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TROUBLESHOOTING

Symptom	Expected cause	Countermeasure
Heavy weight feeling on steering wheel	Faulty on front wheel alignment	Adjust or repair
	Over rotation resistance of lower arm ball joint	Replace
	Over rotation resistance of strut bearing	Replace
	Too low amount of Tire air pressure	Adjust
Steering wheel recovery trouble	Faulty on front wheel alignment	Adjust or repair
Noise or ride comfort trouble	Faulty on wheel alignment	Adjust or repair
	Inappropriated tire air pressure	Adjust
	Faulty function of shock absorber	Replace
	Damaged coil spring	Replace
	Damaged stabilizer	Replace
	Damaged lower arm bushing	Replace
	Stabilizer link fixing nut got loosen	Retighten
	Damaged stabilizer link (dust cover tearing, ring broke away)	Replace
Abnormal worned out of tire	Faulty wheel alignment	Adjust or repair
	Inappropriated tire air pressure	Adjust
Unstable steering wheel	Front wheel alignment trouble	Adjust or repair
	Lower arm ball joint turning resistance is too small	Replace
	Damaged lower arm bushing	Replace
Vehicle pushed aside phenomenon	Wheel alignment trouble	Adjust or repair
	Unbalance of right/left tire	Adjust or replace
	Damaged or transformed lower arm bushing	Replace
	Damaged coil spring	Replace
Steering wheel juddering	Front wheel alignment trouble	Adjust or repair
	Wheel balance trouble	Adjust or repair
	Lower are ball joint turning resistance is too much or too small	Replace
	Damaged stabilizer	Replace
	Damaged lower arm bushing	Replace
	Shock absorber operating trouble	Replace
	Coil spring trouble	Replace

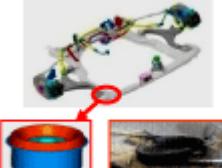
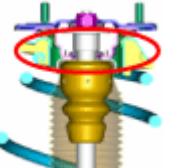
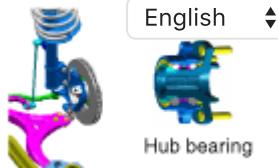
Strange sound type from under body by parts

Conditions for	Strange sound on uneven ground

occurrence	English			
Parts	Step bar link	Step bar bush	Lower arm ball joint	Strut insulator
Trouble area				
Type of strange sound	Rattling, Creaking noise	Squeaking noise	Clunking, Knocking noise	Clicking, Creaking noise
Occurring area	Under part	Under part	Under part	Upper part
Driving speed	20 - 40 km/h (12.4 - 24.9 m/h)	While low speed driving (20 - 40 km/h (12.4 - 24.9 m/h))	20 - 40 km/h (12.4 - 24.9 m/h)	-
Condition of road	Uneven road / bump	Uneven road / bump	Uneven road / bump	Uneven road / tough road
Reason	Loosen / leakage (teared down) / corrosion	Separation of bar and bush / slip	Loosen / leakage (teared down) / corrosion	Tightened (decrease torque) and interference

Conditions for occurrence	Strange sound while going through uneven road / tough road			
Parts	Strut / Shock absorber	Strut / Shock absorber	Strut / Shock absorber	Strut / Shock absorber
Trouble area				
Type of strange sound	Rubbing noise	Clicking, Creaking noise	Rubbing noise	Clicking noise
Occurring area	Upper part	Upper part	Upper part (rear)	Upper part (rear)
Driving speed	15 - 25 km/h (9.3 - 15.5 m/h)	15 - 25 km/h (9.3 - 15.5 m/h)	15 - 40 km/h (9.3 - 24.9 m/h)	30 - 50 km/h (18.6 - 31.1 m/h)
Condition of road	Uneven road	Uneven road	Uneven road and tough road	Tough road
Reason	Friction sound from piston load and bumper rubber inner side	Rolled down bumper rubber (tapping sound of bumper rubber upper part and insulator under part)	Adhesion trouble of upper bracket rubber	Suspension tuning trouble (damping force, rubber characteristic)

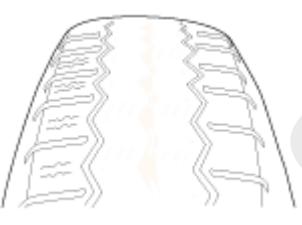
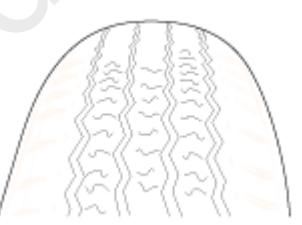
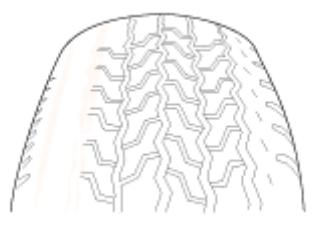
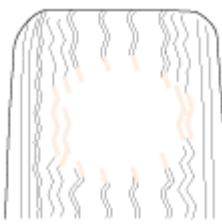
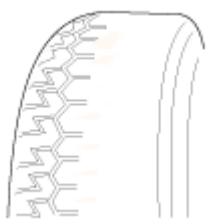
Conditions for occurrence	Strange sound on uneven road		Strange sound while steering	
Parts	Lower arm "G" bush	Cross member bush	Strut bearing	Wheel / Hub bearing
Trouble area				

				
Type of strange sound	Rubbing noise	Clicking noise	Clicking noise	Roaring noise
Occurring area	Under part	Under part	Upper part	Lower and side part
Driving speed	10 - 40 km/h (6.2 - 24.9 m/h)	-	-	20 - 60 km/h (12.4 - 37.3 m/h)
Condition of road	Bump / tough road	Even road	Even road	Even road
Reason	Dropped off / fallen off	Dropped off / fallen off	Grease leakage	Damaged from outer impact, foreign substance inflow

Wheel and tire diagnosis

Wheel /tire noise, vibration and harshness concerns are directly related to vehicle speed and are not generally affected by acceleration, coasting or decelerating. Also, out-of-balance wheel and tires can vibrate at more than one speed. A vibration that is affected by the engine rpm, or is eliminated by placing the transmission in Neutral is not related to the tire and wheel. As a general rule, tire and wheel vibrations felt in the steering wheel are related to the front tire and wheel assemblies. Vibrations felt in the seat or floor are related to the rear tire and wheel assemblies. This can initially isolate a concern to the front or rear.

Careful attention must be paid to the tire and wheels. There are several symptoms that can be caused by damaged or worn tire and wheels. Perform a careful visual inspection of the tires and wheel assemblies. Spin the tires slowly and watch for signs of lateral or radial runout. Refer to the tire wear chart to determine the tire wear conditions and actions

Wheel and tire diagnosis		
Rapid wear at the center	Rapid wear at both shoulders	Wear at one shoulder
		
<ul style="list-style-type: none"> Center-tread down to fabric due to excessive over inflated tires Lack of rotation Excessive toe on drive wheels Heavy acceleration on drive 	<ul style="list-style-type: none"> Under-inflated tires Worn suspension components Excessive cornering speeds Lack of rotation 	<ul style="list-style-type: none"> Toe adjustment out of specification Camber out of specification Damaged strut Damaged lower arm
Partial wear	Feathered edge	Wear pattern
		
<ul style="list-style-type: none"> Caused by irregular burrs on brake 	<ul style="list-style-type: none"> Toe adjustment out of specification 	<ul style="list-style-type: none"> Excessive toe on non-drive wheels

English



Hub bearing

drums

- Damaged or worn tie rods
- Damaged knuckle

- Lack of rotation

English

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