump to the cylinder to help steering operation. When turning the steering wheel feels heavy due to P/S fluid leakage or for some other reason (i.e., when in the manual steering mode), the stub shaft and pinion are in direct linkage and the force is output directly through the pinion and rack.



5. Bearing 9. Ferrule

AEN8RW016316001 Page 1 of 1

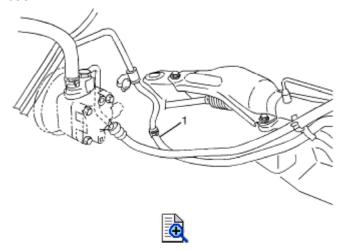
P/S Fluid Change



ACAUTION:

Do not use any fluid other than the specified P/S fluid. Use of any fluid other than the specified P/S fluid may cause juddering or some other faulty condition to occur.

- 1) Lift up vehicle.
- **2)** Remove front under cover.
- **3)** When engine is cool, remove P/S gear low pressure hose (1) from pipe and drain P/S fluid from low pressure hose.



- 4) Install low pressure hose to pipe.
- **5)** Fill specified P/S fluid and bleed air referring to <u>P/S System Air Bleeding</u> <u>Procedure:Hydraulic Type</u>.
- **6)** Repeat Step 3) to 5) for 2 or 3 times if necessary.

P/S fluid specification

Equivalent to ATF DEXRON®-II (ESSO JWS2326) or ATF DEXRON®-III

P/S fluid capacity reference value

About 0.85 liters (1.8/1.5 US/Imp.pt)

AEN8RW016316003 Page 1 of 1

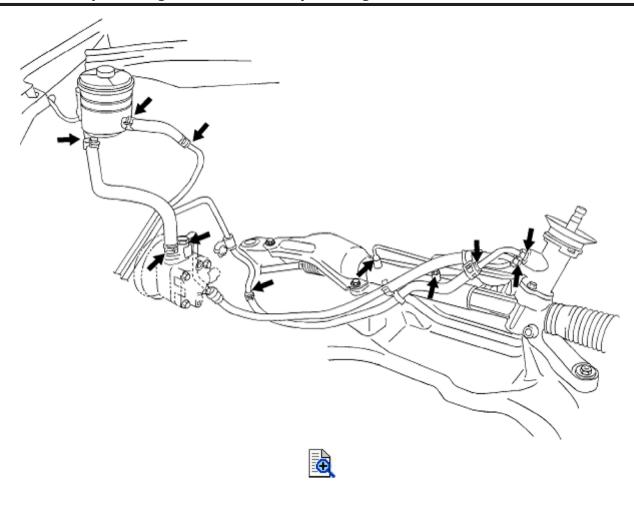
P/S Fluid Leakage Check



Start engine and turn steering wheel fully to the right and left so that maximum hydraulic pressure is provided. Then visually check gear case, P/S pump and P/S fluid reservoir themselves and each joint of their connecting pipes for leakage.

▲CAUTION:

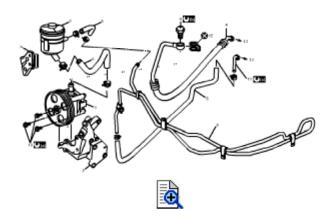
Never keep steering wheel turned fully for longer than 10 seconds.



AEN8RW016316015 Page 1 of 1

P/S Hose / Pipe Components



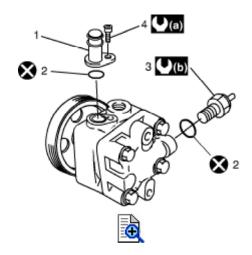


1.	P/S pump assembly	7.	P/S fluid reservoir bracket	13.	To P/S gear case assembly
2.	Bracket	8.	Cooling pipe	(a)	25 N·m (2.5 kgf-m, 18.0 lbf-ft)
3.	P/S fluid reservoir	9.	P/S pump union bolt	(b)	55 N·m (5.5 kgf-m, 40.0 lbf-ft)
4.	High pressure hose and pipe	10.	P/S pump mounting bolt	(C)	35 N·m (3.5 kgf-m, 25.5 lbf-ft)
5.	Suction hose	11.	P/S gear case low pressure return pipe	3	Do not reuse.
6.	Low pressure return hose	12.	Washer		

AEN8RW016316017 Page 1 of 1

P/S Pump Components





1. Suction connector	(0.37 kgf-m, 2.7 lbf-ft)
2. O-ring	(b): 20 N·m (2.0 kgf-m, 14.5 lbf-ft)
3. Pressure switch	Do not reuse.
4. Suction connector bolt	

AEN8RW016316004 Page 1 of 1

P/S System Air Bleeding Procedure



- 1) Jack up the front end of vehicle and apply safety stands.
- 2) Fill P/S fluid reservoir with fluid up to specified level.

NOTE:

Before starting engine, place transmission gear shift lever in "Neutral" (shift selector lever to "P" range for A/T model), and set parking brake.

- **3)** After running engine at idling speed for 3 to 5 seconds, stop it and add fluid to satisfy specification.
- **4)** With engine stopped, turn steering wheel to the right and left as far as it stops, repeat it a few times and fill fluid to specified level.
- **5)** With engine running at idling speed, repeat stop-to-stop turn of steering wheel till all foams in P/S fluid reservoir are gone.

NOTE:

Make sure to bleed air completely. If air remains in fluid, P/S pump may make humming noise or steering wheel may feel heavy.

6) Finally check to make sure that fluid is filled to specified level.

AEN8RW016316016 Page 1 of 2

P/S Pump Removal and Installation



Reference: P/S Pump Components: Hydraulic Type

Removal

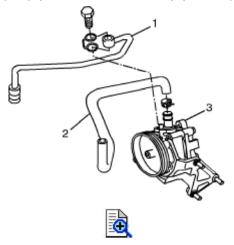
ACAUTION:

Never disassemble P/S pump. Disassembly will spoil its original performance. If faulty condition is found, replace it with new one.

NOTE:

Be sure to clean each joint of suction and discharge sides thoroughly before removal.

- 1) Disconnect negative (-) cable at battery.
- 2) Take out P/S fluid in reservoir with syringe or such.
- 3) Remove IMT valve actuator referring to <u>IMT Valve Actuator Removal and Installation</u>.
- **4)** Disconnect high pressure pipe (1) and suction hose (2) from power steering pump (3).

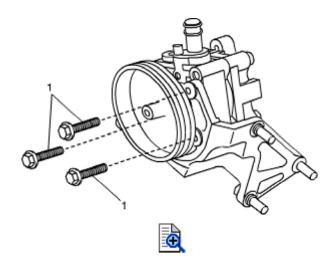


NOTE:

As fluid flows out of disconnected joints, put a receptacle under joints or a plug to pipe.

- **5)** Disconnect pressure switch lead wire at switch terminal.
- **6)** Remove water pump and generator drive belt referring to <u>Water Pump and Generator Drive</u> <u>Belt Removal and Installation</u>.
- **7)** Remove P/S pump mounting bolts (1) and then remove P/S pump.

AEN8RW016316016 Page 2 of 2



NOTE:

Plug each port of removed pump to prevent dust or any other foreign matter from entering.

Installation

Reverse removal procedure, and then nothing the following instructions.

NOTE:

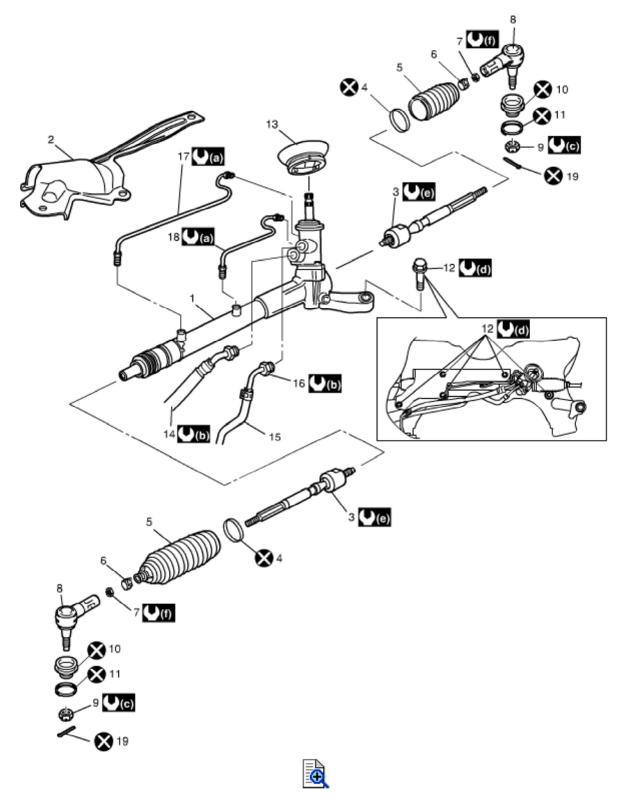
Fill specified power steering fluid after installation and bleed air without failure referring to <u>P/S System Air Bleeding Procedure:Hydraulic Type</u>.

Tightening torque

P/S pump mounting bolt: 25 N·m (2.5 kgf-m, 18.0 lbf-ft) High pressure pipe union bolt: 55 N·m (5.5 kgf-m, 40.0 lbf-ft) AEN8RW016316012 Page 1 of 2

Steering Gear Case Assembly Components





Steering gear case	10. Boot	19. Cotter pin

AEN8RW016316012 Page 2 of 2

2. Member bracket	11. Clip	(1.3 kgf-m, 9.5 lbf-ft)
3. Tie-rod	12. Steering gear case mounting bolt : Refer to <u>Steering Gear Case Assembly</u> <u>Removal and Installation:Hydraulic Type</u>	(b): 35 N·m (3.5 kgf-m, 25.5 lbf-ft)
4. Band	13. Steering gear case grommet	: 45 N·m (4.5 kgf-m, 32.5 lbf-ft) : Refer to <u>Tie-Rod End</u> <u>Removal and</u> <u>Installation:Hydraulic Type</u>
5. Rack boot	14. High pressure pipe	(7.0 kgf-m, 51.0 lbf-ft)
6. Rack boot clip	15. Low pressure return hose	(8.8 kgf-m, 64.0 lbf- ft)
7. Tie-rod end lock nut	16. Low pressure return pipe	(f): 45 N·m (4.5 kgf-m, 32.5 lbf-ft)
8. Tie-rod end	17. Cylinder pipe "A"	Do not reuse.
9. Tie-rod end nut	18. Cylinder pipe "B"	

NOTE:

Component enclosed in broken line cannot be disassembled and adjusted.

AEN8RW016316013 Page 1 of 4

Steering Gear Case Assembly Removal and Installation



6C

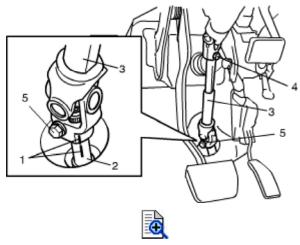
Reference: Steering Gear Case Assembly Components: Hydraulic Type

Removal

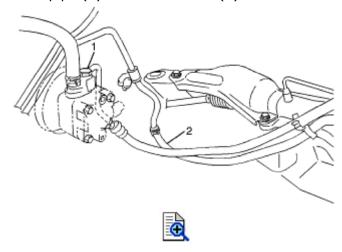
ACAUTION:

Be sure to set front wheels (tires) in straight direction and remove ignition key from key cylinder before the following steps, otherwise contact coil of air bag system may get damaged.

- 1) Take out fluid in P/S fluid reservoir with syringe or such.
- **2)** Remove steering joint cover.
- **3)** Make alignment marks (1) on pinion shaft (2) and joint of steering lower shaft (3) for a guide during reinstallation.
- **4)** Loosen joint bolt (steering column side) (4) and remove joint bolt (pinion shaft side) (5), and then disconnect steering lower shaft (3) from pinion shaft (2).



5) Disconnect high pressure pipe (1) and return hose (2).



6) Remove front suspension frame with steering gear case from vehicle referring to <u>Front</u> Suspension Frame, Stabilizer Bar and/or Bush Removal and Installation (2WD Model) or

AEN8RW016316013 Page 2 of 4

<u>Front Suspension Frame, Stabilizer Bar and/or Bush Removal and Installation (4WD Model)</u>, and then remove steering gear case from front suspension frame.

7) Remove cylinder pipes (3) and (4) from steering gear case, using flare nut wrench.

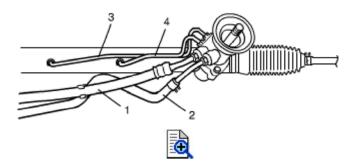
NOTE:

As fluid flows out of disconnected joints, put a receptacle under joints or a plug to pipe.

8) Disconnect high pressure pipe (1) and low pressure return hose (2) from steering gear case, using flare nut wrench.

NOTE:

As fluid flows out of disconnected joints, have a container under joints or a plug to pipe.



Installation

1) Install cylinder pipes (4) and (5) to steering gear case using flare nut wrench.

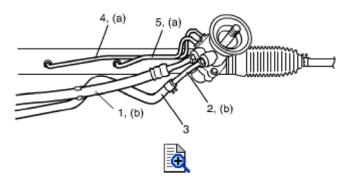
Tightening torque

```
Cylinder pipe A (a): 13 N·m (1.3 kgf-m, 9.5 lbf-ft)
Cylinder pipe B (a): 13 N·m (1.3 kgf-m, 9.5 lbf-ft)
```

2) Install high pressure pipe (1) and low pressure return pipe (2) to steering gear case and then connect low pressure return hose (3) to low pressure return pipe (2).

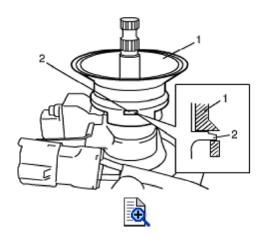
Tightening torque

```
High pressure pipe (b): 35 N·m (3.5 kgf-m, 25.5 lbf-ft)
Low pressure return pipe (b): 35 N·m (3.5 kgf-m, 25.5 lbf-ft)
```



3) Install grommet (1) as shown in figure.

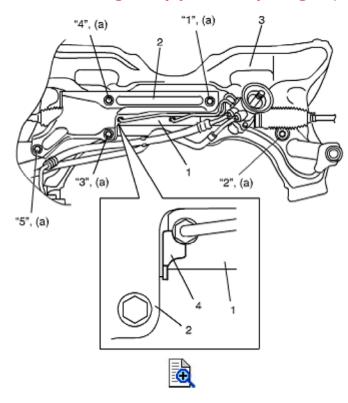
AEN8RW016316013 Page 3 of 4



- 2. Protrusion
- **4)** Install steering gear case to suspension frame (3) as follows.
 - a) Set member bracket (2) to steering gear case (1).
 - b) Install all steering gear case mounting bolts by hand.
 - c) Tighten steering mounting bolts in numerical order and specified torque.

Tightening torque

Steering gear case mounting bolt (a): 70 N·m (7.0 kgf-m, 51.0 lbf-ft)



4. Mounting rubber protrusion

5) Install front suspension frame with steering gear case to vehicle referring to Steps 4) – 22) of <u>Front Suspension Frame</u>, <u>Stabilizer Bar and/or Bush Removal and Installation (2WD</u>

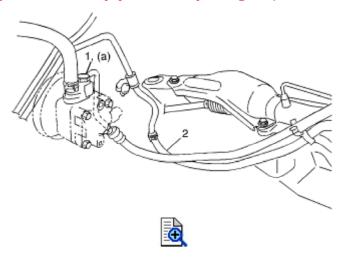
AEN8RW016316013 Page 4 of 4

<u>Model</u>) or <u>Front Suspension Frame, Stabilizer Bar and/or Bush Removal and Installation</u> (4WD Model).

6) Connect high pressure pipe (1) and return hose (2) to specified torque.

Tightening torque

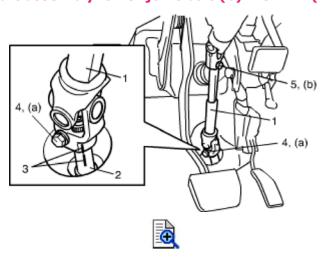
High pressure pipe union bolt (a): 55 N·m (5.5 kgf-m, 40.0 lbf-ft)



- 7) Be sure that steering wheel and brake discs (right & left) are all straight-ahead position and then insert steering lower shaft (1) into steering pinion shaft (2) with matching marks (3).
- **8)** Tighten steering shaft joint lower bolt (4) and upper bolt (5) to specified torque (tighten lower side first and then tighten upper side).

Tightening torque

Steering lower shaft assembly upper joint bolt (a): 25 N·m (2.5 kgf-m, 18.5 lbf-ft) Steering lower shaft assembly lower joint bolt (b): 25 N·m (2.5 kgf-m, 18.5 lbf-ft)



- **9)** Install steering joint cover.
- **10)** After installation, be sure to fill specified power steering fluid and bleed air. Refer to <u>P/S</u>
 <u>System Air Bleeding Procedure: Hydraulic Type</u>.
- **11)** Check toe setting. Adjust as required. Refer to <u>Front Wheel Alignment Inspection and Adjustment</u>.

AEN8RW016316007 Page 1 of 1

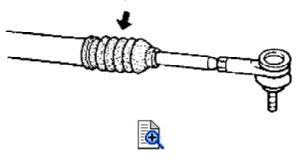
Steering Rack Boot Check



• Check boot for crack and damage which, if any, means possibility of rusty gear, entry of dust or lack of grease. Also, check if any of such faulty conditions exists.

• Check steering rack boot for dent or breakage.

If there is a dent, keep boot in most compressed state for some seconds to connect dent.



AEN8RW016316014 Page 1 of 4

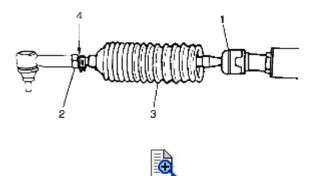
Tie-Rod / Rack Boot Removal and Installation



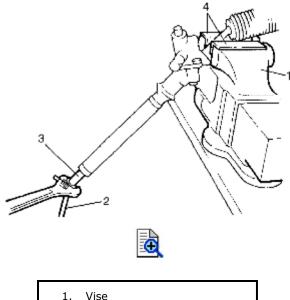
<u>Reference: Steering Rack Boot Check:Hydraulic Type</u> <u>Reference: Steering Gear Case Assembly Components:Hydraulic Type</u>

Removal

- 1) Remove steering gear case from vehicle referring to <u>Steering Gear Case Assembly Removal</u> <u>and Installation:Hydraulic Type</u>.
- 2) For ease of adjustment after installation, make marking (4) of tie-rod end lock nut position of tie-rod thread.
- 3) Loosen tie-rod end lock nut (2) and remove tie-rod end.
- 4) Remove boot band and clip.
- **5)** Remove boot (3) from tie-rod (1).



6) Remove tie-rod (2) from rack (3).

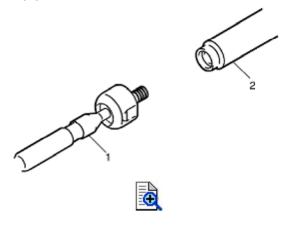


- I. Vise
 - 4. Aluminum plate

Installation

AEN8RW016316014 Page 2 of 4

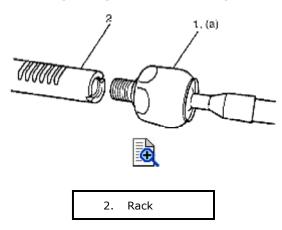
1) Install tie-rod (1) to rack (2).



2) Tighten tie-rod ball nut (1) to specified torque.

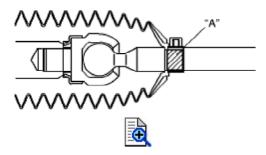
Tightening torque

Tie-rod ball nut (a): 88 N·m (8.8 kgf-m, 64.0 lbf-ft)



3) Apply grease "A" to boot inside as shown in figure. Position boot properly in grooves of gear case (2) (or rack side mount) and tie-rod (1). After this, check to ensure that boot is free from twist and dent.

"A": Grease 99000-25050 (SUZUKI Super Grease E)



4) Clamp boot with clip (1) and fasten band (2) securely using special tool.

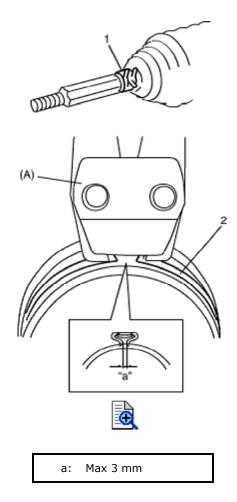
NOTE:

After clamping, make sure that the boot installation part is fixed. If the boot turns easily by hand, tighten with higher torque to fix it firmly.

Special Tool

AEN8RW016316014 Page 3 of 4

(A): <u>09943-57010</u>

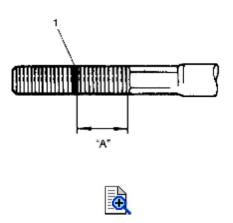


5) Install tie-rod end lock nut and tie-rod end to tie-rod. Position lock nut to marking (1) made

NOTE:

in removal.

When tie-rod was replaced, measure length "A" on removed tie-rod and use it on new replacement tie-rod so as to position lock nut properly.

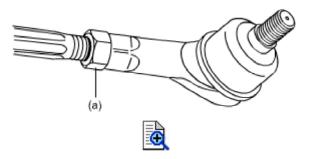


6) Tighten tie-rod end lock nut to specified torque.

Tightening torque

AEN8RW016316014 Page 4 of 4

Tie-rod end lock nut (a): 45 N·m (4.5 kgf-m, 32.5 lbf-ft)



7) Install steering gear case to vehicle referring to <u>Steering Gear Case Assembly Removal and Installation:Hydraulic Type</u>.

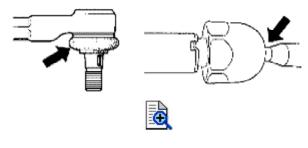
AEN8RW016316011 Page 1 of 1

Tie-Rod End Ball Joint Inspection

6C

Reference: Tie-Rod End Removal and Installation:Hydraulic Type • Inspect for play in ball joint.

- inspect for play in rack end ball joint. In either case, if found defective, replace.



AEN8RW016316020 Page 1 of 1

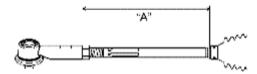
Tie-Rod End Initial Position Setting



Set tie-rods to following specified length "A".

Initial position of tie-rod end "A"

: Approx. 201 mm (7.91 in.)





AEN8RW016316010 Page 1 of 3

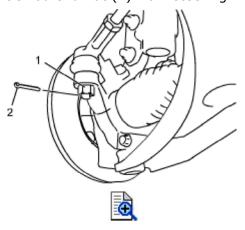
Tie-Rod End Removal and Installation



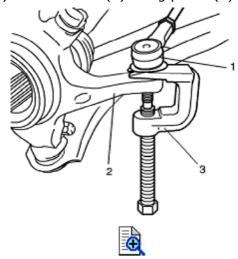
Reference: Tie-Rod End Boot Check: Hydraulic Type

Removal

- 1) Hoist vehicle and then remove wheel referring to <u>Wheel (with Tire) Removal and Installation</u>.
- 2) Remove cotter pin (2) and tie-rod end nut (1) from steering knuckle.

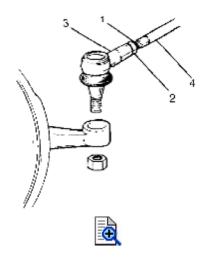


3) Disconnect tie-rod end (1) from knuckle (2) using puller (3).



4) For ease of adjustment after installation, make marking (1) of tie-rod end lock nut (2) position on tie-rod end thread. Then, Loosen lock nut and remove tie-rod end (3) from tie-rod (4).

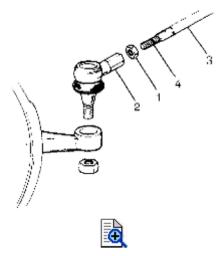
AEN8RW016316010 Page 2 of 3



Installation

Reference: Tie-Rod End Ball Joint Inspection: Hydraulic Type

1) Install tie-rod end lock nut (1) and tie-rod end (2) to tie-rod (3). Align lock nut with mark (4) on tie-rod thread.



- 2) Connect tie-rod end to knuckle. Tighten tie-rod end nut (1) to specified torque.
- **3)** Bend new cotter pin (2).

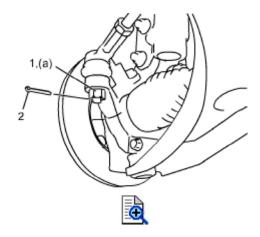
NOTE:

After tightening tie-rod end nut to specified torque, match next first slot of nut with hole of tie-rod end for insertion of cotter pin (rotation angle 60° max).

Tightening torque

Tie-rod end nut (a): 45 N·m (4.5 kgf-m, 32.5 lbf-ft)

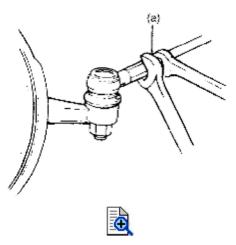
AEN8RW016316010 Page 3 of 3



- **4)** Set tie-rod end initial position referring to <u>Tie-Rod End Initial Position Setting:Hydraulic</u> <u>Type</u>.
- 5) Inspect for proper toe referring to *Front Wheel Alignment Inspection and Adjustment*.
- **6)** After confirming proper toe, tighten tie-rod end lock nut to specified torque.

Tightening torque

Tie-rod end lock nut (a): 45 N·m (4.5 kgf-m, 32.5 lbf-ft)



7) Tighten wheel nuts to specified torque and lower hoist.

Tightening torque

Wheel nut: 85 N·m (8.5 kgf-m, 61.5 lbf-ft)

AEN8RW016317001 Page 1 of 1

P/S System Specification and Service Data



Item		Specification	
Hydraulic pressure Control	Relieved pressure	10400 kPa (106 kg/cm ² or 1508 psi)	
	Control device	Flow control valve	
		Relief valve	
Power steering pressure switch		Switch turns on (closes) when the pressure is higher than 2,400 – 3,100 kPa (24 – 31 kg/cm², 341 – 441 psi). ECM uses this signal for idle speed control.	
Specified fluid		Equivalent to ATF DEXRON®-II, (ESSO JWS 2326) or ATF DEXRON®-III	
Fluid capacity of system		about 0.85 L (1.8/1.5 US/Imp pt.)	
		The value is rough amount of fluid in entire system. Fluid level should be within "LOWER" and "UPPER" level marks on fluid reservoir, which means that appropriate amount of fluid is in it. (For details, refer to P/S Fluid Level Check:Hydraulic Type.)	
Steering Wheel Play		0 - 30 mm (0 - 1.2 in.)	
Steering force		Less than 40 N (4.0 kg, 8.8 lb) (Refer to <u>Steering</u> <u>Force Check:Hydraulic</u> <u>Type</u> for procedure of force check.)	
P/S belt tension		Refer to <u>Water Pump and</u> <u>Generator Drive Belt On-</u> <u>Vehicle Inspection</u> .	

AEN8RW016317002 Page 1 of 1

Tightening Torque Specifications



▲CAUTION:

For fastener with * (asterisk) below, be sure to tighten it according to specified procedure in "Repair Instructions".

Factoring	Tig	Note		
Fastening part	N∙m	kgf-m	lbf-ft	Note
Tie-rod end nut	45	4.5	32.5	138
Tie-rod end lock nut	45	4.5	32.5	13 13
Wheel nut	85	8.5	61.5	138
Cylinder pipe A	13	1.3	9.5	138
Cylinder pipe B	13	1.3	9.5	138
High pressure pipe	35	3.5	25.5	138
Low pressure return pipe	35	3.5	25.5	138
Steering gear case mounting bolt	70	7.0	51.0	138
High pressure pipe union bolt	55	5.5	40.0	13 13
Steering lower shaft assembly upper joint bolt	25	2.5	18.5	138
Steering lower shaft assembly lower joint bolt	25	2.5	18.5	188
Tie-rod ball nut	88	8.8	64.0	138
P/S pump mounting bolt	25	2.5	18.0	138

NOTE:

The specified tightening torque is also described in the following.

Steering Gear Case Assembly Components: Hydraulic Type

P/S Hose / Pipe Components: Hydraulic Type

P/S Pump Components: Hydraulic Type

Reference:

For the tightening torque of fastener not specified in this section, refer to <u>Fasteners</u> <u>Information</u>.

AEN8RW016104001 Page 1 of 2

Steering Symptom Diagnosis



Condition	Possible Cause	Action
Hard steering	Tire not adequately inflated	Inflate tires to proper pressure.
	Malfunction of power steering system	Check and correct. Refer to P/S System Symptom Diagnosis:Hydraulic Type or P/S System Symptom Diagnosis:Electric Type.
	Bind in tie-rod end ball studs or lower ball joints	Replace tie-rod end or front suspension control arm.
	Disturbed front wheel alignment	Check and adjust front wheel alignment.
	Bind in steering column	Repair or replace steering column assembly.
	Rack and pinion adjustment (for electric model)	Check and adjustment rack and pinion torque.
Too much play in	Wheel bearings worn	Replace wheel bearing.
steering	Loose steering gear case bolts	Tighten gear case bolts.
	Faulty steering gear case assembly	Replace steering gear case assembly.
	Worn steering shaft joints	Replace steering lower shaft assembly.
	Worn tie-rod ends or tie-rod inside ball joints	Replace tie-rod end or tie-rod.
	Worn lower ball joints	Replace front suspension control arm.
	Rack and pinion adjustment (for electric model)	Check and adjustment rack and pinion torque.
Poor return ability	Bind in tie-rod end ball studs	Replace tie-rod end.
	Bind in ball joints	Replace front suspension control arm.
	Bind in steering column	Replace steering column assembly.
	Disturbed front end alignment	Check and adjust front end alignment.
	Faulty steering gear case assembly	Replace steering gear case assembly.
	Tires not adequately inflated	Adjust tire pressure.
	Rack and pinion adjustment (for electric model)	Check and adjustment rack and pinion torque.
Rack and pinion noise	Loose steering gear case bolts	Tighten steering gear case bolts.
(Rattle or chuckle)	Rack and pinion adjustment (for electric model)	Check and adjustment rack and pinion torque.

AEN8RW016104001 Page 2 of 2

	Faulty steering gear case assembly	Replace steering gear case assembly.	
	Broken or otherwise damaged wheel bearing(s)	Replace wheel bearing(s).	
Wander or poor steering stability	Mismatched or uneven tires	Replace or inflate tires to proper pressure.	
	Loosen ball joints and tie-rod ends	Replace suspension control arm or tie-rod end.	
	Faulty struts or mountings	Replace strut or repair mounting.	
	Loose stabilizer bar	Tighten or replace stabilizer bar or bush.	
	Broken or sagging coil springs	Replace coil spring.	
	Rack and pinion adjustment (for electric model)	Check and adjustment rack and pinion torque.	
	Disturbed front wheel alignment	Check and adjust front wheel alignment.	
	Faulty steering gear case assembly	Replace steering gear case assembly.	
Erratic steering when	Worn wheel bearings	Replace wheel bearing.	
braking	Broken or sagging coil springs	Replace coil spring.	
	Wheel tires are inflated unequally	Inflate tires to proper pressure.	
	Disturbed front wheel alignment	Check and adjust front wheel alignment.	
	Brakes not working in unison	Check and repair brake system.	
	Leaking wheel cylinder or caliper	Repair or replace wheel cylinder or caliper.	
	Warped discs	Replace brake disc.	
	Badly worn brake linings	Replace brake shoe lining.	
	Drum is out of round in some brakes	Replace brake drum.	
	Defective wheel cylinders	Replace or repair wheel cylinder.	