



# SECTION 11 - TROUBLESHOOTING

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# Engine

■ **NOTE:** A Condition/Remedy marked with an asterisk (\*) is for manual transmission models only.

Problem: Engine will not start or is hard to start (Compression too low)	
Condition	Remedy
<ol style="list-style-type: none"> <li>1. <b>Valve clearance</b> out of adjustment</li> <li>2. <b>Valve guides</b> worn - seated poorly</li> <li>3. <b>Valves</b> mistimed</li> <li>4. <b>Piston rings</b> worn excessively</li> <li>5. <b>Cylinder bore</b> worn</li> <li>6. <b>Spark plug</b> seating poorly</li> <li>7. <b>Starter motor</b> cranks too slowly - does not turn</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust clearance</li> <li>2. Repair - replace guides</li> <li>3. Adjust valve timing</li> <li>4. Replace rings</li> <li>5. Replace - rebore cylinder</li> <li>6. Tighten plug</li> <li>7. See Electrical in this section</li> </ol>
Problem: Engine will not start or is hard to start (No spark)	
Condition	Remedy
<ol style="list-style-type: none"> <li>1. <b>Spark plug</b> fouled</li> <li>2. <b>Spark plug</b> wet</li> <li>3. <b>Magneto</b> defective</li> <li>4. <b>CDI unit</b> defective</li> <li>5. <b>Ignition coil</b> defective</li> <li>6. <b>High-tension lead</b> open - shorted</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean - replace plug</li> <li>2. Clean - dry plug</li> <li>3. Replace magneto</li> <li>4. Replace CDI unit</li> <li>5. Replace ignition coil</li> <li>6. Replace high tension lead</li> </ol>
Problem: Engine will not start or is hard to start (No fuel reaching the carburetor)	
Condition	Remedy
<ol style="list-style-type: none"> <li>1. <b>Gas tank vent hose</b> obstructed</li> <li>2. <b>Carburetor inlet needle</b> defective</li> <li>3. <b>Fuel hose</b> obstructed</li> <li>4. <b>Fuel screens</b> obstructed</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean vent hose</li> <li>2. Replace needle</li> <li>3. Clean - replace hose</li> <li>4. Clean - replace inlet screen - valve screen</li> </ol>
Problem: Engine stalls easily	
Condition	Remedy
<ol style="list-style-type: none"> <li>1. <b>Spark plug</b> fouled</li> <li>2. <b>Magneto</b> defective</li> <li>3. <b>CDI unit</b> defective</li> <li>4. <b>Carburetor jets</b> obstructed</li> <li>5. <b>Valve clearance</b> out of adjustment</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean plug</li> <li>2. Replace magneto</li> <li>3. Replace CDI unit</li> <li>4. Clean jets</li> <li>5. Adjust clearance</li> </ol>
Problem: Engine noisy (Excessive valve chatter)	
Condition	Remedy
<ol style="list-style-type: none"> <li>1. <b>Valve clearance</b> too large</li> <li>2. <b>Valve spring(s)</b> weak - broken</li> <li>3. <b>Rocker arm - rocker arm shaft</b> worn</li> <li>4. <b>Camshaft</b> worn</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust clearance</li> <li>2. Replace spring(s)</li> <li>3. Replace arm - shaft</li> <li>4. Replace camshaft</li> </ol>

**Problem: Engine noisy (Noise seems to come from piston)**

Condition	Remedy
1. <b>Piston - cylinder</b> worn	1. Replace - service piston - cylinder
2. <b>Combustion chamber carbon</b> buildup	2. Clean chamber
3. <b>Piston pin - piston pin bore</b> worn	3. Replace - service pin - bore
4. <b>Piston rings - ring groove(s)</b> worn	4. Replace rings - piston

**Problem: Engine noisy (Noise seems to come from timing chain)**

Condition	Remedy
1. <b>Chain</b> stretched	1. Replace chain
2. <b>Sprockets</b> worn	2. Replace sprockets
3. <b>Tension adjuster</b> malfunctioning	3. Repair - replace adjuster

**Problem: Engine noisy (Noise seems to come from clutch)**

Condition *	Remedy *
1. Crankshaft splines - bearings worn	1. Replace crankshaft - bearings
2. Countershaft - hub splines worn	2. Replace countershaft - hub
3. Clutch plate teeth worn	3. Replace clutch plate(s)
4. Driven - drive clutch plates distorted - broken	4. Replace clutch plate(s)
5. Clutch dampers weak	5. Replace dampers

**Problem: Engine noisy (Noise seems to come from crankshaft)**

Condition	Remedy
1. <b>Bearing</b> worn - burned	1. Replace bearing
2. <b>Lower rod-end bearing</b> worn - burned	2. Replace bearing
3. <b>Connecting rod side clearance</b> too large	3. Replace thrust washer(s)

**Problem: Engine noisy (Noise seems to come from transmission)**

Condition	Remedy
1. <b>Gears</b> worn - rubbing	1. Replace gears
2. <b>Splines</b> worn	2. Replace shaft(s)
3. <b>Primary gears</b> worn - rubbing	3. Replace gears
4. <b>Bearings</b> worn	4. Replace bearings
5. <b>Bushing</b> worn	5. Replace bushing

**Problem: Engine noisy (Noise seems to come from secondary-transmission/left-side cover)**

Condition *	Remedy *
1. <b>Gears - shaft(s)</b> worn	1. Replace gears - shafts
2. <b>Bearing(s)/bushing(s)</b> damaged	2. Replace bearing(s)/bushing(s)

**Problem: Engine noisy (Noise seems to come from secondary bevel gear and final driven shaft)**

Condition	Remedy
1. <b>Drive - driven bevel gears</b> damaged - worn	1. Replace gears
2. <b>Backlash</b> excessive	2. Adjust backlash
3. <b>Tooth contact</b> improper	3. Adjust contact
4. <b>Bearing</b> damaged	4. Replace bearing
5. <b>Gears</b> worn - rubbing	5. Replace gears
6. <b>Splines</b> worn	6. Replace shaft(s)
7. <b>Final driven shaft thrust clearance</b> too large	7. Replace thrust washer(s)

<b>Problem: Clutch slipping</b>	
<b>Condition *</b>	<b>Remedy *</b>
<ol style="list-style-type: none"> <li>1. <b>Release roller</b> out of adjustment - loss of freeplay</li> <li>2. <b>Clutch springs</b> weak</li> <li>3. <b>Clutch shoes</b> worn</li> <li>4. <b>Pressure disc</b> worn - distorted</li> <li>5. <b>Clutch plates (driven - drive)</b> distorted</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust clutch bolts 1 &amp; 2</li> <li>2. Replace springs</li> <li>3. Replace shoes</li> <li>4. Replace disc</li> <li>5. Replace plates</li> </ol>
<b>Problem: Clutch dragging</b>	
<b>Condition *</b>	<b>Remedy *</b>
<ol style="list-style-type: none"> <li>1. <b>Clutch release roller</b> out of adjustment - too much freeplay</li> <li>2. <b>Clutch springs</b> weak</li> <li>3. <b>Pressure disc - clutch plates</b> distorted</li> <li>4. <b>Clutch release mechanism</b> worn - damaged</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust clutch bolts 1 &amp; 2</li> <li>2. Replace springs</li> <li>3. Replace disc - plates</li> <li>4. Adjust - replace mechanism</li> </ol>
<b>Problem: Transmission will not shift</b>	
<b>Condition *</b>	<b>Remedy *</b>
<ol style="list-style-type: none"> <li>1. <b>Gearshift cam</b> broken</li> <li>2. <b>Gearshift forks</b> distorted</li> <li>3. <b>Gearshift shaft</b> worn</li> <li>4. <b>Clutch release mechanism</b> worn - damaged</li> <li>5. <b>Reverse cable</b> adjusted improperly</li> <li>6. <b>Gearshift cable</b> adjusted improperly</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace cam</li> <li>2. Replace forks</li> <li>3. Replace shaft</li> <li>4. Adjust - replace mechanism</li> <li>5. Adjust cable</li> <li>6. Adjust cable</li> </ol>
<b>Problem: Transmission will not shift back</b>	
<b>Condition *</b>	<b>Remedy *</b>
<ol style="list-style-type: none"> <li>1. <b>Reverse shift cam</b> broken</li> <li>2. <b>Shift shafts</b> rubbing - sticking</li> <li>3. <b>Gearshift forks</b> distorted - worn</li> <li>4. <b>Gearshift lever return spring</b> broken - damaged</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace cam</li> <li>2. Replace shafts</li> <li>3. Replace forks</li> <li>4. Replace spring</li> </ol>
<b>Problem: Transmission jumps out of gear</b>	
<b>Condition *</b>	<b>Remedy *</b>
<ol style="list-style-type: none"> <li>1. <b>Shifting gears (driveshaft - countershaft)</b> worn</li> <li>2. <b>Gearshift forks</b> distorted - worn</li> <li>3. <b>Cam stopper spring (gearshift cam)</b> weak</li> <li>4. <b>Gearshift lever stopper pin</b> worn</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace gears</li> <li>2. Replace forks</li> <li>3. Replace spring</li> <li>4. Replace pin</li> </ol>
<b>Problem: Secondary-transmission will not shift or shift back</b>	
<b>Condition *</b>	<b>Remedy *</b>
<ol style="list-style-type: none"> <li>1. <b>Sliding dog</b> broken - worn</li> <li>2. <b>Gearshift fork</b> broken - worn</li> <li>3. <b>Hi/Low shift lever</b> out of adjustment</li> <li>4. <b>Gearshift cam</b> worn</li> <li>5. <b>Cam stopper spring</b> weak</li> <li>6. <b>Gearshift fork shaft</b> worn</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace dog</li> <li>2. Replace fork</li> <li>3. Adjust lever</li> <li>4. Replace cam</li> <li>5. Replace spring</li> <li>6. Replace shaft</li> </ol>

**Problem: Engine idles poorly**

Condition	Remedy
1. <b>Valve clearance</b> out of adjustment	1. Adjust clearance
2. <b>Valve seating</b> poor	2. Replace - service seats - valves
3. <b>Valve guides</b> defective	3. Replace guides
4. <b>Rocker arms - arm shaft</b> worn	4. Replace arms - shafts
5. <b>Magneto</b> defective	5. Replace magneto
6. <b>CDI unit</b> defective	6. Replace CDI unit
7. <b>Spark plug</b> fouled - <b>gap</b> too wide	7. Adjust gap - replace plug
8. <b>Ignition coil</b> defective	8. Replace ignition coil
9. <b>Float</b> out of adjustment	9. Adjust float height
10. <b>Jets</b> obstructed	10. Clean jets
11. <b>Pilot screw setting</b> improper	11. Adjust pilot screw

**Problem: Engine runs poorly at high speed**

Condition	Remedy
1. <b>High RPM “cut out”</b> against RPM limiter	1. Shift into higher gear - decrease speed
2. <b>Valve springs</b> weak	2. Replace springs
3. <b>Valve timing</b> out of adjustment	3. Adjust timing
4. <b>Cams - rocker arms</b> worn	4. Replace cams - arms
5. <b>Spark plug gap</b> too narrow	5. Adjust gap
6. <b>Ignition coil</b> defective	6. Replace ignition oil
7. <b>Float level</b> too low	7. Adjust float height
8. <b>Air cleaner element</b> obstructed	8. Clean element
9. <b>Fuel hose</b> obstructed	9. Clean - prime hose

**Problem: Exhaust smoke dirty or heavy**

Condition	Remedy
1. <b>Oil (in the engine)</b> overfilled - contaminated	1. Drain excess oil - replace oil
2. <b>Piston rings - cylinder</b> worn	2. Replace - service rings - cylinder
3. <b>Valve guides</b> worn	3. Replace guides
4. <b>Cylinder wall</b> scored - scuffed	4. Replace - service cylinder
5. <b>Valve stems</b> worn	5. Replace valves
6. <b>Stem seals</b> defective	6. Replace seals

### Problem: Engine lacks power

Condition	Remedy
1. <b>Valve clearance</b> incorrect	1. Adjust clearance
2. <b>Valve springs</b> weak	2. Replace springs
3. <b>Valve timing</b> out of adjustment	3. Adjust timing
4. <b>Piston ring(s) - cylinder</b> worn	4. Replace - service rings - cylinder
5. <b>Valve seating</b> poor	5. Repair seats
6. <b>Spark plug</b> fouled	6. Clean - replace plug
7. <b>Rocker arms - shafts</b> worn	7. Replace arms - shafts
8. <b>Spark plug gap</b> incorrect	8. Adjust gap - replace plug
9. <b>Carburetor jets</b> obstructed	9. Clean jets
10. <b>Float level</b> out of adjustment	10. Adjust float height
11. <b>Air cleaner element</b> obstructed	11. Clean element
12. <b>Oil (in the engine)</b> overfilled - contaminated	12. Drain excess oil - change oil
13. <b>Intake manifold</b> leaking air	13. Tighten - replace manifold
14. <b>Cam chain</b> worn	14. Replace cam chain

### Problem: Engine overheats

Condition	Remedy
1. <b>Carbon deposit (piston crown)</b> excessive	1. Clean piston
2. <b>Oil</b> low	2. Add oil
3. <b>Octane</b> low - <b>gasoline</b> poor	3. Drain - replace gasoline
4. <b>Oil pump</b> defective	4. Replace pump
5. <b>Oil circuit</b> obstructed	5. Clean circuit
6. <b>Gasoline level (in float chamber)</b> too low	6. Adjust float height
7. <b>Intake manifold</b> leaking air	7. Tighten - replace manifold
8. <b>Coolant level</b> low	8. Fill - examine system for leaks
9. <b>Fan</b> malfunctioning	9. Check fan fuse - replace fan
10. <b>Fan switch</b> malfunctioning	10. Replace fan switch
11. <b>Thermostat</b> stuck - closed	11. Replace thermostat
12. <b>Radiator hoses - cap</b> damaged - obstructed	12. Clear obstruction - replace hoses

## Drive

Problem: Power not transmitted from engine to wheels	
Condition	Remedy
1. <b>Rear axle shaft serration</b> worn - broken	1. Replace shaft
Problem: Power not transmitted from engine to either front wheel	
Condition	Remedy
1. <b>Secondary drive - driven gear teeth</b> broken	1. Replace gear(s)
2. <b>Propeller shaft serration</b> worn - broken	2. Replace shaft
3. <b>Coupling</b> damaged	3. Replace coupling
4. <b>Coupling joint serration</b> worn - damaged	4. Replace joint
5. <b>Front drive - driven bevel gears</b> broken - damaged	5. Replace gear(s)
6. <b>Front differential gears/pinions</b> broken - damaged	6. Replace gears - pinions
7. <b>Sliding dog/shaft/fork</b> worn - damaged	7. Replace gear(s)
8. <b>Front drive axle</b> worn - damaged	8. Replace axle
9. <b>Front drive axle serration</b> worn - damaged	9. Replace axle

## Fuel System

Problem: Starting impaired	
Condition	Remedy
<ol style="list-style-type: none"> <li>1. <b>Starter jet</b> obstructed</li> <li>2. <b>Starter jet passage</b> obstructed</li> <li>3. <b>Starter body - carburetor</b> leaking air</li> <li>4. <b>Starter valve</b> not operating properly</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean jet</li> <li>2. Clean passage</li> <li>3. Tighten - adjust - replace gasket</li> <li>4. Check - adjust valve</li> </ol>
Problem: Idling or low speed impaired	
Condition	Remedy
<ol style="list-style-type: none"> <li>1. <b>Slow jet</b> obstructed - loose</li> <li>2. <b>Slow jet outlet</b> obstructed</li> <li>3. <b>Low speed fuel screw setting</b> incorrect</li> <li>4. <b>Starter valve</b> not fully closed</li> <li>5. <b>Float height</b> incorrect</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean - tighten jet</li> <li>2. Clean outlet</li> <li>3. Adjust screw</li> <li>4. Adjust valve</li> <li>5. Adjust float height</li> </ol>
Problem: Medium or high speed impaired	
Condition	Remedy
<ol style="list-style-type: none"> <li>1. <b>High RPM “cut out”</b> against RPM limiter</li> <li>2. <b>Main jet</b> obstructed</li> <li>3. <b>Needle jet</b> obstructed</li> <li>4. <b>Throttle vacuum piston</b> not operating properly</li> <li>5. <b>Filter</b> obstructed</li> <li>6. <b>Float height</b> incorrect</li> <li>7. <b>Starter valve</b> not fully closed</li> </ol>	<ol style="list-style-type: none"> <li>1. Shift into higher gear - decrease RPM speed</li> <li>2. Clean main jet</li> <li>3. Clean needle jet</li> <li>4. Check piston operation</li> <li>5. Clean filter</li> <li>6. Adjust float height</li> <li>7. Adjust valve</li> </ol>
Problem: Overflow and fuel level fluctuations	
Condition	Remedy
<ol style="list-style-type: none"> <li>1. <b>Float valve</b> worn - damaged</li> <li>2. <b>Float valve spring</b> broken</li> <li>3. <b>Float</b> not working properly</li> <li>4. <b>Float valve</b> dirty</li> <li>5. <b>Float height</b> too high - too low</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace valve</li> <li>2. Replace spring</li> <li>3. Adjust float height - replace float</li> <li>4. Clean valve</li> <li>5. Adjust float height</li> </ol>

## Electrical

Problem: Spark absent or weak	
Condition	Remedy
<ol style="list-style-type: none"> <li>1. <b>Ignition coil</b> defective</li> <li>2. <b>Spark plug</b> defective</li> <li>3. <b>Magneto</b> defective</li> <li>4. <b>CDI unit</b> defective</li> <li>5. <b>Pick-up coil</b> defective</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace ignition coil</li> <li>2. Replace plug</li> <li>3. Replace magneto</li> <li>4. Replace CDI unit</li> <li>5. Replace pick-up coil</li> </ol>
Problem: Spark plug fouled with carbon	
Condition	Remedy
<ol style="list-style-type: none"> <li>1. <b>Mixture</b> too rich</li> <li>2. <b>Idling RPM</b> too high</li> <li>3. <b>Gasoline</b> incorrect</li> <li>4. <b>Air cleaner element</b> dirty</li> <li>5. <b>Spark plug</b> incorrect (too cold)</li> <li>6. <b>Valve seals</b> cracked - missing</li> <li>7. <b>Oil rings</b> worn - broken</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust carburetor</li> <li>2. Adjust carburetor</li> <li>3. Change to correct gasoline</li> <li>4. Clean element</li> <li>5. Replace plug</li> <li>6. Replace seals</li> <li>7. Replace rings</li> </ol>
Problem: Spark plug electrodes overheat or burn	
Condition	Remedy
<ol style="list-style-type: none"> <li>1. <b>Spark plug</b> incorrect (too hot)</li> <li>2. <b>Engine</b> overheats</li> <li>3. <b>Spark plug</b> loose</li> <li>4. <b>Mixture</b> too lean</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace plug</li> <li>2. Service cooling system</li> <li>3. Tighten plug</li> <li>4. Adjust carburetor</li> </ol>
Problem: Magneto does not charge	
Condition	Remedy
<ol style="list-style-type: none"> <li>1. <b>Lead wires/connections</b> shorted - loose - open</li> <li>2. <b>Magneto coils</b> shorted - grounded - open</li> <li>3. <b>Regulator/rectifier</b> shorted - punctured</li> </ol>	<ol style="list-style-type: none"> <li>1. Repair - replace - tighten lead wires</li> <li>2. Replace magneto coils</li> <li>3. Replace regulator/rectifier</li> </ol>
Problem: Magneto charges, but charging rate is below the specification	
Condition	Remedy
<ol style="list-style-type: none"> <li>1. <b>Lead wires</b> shorted - open - loose (at terminals)</li> <li>2. <b>Stator coils (magneto)</b> grounded - open</li> <li>3. <b>Regulator/rectifier</b> defective</li> <li>4. <b>Electrolyte</b> low</li> <li>5. <b>Cell plates (battery)</b> defective</li> </ol>	<ol style="list-style-type: none"> <li>1. Repair - tighten lead wires</li> <li>2. Replace stator coils</li> <li>3. Replace regulator/rectifier</li> <li>4. Add distilled water</li> <li>5. Replace battery</li> </ol>

### Problem: Magneto overcharges

Condition	Remedy
1. <b>Internal battery</b> short circuited	1. Replace battery
2. <b>Regulator/rectifier resistor</b> damaged - defective	2. Replace resistor
3. <b>Regulator/rectifier</b> poorly grounded	3. Clean - tighten ground connection

### Problem: Charging unstable

Condition	Remedy
1. <b>Lead wire</b> intermittently shorting	1. Replace lead wire
2. <b>Magneto</b> internally shorted	2. Replace magneto
3. <b>Regulator/rectifier</b> defective	3. Replace regulator/rectifier

### Problem: Starter button not effective

Condition	Remedy
1. <b>Battery charge</b> low	1. Recharge - replace battery
2. <b>Switch contacts</b> defective	2. Replace switch
3. <b>Starter motor brushes</b> not seating	3. Repair - replace brushes
4. <b>Starter relay</b> defective	4. Replace relay
5. <b>Emergency stop - ignition switch</b> off	5. Turn on switches
6. <b>Wiring connections</b> loose - disconnected	6. Connect - tighten - repair connections

### Problem: Battery “sulfation” (Acidic white powdery substance or spots on surfaces of cell plates)

Condition	Remedy
1. <b>Charging rate</b> too low - too high	1. Replace battery
2. <b>Battery electrolyte</b> excessive - insufficient	2. Keep electrolyte to prescribed level
3. <b>Specific gravity</b> too high - too low	3. Charge battery - add distilled water
4. <b>Battery</b> run-down - damaged	4. Replace battery
5. <b>Electrolyte</b> contaminated	5. Recharge - replace battery

### Problem: Battery discharges too rapidly

Condition	Remedy
1. <b>Electrolyte</b> contaminated	1. Replace battery
2. <b>Specific gravity</b> too high	2. Charge battery - add distilled water
3. <b>Charging system (charging operation)</b> not set properly	3. Check magneto - regulator/rectifier - circuit connections - adjust for specified charging operation
4. <b>Cell plates</b> overcharged - damaged	4. Replace battery - correct charging system
5. <b>Battery</b> short-circuited	5. Replace battery
6. <b>Specific gravity</b> too low	6. Recharge battery

### Problem: Battery polarity reversed

Condition	Remedy
1. <b>Battery</b> incorrectly connected	1. Reverse connections - replace battery

## Steering/Suspension

Problem: Handling too heavy or stiff	
Condition	Remedy
<ol style="list-style-type: none"> <li>1. <b>Front wheel alignment</b> incorrect</li> <li>2. <b>Lubrication</b> inadequate</li> <li>3. <b>Tire inflation pressure</b> incorrect</li> <li>4. <b>Tie rod ends</b> seizing</li> <li>5. <b>Linkage connections</b> seizing</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust alignment</li> <li>2. Lubricate appropriate components</li> <li>3. Adjust pressure</li> <li>4. Replace tie rod ends</li> <li>5. Repair - replace connections</li> </ol>
Problem: Steering oscillation	
Condition	Remedy
<ol style="list-style-type: none"> <li>1. <b>Tires</b> inflated unequally</li> <li>2. <b>Wheel(s)</b> wobbly</li> <li>3. <b>Wheel hub cap screw(s)</b> loose - missing</li> <li>4. <b>Wheel hub bearing</b> worn - damaged</li> <li>5. <b>Tie rod ends</b> worn - loose</li> <li>6. <b>Tires</b> defective - incorrect</li> <li>7. <b>A-arm bushings</b> damaged</li> <li>8. <b>Bolts - nuts (frame)</b> loose</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust pressure</li> <li>2. Replace wheel(s)</li> <li>3. Tighten - replace cap screws</li> <li>4. Replace bearing</li> <li>5. Replace - tighten tie rod ends</li> <li>6. Replace tires</li> <li>7. Replace bushings</li> <li>8. Tighten bolts - nuts</li> </ol>
Problem: Steering pulling to one side	
Condition	Remedy
<ol style="list-style-type: none"> <li>1. <b>Tires</b> inflated unequally</li> <li>2. <b>Front wheel alignment</b> incorrect</li> <li>3. <b>Wheel hub bearings</b> worn - broken</li> <li>4. <b>Frame</b> distorted</li> <li>5. <b>Shock absorber</b> defective</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust pressure</li> <li>2. Adjust alignment</li> <li>3. Replace bearings</li> <li>4. Repair - replace frame</li> <li>5. Replace shock absorber</li> </ol>
Problem: Steering impaired	
Condition	Remedy
<ol style="list-style-type: none"> <li>1. <b>Tire pressure</b> too high</li> <li>2. <b>Steering linkage connections</b> worn</li> <li>3. <b>Cap screws (suspension system)</b> loose</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust pressure</li> <li>2. Replace connections</li> <li>3. Tighten cap screws</li> </ol>
Problem: Tire wear rapid or uneven	
Condition	Remedy
<ol style="list-style-type: none"> <li>1. <b>Wheel hub bearings</b> worn - loose</li> <li>2. <b>Front wheel alignment</b> incorrect</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace bearings</li> <li>2. Adjust alignment</li> </ol>
Problem: Steering noise	
Condition	Remedy
<ol style="list-style-type: none"> <li>1. <b>Caps screws - nuts</b> loose</li> <li>2. <b>Wheel hub bearings</b> broken - damaged</li> <li>3. <b>Lubrication</b> inadequate</li> </ol>	<ol style="list-style-type: none"> <li>1. Tighten cap screws - nuts</li> <li>2. Replace bearings</li> <li>3. Lubricate appropriate components</li> </ol>

Problem: Suspension too soft	
Condition	Remedy
1. <b>Spring(s)</b> weak	1. Replace spring(s)
2. <b>Shock absorber</b> damaged	2. Replace shock absorber
Problem: Suspension too stiff	
Condition	Remedy
1. <b>A-arm-related bushings</b> worn	1. Replace bushing
Problem: Suspension noisy	
Condition	Remedy
1. <b>Cap screws (suspension system)</b> loose	1. Tighten cap screws
2. <b>A-arm-related bushings</b> worn	2. Replace bushings
Problem: Rear wheel oscillation	
Condition	Remedy
1. <b>Rear wheel hub bearings</b> worn - loose	1. Replace bearings
2. <b>Tires</b> defective - incorrect	2. Replace tires
3. <b>Wheel rim</b> distorted	3. Replace rim
4. <b>Wheel hub cap screws</b> loose	4. Tighten cap screws
5. <b>Axle shaft nut</b> loose (Manual Transmission)	5. Tighten nut (Manual Transmission)
6. <b>Auxiliary brake</b> adjusted incorrectly	6. Adjust brake
7. <b>Rear suspension arm-related bushing</b> worn	7. Replace bushing
8. <b>Rear shock absorber</b> damaged	8. Replace shock absorber
9. <b>Rear suspension arm nut</b> loose	9. Tighten nut

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## Brakes

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Problem: Braking poor	
Condition	Remedy
1. <b>Pad</b> worn	1. Replace pads
2. <b>Pedal free-play</b> excessive	2. Adjust free-play
3. <b>Brake fluid</b> leaking	3. Repair - replace hydraulic system
4. <b>Hydraulic system</b> leaking air	4. Bleed hydraulic system
5. <b>Master cylinder/brake cylinder seal</b> worn	5. Replace seal(s)
Problem: Brake lever travel excessive	
Condition	Remedy
1. <b>Hydraulic system</b> entrapped air	1. Bleed hydraulic system
2. <b>Brake fluid</b> low	2. Add fluid to proper level
3. <b>Brake fluid</b> incorrect	3. Replace with correct fluid
4. <b>Piston seal - cup</b> worn	4. Replace seal - cup
Problem: Brake fluid leaking	
Condition	Remedy
1. <b>Connection joints</b> loose	1. Tighten joint
2. <b>Hose</b> cracked	2. Replace hose
3. <b>Piston seal</b> worn	3. Replace seal