

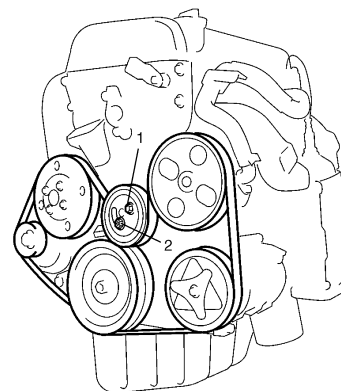
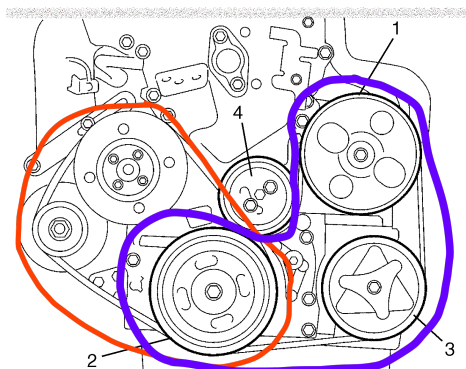
Suzuki Liana: Ta bort tillbehörsbälten (generator, vattenpump, AC och servostyrning)

Detta dokument beskriver tillbehörsbälten för en 2005 Suzuki Liana. Det är tänkt att komplettera fabrikshandboken med några riktiga tips. Medan flera YouTube -videor demonstrerar detta förfarande efter att ha tagit bort motorfästet och dragit upp motorn för att ge bättre åtkomst kunde jag byta remmar med motorn på plats.

Det finns två 4-spline PK-remmar som drivs av vevskivans remskiva (#2 i diagrammet nedan), en inre generator och vattenpumprem (röd) och yttre servostyrning och AC-rem (blå). Båda remmarna kan bytas med motorn i bilen men spelrummen, särskilt till spännrullen (4) är mycket täta och en "stubbig" insexnyckeljusterare (lätt att göra) kommer att krävas. En 12 mm skiftnyckel med ett långt handtag för räckvidd och hävstång kommer också att göra livet mycket enklare!

Se de bifogade avsnitten i fabrikshandboken för instruktioner om justering av remspänning.

Detta är ett enkelt jobb i princip! Om motorn togs bort bör det bara ta ett par minuter. I praktiken med motorn på plats är avstånden täta och utan rätt verktyg kan du slösa lite tid på att famla runt med att försöka få in insexnyckeln i sitt håll!



Steg

1. Ta bort batteri minus kontakt	<ul style="list-style-type: none">• 10 mm skiftnyckel
2. Jack upp höger framaxel och stöd med jackstativ	
3. Ta bort höger plaststänkskydd Stänkskyddet säkras med både plåtskruvar (10 mm hex / #2 Phillips -huvud) och plastnitar. Skruvarna kan vara rostiga och svåra att ta bort.	<ul style="list-style-type: none">• 10 mm skiftnyckel eller hylsa• #2 Philips huvudskruvmejsel• Verktyg för borttagning av nit• Penetrerande olja• Extra nitar och plåtskruvar
4. Ta bort luftfilterlocket och luftintagsslangen av gummifördelare	<ul style="list-style-type: none">• platt blad skruvmejsel eller slangklämma hylsnyckel

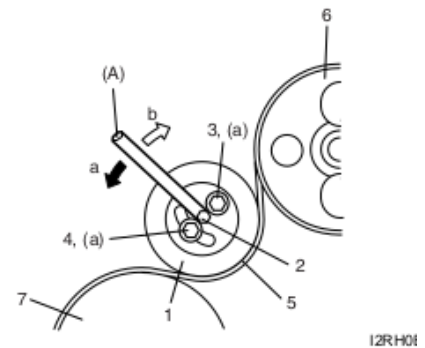
5. Servostyrning och borttagning av AC -bälte

- a) lossa 12 mm bultar (3) och (4)
- b) Använd en 10 mm insexnyckel (A) i remskivans mitthål (2) för att lossa remspänningen för borttagning

Detta kan utföras antingen ovanifrån eller under bilen. Att ha en 12 mm skiftnyckel med ett långt handtag ger dig mer hävstång för att lossa de täta justeringsbultarna. Spel för insexnyckeln är extremt begränsad! Du kan göra detta verktyg genom att ändra en 10 mm insexnyckel. Att lägga till ett längre handtag kommer att göra det mycket lättare att sätta i remskivan!

Att anpassa dessa anpassade skiftnycklar är enkelt och billigt. svetsa en 20-30 cm / 8-12 " bit av 10 mm stång till insexnyckelns långa ände och en svets liknande förlängning som en öppen skiftnyckel.

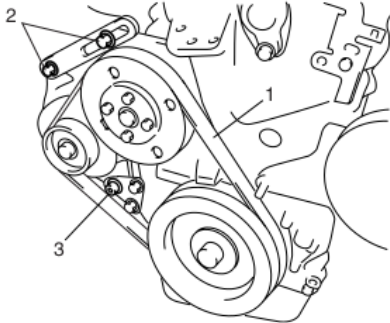
- 12 mm skiftnyckel med långt handtag
- Stubby 10 mm insexnyckel med långt handtag



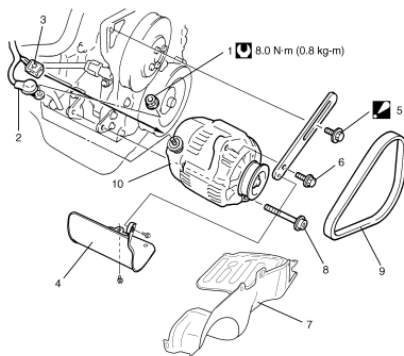
a: Tight	6. P/S pump pulley
b: Loose	7. Crankshaft pulley
2. Tension pulley hole	

6. Borttagning av vattenpump och generatorrem

- lossa generatorbultens justeringsbultar (2)
- lossa generatorns vridbult (3)
- dra generatoren framåt för att lossa bältet



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I3RHDA1A0001-01

1. "B" terminal nut	4. Generator cover	7. Splash cover (Right)	10. Generator
2. "B" terminal wire	5. Generator adjusting bolt : Only loosen this bolt.	8. Generator pivot bolt	Tightening torque
3. Connector	6. Generator adjusting arm bolt	9. Generator belt	

- 12 mm skiftnyckel med långt handtag
- 8 mm insexnyckel

Air Bleeding Procedure

S3RH0A6306003

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

NOTE

Before starting engine, set 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 that fluid is filled to specified level.

P/S Pump Drive Belt On-Vehicle Inspection

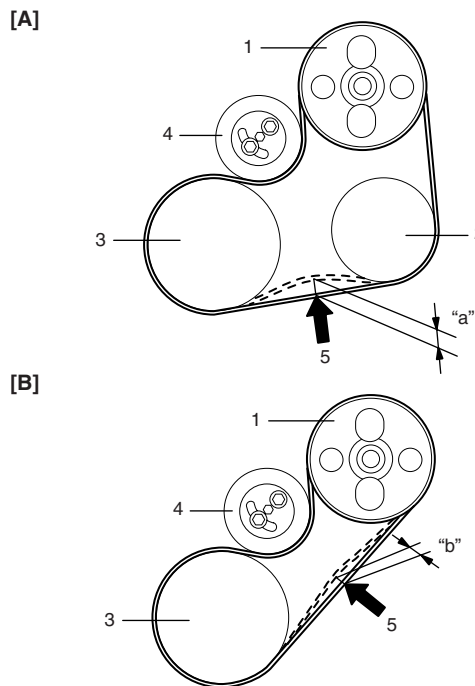
S3RH0A6306004

- 1) Remove engine undercover of right side from vehicle body.
- 2) Check belt for cracks, cuts, deformation, wear and cleanliness.
If any defect is found, replace power steering belt. Refer to "P/S Pump Drive Belt Removal and Installation".
- 3) Check belt tension by measuring how much it deflects. Push the belt intermediate point between A/C compressor pulley (2) or P/S pump pulley (1) and crankshaft pulley (3). The push force (5) should be about 100 N (10 kg, 22 lb). Adjust it if necessary referring to "P/S Pump Drive Belt Tension Adjustment".

Deflection of P/S belt

"a": 7 – 9 mm (0.28 – 0.35 in.) for new belt, 9 – 11 mm (0.35 – 0.43 in.) for used belt

"b": 4 – 9 mm (0.16 – 0.35 in.) for new and used belts



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[A]: For vehicle with A/C system
[B]: For vehicle without A/C system
4. Tension pulley

P/S Pump Drive Belt Tension Adjustment

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- 1) Remove engine undercover of right side, and then loosen tension pulley bolt (3).
- 2) To adjust P/S belt (5), loosen tension pulley nut (4), and then turn tension pulley (1) counterclockwise or clockwise by using special tool (A).

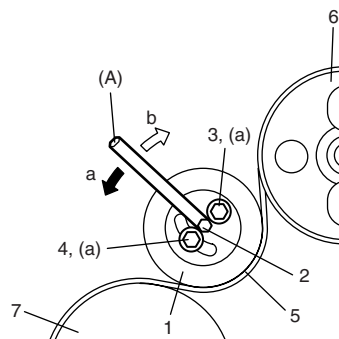
Special tool

(A): 09945-35410

- 3) Adjust belt tension to the following specification, and then tighten tension pulley bolt and nut to specified torque.

Tightening torque

Tension pulley bolt and nut (a): 25 N·m (2.5 kgf·m, 18.0 lb·ft)



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a: Tight	6. P/S pump pulley
b: Loose	7. Crankshaft pulley
2. Tension pulley hole	

Remounting

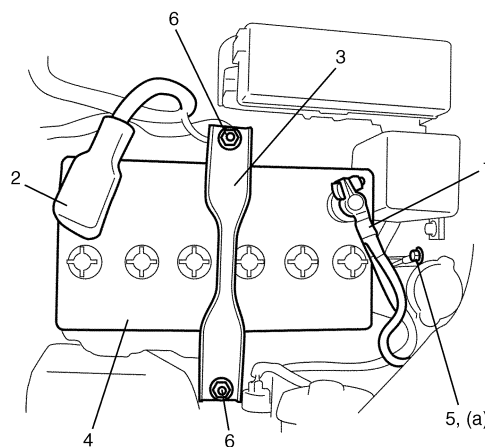
- 1) Reverse removal procedure.
- 2) Torque battery cables to specification.

NOTE

Check to be sure that ground cable has enough clearance to hood panel by terminal.

Tightening torque

Body ground bolt (a): 8.0 N·m (0.8 kgf·m, 6.0 lb-ft)



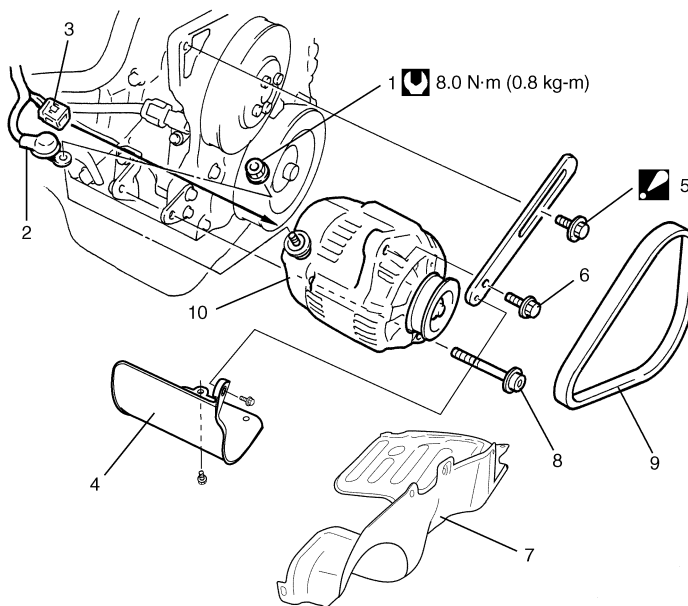
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5. Body ground bolt
6. Nut

Generator Dismounting and Remounting

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- 1) Disconnect negative cable at battery.
- 2) Remove exhaust No. 2 pipe referring to "Exhaust System Components in Section 1K".
- 3) Dismount in numerical order as shown in the figure.
- 4) Reverse dismounting procedure for remounting.



I3RH0A1A0001-01

1. "B" terminal nut	4. Generator cover	7. Splash cover (Right)	10. Generator
2. "B" terminal wire	5. Generator adjusting bolt : Only loosen this bolt.	8. Generator pivot bolt	⚡ : Tightening torque
3. Connector	6. Generator adjusting arm bolt	9. Generator belt	

Radiator On-Vehicle Inspection and Cleaning

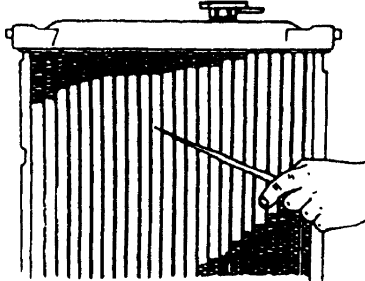
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Inspection

Check radiator for leakage or damage. Straighten bent fins, if any.

Cleaning

Clean frontal area of radiator cores.



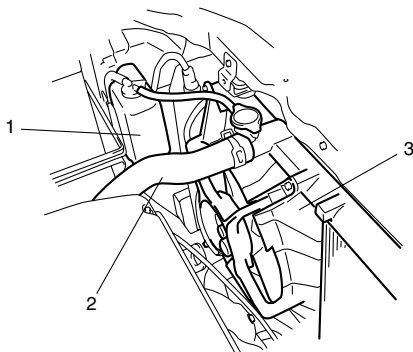
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Radiator Removal and Installation

S3RH0A1606012

Removal

- 1) Disconnect negative cable at battery.
- 2) Drain cooling system by loosening drain plug of radiator. Refer to "Cooling System Flush and Refill".
- 3) Disconnect connector of cooling fan motor.
- 4) Remove A/C condenser cooling fan assembly, if equipped with A/C.
- 5) Remove reservoir tank (1), if equipped with A/C.
- 6) Disconnect radiator inlet (2) and outlet hoses from radiator.
- 7) Remove cooling fan assembly (3).
- 8) Disconnect A/T fluid hoses from radiator, if equipped with A/T vehicle.
- 9) Remove radiator.



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Installation

Reverse removal procedures, noting the following.

- Refill cooling system with proper coolant referring to "Cooling System Flush and Refill".
- After installation, check each joint for leakage.

Water Pump / Generator Drive Belt Tension Inspection and Adjustment

S3RH0A1606018

⚠ WARNING

- Disconnect negative cable at battery before checking and adjusting belt tension.
- To help avoid danger of being burned, do not remove radiator cap while engine and radiator are still hot. Scalding fluid and steam can be blown out under pressure if cap is taken off too soon.

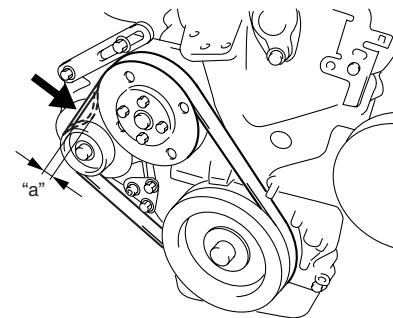
- 1) Inspect belt for cracks, cuts, deformation, wear and cleanliness. If it is necessary to replace belt, refer to "Water Pump / Generator Drive Belt Removal and Installation".
- 2) Check belt for tension. Belt is in proper tension when it deflects 4.5 to 5.5 mm (0.18 – 0.22 in.) under thumb pressure (about 100 N (10 kg, 22 lb.)).

Water pump / generator drive belt tension

"a": 4.5 – 5.5 mm (0.18 – 0.22 in.) as deflection / 100 N (10 kg, 22 lb.)

NOTE

When replacing belt with a new one, adjust belt tension to 3 – 4 mm (0.12 – 0.16 in.).



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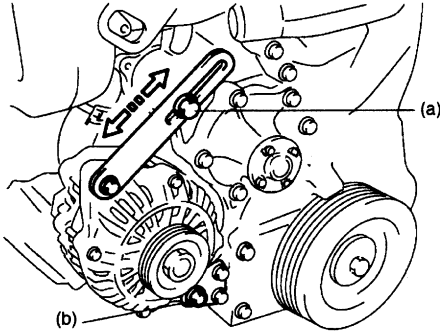
1F-11 Engine Cooling System:

- 3) If belt is too tight or too loose, adjust it to proper tension by displacing generator position.
- 4) Tighten generator adjusting bolt and pivot bolts as specified torque.

Tightening torque

Generator adjusting bolt (a): 23 N·m (2.3 kgf·m, 17.0 lb-ft)

Generator pivot bolt (b): 50 N·m (5.0 kgf·m, 36.0 lb-ft)



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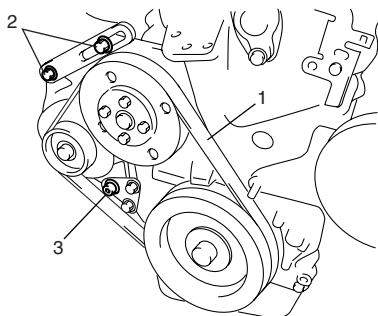
- 5) Connect negative cable at battery.

Water Pump / Generator Drive Belt Removal and Installation

S3RH0A1606019

Removal

- 1) Disconnect negative cable at battery.
- 2) Remove right side engine under cover and generator cover (if equipped).
- 3) Loosen drive belt adjusting bolt (2) and generator pivot bolt (3).
When servicing car equipped with A/C, remove compressor drive belt before removing water pump belt (1).
Refer to "P/S Pump Drive Belt Removal and Installation in Section 6C".

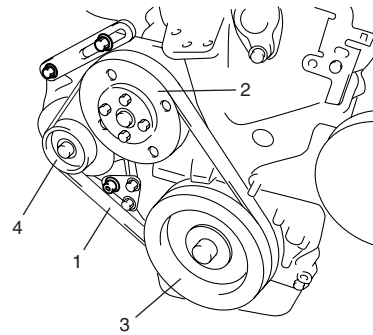


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- 4) Slacken belt by displacing generator and then remove it.

Installation

- 1) Install belt (1) to water pump pulley (2), crankshaft pulley (3) and generator pulley (4).
When servicing car equipped with A/C, install compressor drive belt, too.



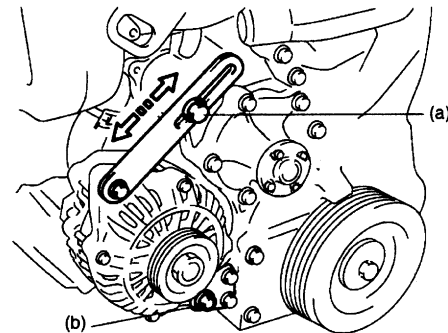
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- 2) Adjust belt tension by referring to "Water Pump / Generator Drive Belt Tension Inspection and Adjustment".
For adjustment of compressor drive belt tension, refer to "P/S Pump Drive Belt On-Vehicle Inspection in Section 6C".
- 3) Tighten water pump belt adjusting bolt and pivot bolt to specified torque.

Tightening torque

Generator adjusting bolt (a): 23 N·m (2.3 kgf·m, 17.0 lb-ft)

Generator pivot bolt (b): 50 N·m (5.0 kgf·m, 36.0 lb-ft)



I2RH0B160013-01

- 4) Install right side engine under cover and generator cover (if equipped).
- 5) Connect negative cable at battery.

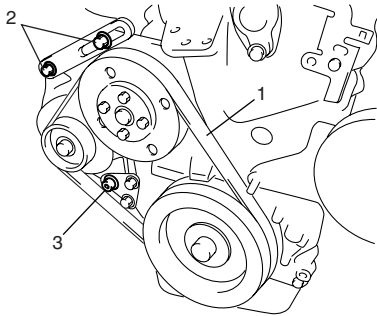
Water Pump Removal and Installation

S3RH0A1606014

Removal

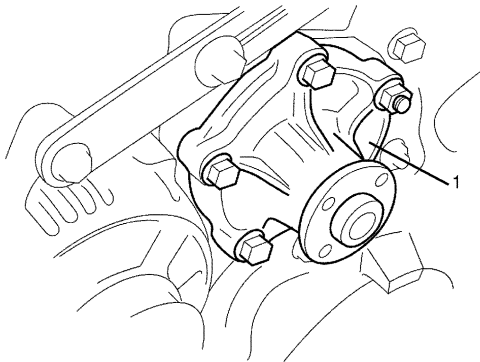
- 1) Disconnect negative cable at battery.
- 2) Drain cooling system by loosening drain plug of radiator referring to "Cooling System Flush and Refill".
- 3) Remove A/C compressor belt referring to "P/S Pump Drive Belt On-Vehicle Inspection in Section 6C" (if equipped).

- Loosen water pump / generator drive belt adjusting bolt (2) and generator pivot bolt (3). Then remove water pump / generator drive belt (1) and water pump pulley. Refer to "Water Pump / Generator Drive Belt Removal and Installation".



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- Remove water pump assembly (1).



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Installation

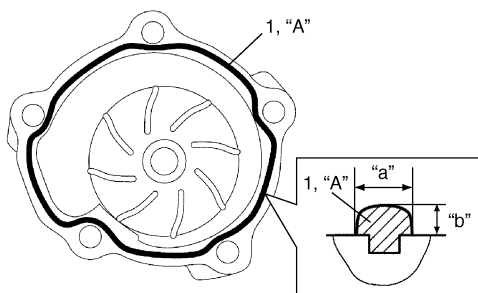
- Apply sealant (1) to mating surface of water pump as shown in the figure.

"A": Water tight sealant 99000-31250

Sealant quantity (to mating surface of water pump)

Width "a": 3 mm (0.12 in.)

Height "b": 2 mm (0.08 in.)

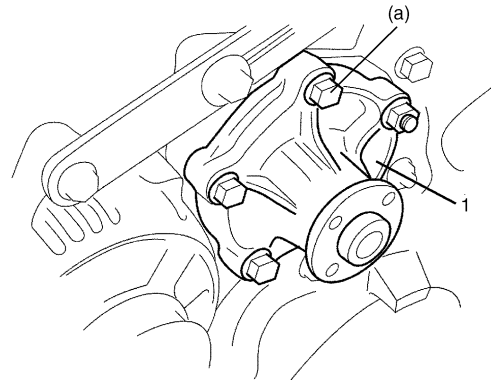


I2RH0B160017-01

- Install water pump assembly (1) to cylinder block and tighten bolts and nut to specified torque.

Tightening torque

Water pump bolt and nut (a): 22 N·m (2.2 kgf·m, 16.0 lb-ft)



I2RH0B160018-01

- Install water pump pulley.
- Install water pump / generator drive belt referring to "Water Pump / Generator Drive Belt Removal and Installation".
- Install A/C compressor belt referring to "Compressor Drive Belt Removal and Installation in Section 7B" (if equipped).
- Fill coolant referring to "Cooling System Flush and Refill".
- Connect negative cable at battery.
- Check each part for leakage.

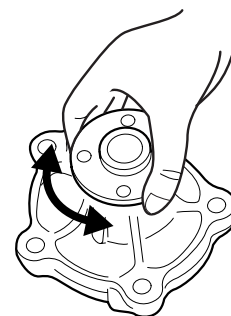
Water Pump Inspection

S3RH0A1606015

⚠ CAUTION

**Do not disassemble water pump.
If any repair is required on pump, replace it as assembly.**

- Rotate water pump by hand to check for smooth operation. If pump does not rotate smoothly or makes abnormal noise, replace it.



I2RH0B160019-01

Specifications

Tightening Torque Specifications

S3RH0A1607001

Fastening part	Tightening torque			Note
	N-m	kgf-m	lb-ft	
Generator adjusting bolt	23	2.3	17.0	🔩 / 🔩
Generator pivot bolt	50	5.0	36.0	🔩 / 🔩
Water pump bolt and nut	22	2.2	16.0	🔩

NOTE

The specified tightening torque is also described in the following.
 “Cooling System Components”

Reference:

For the tightening torque of fastener not specified in this section, refer to “Fasteners Information in Section 0A”.

Special Tools and Equipment

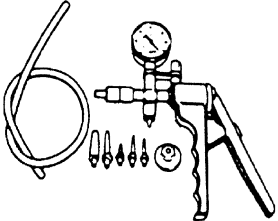
Recommended Service Material

S3RH0A1608001

Material	SUZUKI recommended product or Specification		Note
Water tight sealant	SUZUKI Bond No.1207F	P/No.: 99000-31250	🔩

Special Tool

S3RH0A1608002

09917-47011 Vacuum pump gauge 🔩		
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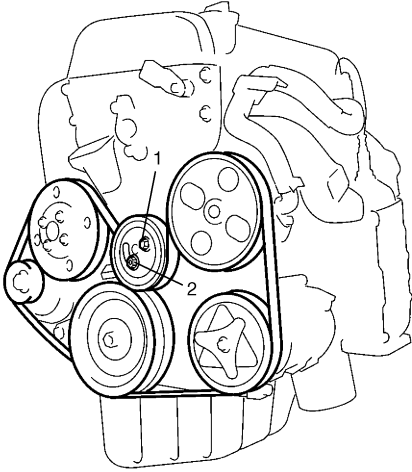
6C-9 Power Assisted Steering System:

P/S Pump Drive Belt Removal and Installation

S3RH0A6306018

Removal

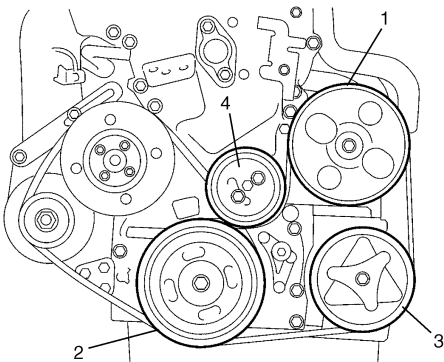
- 1) Disconnect negative cable at battery.
- 2) Remove engine undercover of right side, and then loosen tension pulley bolt (1) and nut (2).
- 3) Remove power steering belt.



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Installation

- 1) Install belt to power steering pump pulley (1), crankshaft pulley (2), A/C pulley (if equipped) (3) and tension pulley (4).
- 2) Adjust belt tension by referring to "P/S Pump Drive Belt Tension Adjustment".



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P/S Pump Drive Belt Inspection

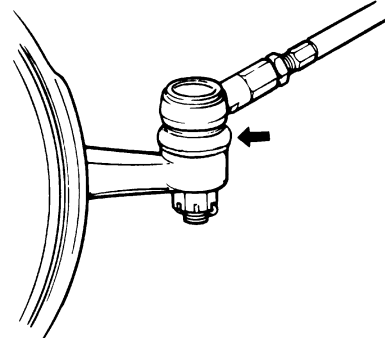
S3RH0A6306019

Check power steering belt for wear and cracks, and replace as required.

Tie-Rod End Boot On-Vehicle Inspection

S3RH0A6306007

Check boot for crack and damage. If any, replace it with a new one.



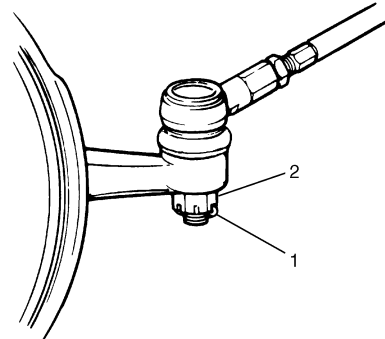
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Tie-Rod End Removal and Installation

S3RH0A6306009

Removal

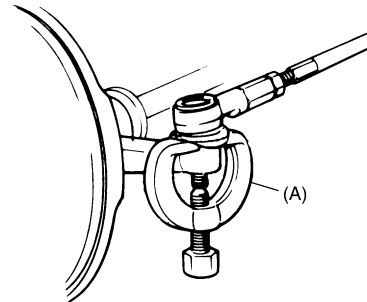
- 1) Hoist vehicle, and then remove wheel.
- 2) Remove split pin (1), and then tie-rod end castle nut (2).



I2RH01630015-01

- 3) Using special tool, remove tie-rod end from knuckle.

Special tool
(A): 09913-65210



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