

3. TROUBLE SHOOTING

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3-1. Engine

Complaint	Possible causes	Remedy	Page
Poor starting	Starter will not run		
	1. Main fuse is blown off.	Replace.	
	2. Contact is not closing in main switch, or this switch is open-circuited.	Repair or replace.	
	3. Run-down battery.	Recharge.	11-12
	4. Defective starting relay.	Repair or replace.	
	5. Loose terminal connection on the battery.	Clean and retighten.	11-14
	6. Defective brushes in starter.	Replace.	11-7
	7. Loose battery cord connection.	Retighten.	
	8. Open in field or armature circuit of starter.	Repair or replace.	11-6
	No sparking		
	1. Defective spark plug.	Adjust the gap, or replace.	9-5/ 9-6
	2. Short-circuit (grounded) fault in high-tension cords.	Repair or replace defective cords.	
	3. Cracked rotor or cap in distributor.	Replace.	9-6
	4. Burnt breaker contact points.	Replace.	9-6
	5. Breaker contact gap out of adjustment.	Adjust as prescribed.	9-9
	6. Defective condenser.	Replace.	9-7
	7. Contact is not closing positively in main switch, or this switch is open-circuited.	Replace.	
	8. Loose or blown fuse.	Set right, or replace.	
	9. Ignition timing out of adjustment.	Adjust as prescribed.	9-9
	10. Defective ignition coil.	Replace.	9-7
	Faulty intake and exhaust systems		
	1. Carburetor needs readjustment.	Adjust as prescribed.	5-8
	2. Fuel pump is not discharging adequately.	Replace.	
	3. Clogged air cleaner.	Clean, or replace.	6-1
	4. Defective choke mechanism.	Repair or replace.	5-8
	5. Loose intake manifold.	Retighten.	
	6. Carburetor is dirty and clogged.	Disassemble and clean.	5-8
	7. Float level out of adjustment.	Adjust as prescribed.	5-10
	8. Clogged fuel hose.	Clean or replace.	
	9. Not enough fuel in the tank.	Refill.	
10. Clogged muffler.	Clean.		
Abnormal internal condition in engine			
1. Ruptured cylinder head gasket.	Replace.		
2. Valve clearance out of adjustment.	Adjust as prescribed.	4-47	
3. Weakened or broken valve spring.	Replace.	4-23	
4. Loose manifold, permitting air to be drawn in.	Retighten and, as necessary, replace the gasket.		
5. Worn pistons, rings or cylinders.	Replace worn rings and pistons and, as necessary, rebore.	4-26	

Complaint	Possible causes	Remedy	Page
	6. Broken valve timing belt. 7. Poor valve seating. 8. Wrong kind of engine oil. 9. Burnt valves.	Replace. Repair or replace. Replace. Replace.	4-32 4-21 4-55
Not enough power	<p>Inadequate compression</p> 1. Valve clearance out of adjustment. 2. Valves not seating tight. 3. Valve stems tending to seize. 4. Broken or weakened valve spring. 5. Piston rings seized in grooves, or broken. 6. Worn pistons, rings or cylinders. 7. Leaky cylinder head gasket.	Adjust as prescribed. Repair. Replace. Replace. Replace worn parts end, as necessary, rebore. Replace.	4-47 4-21 4-23 4-26
	<p>Improperly timed ignition</p> 1. Ignition timing out of adjustment. 2. Defective spark plug. 3. Breaker point gap out of adjustment. 4. Leaky high-tension cords for some cylinders. 5. Distributor governor is not working correctly.	Adjust as prescribed. Adjust the gap, or replace. Adjust or replace. Replace. Repair.	9-9 9-6 9-9
	<p>Fuel system out of order</p> 1. Clogged carburetor. 2. Defective fuel pump. 3. Clogged fuel filter. 4. Choke wire working erratically. 5. Float level out of adjustment. 6. Broken diaphragm in depression chamber (carburetor) 7. Clogged fuel pipe. 8. Clogged fuel tank outlet. 9. Loose joint in fuel system.	Disassemble and clean. Repair or replace. Replace. Adjust. Adjust. Replace Clean or replace. Clean. Retighten.	5-8 6-4 5-8 5-10
	<p>Abnormal condition in air intake system</p> 1. Air cleaner dirty and clogged. 2. Poor returning motion of choke valve.	Clean or replace. Repair, adjust or replace.	6-1 5-8
	<p>Clogged exhaust system</p> 1. Muffler is clogged with carbon.	Clean.	
	<p>Overheating tendency of engine</p> 1. (Refer to the section entitled "overheating.")		
	<p>Others</p> 1. Dragging brakes. 2. Slipping clutch.	Adjust as prescribed. Adjust or replace.	18-14 12-3

Complaint	Possible causes	Remedy	Page
Sudden drop of speed in high-speed cruise	<p>Abnormal condition in electrical systems</p> <ol style="list-style-type: none"> 1. Breaker contact point gap too large. 2. Spark plug gap too large. 3. Cracked rotor or cap in distributor, resulting in leakage. 4. Defective condenser. 5. Deteriorated ignition coil, or crack resulting in leakage. 6. Leaky high-tension cords. 7. Ignition timing out of adjustment. <p>Abnormal condition in fuel system</p> <ol style="list-style-type: none"> 1. Float level set too low. 2. Clogged condition of main jet circuit in carburetor. 3. Inadequately discharging fuel pump. <p>Abnormal condition in engine</p> <ol style="list-style-type: none"> 1. Loss of compression pressure due to leaky cylinder head gasket. 2. Compression pressure too low because of worn pistons, rings, cylinders or burnt valves. 	<p>Adjust as prescribed.</p> <p>Adjust as prescribed.</p> <p>Replace.</p> <p>Replace.</p> <p>Replace.</p> <p>Replace.</p> <p>Adjust as prescribed.</p> <p>ADjust as prescribed.</p> <p>Clean.</p> <p>Replace.</p> <p>Replace.</p> <p>Replace and, as necessary, rebore.</p>	<p>9-9</p> <p>9-6</p> <p>9-6</p> <p>9-7</p> <p>9-7</p> <p>9-9</p> <p>5-10</p> <p>5-8</p> <p>6-4</p> <p></p> <p></p> <p>3-3</p>
Engine not responding quickly to pedal control in picking up speed	<p>Abnormal condition in electrical system</p> <ol style="list-style-type: none"> 1. Ignition timing out of adjustment. 2. Defective spark plug, or plug gap out of adjustment. 3. Leaky high-tension cords for some cylinders. 4. Breaker contact points out of adjustment or defective. 5. Defective condenser. <p>Abnormal condition in fuel system</p> <ol style="list-style-type: none"> 1. Float level too low or too high. 2. Clogged jets in carburetor. 3. Air cleaner is dirty and clogged. <p>Abnormal condition in engine</p> <ol style="list-style-type: none"> 1. Exhaust ports dirty with carbon. 2. Muffler clogged with carbon. 3. Compression pressure too low. 4. Poorly seating valves. 5. Valve clearance out of adjustment. 6. Pistons tending to seize. 7. Bearings tending to seize. 	<p>Adjust as prescribed.</p> <p>Replace, or adjust as prescribed.</p> <p>Replace.</p> <p>Adjust or replace.</p> <p>Replace.</p> <p>Adjust as prescribed.</p> <p>Clean.</p> <p>Clean or replace.</p> <p>Clean.</p> <p>Replace worn running parts, or rebore.</p> <p>Repair.</p> <p>Adjust as prescribed.</p> <p>Replace and, as necessary, rebore.</p> <p>Replace.</p>	<p>9-9</p> <p>9-6</p> <p>9-6</p> <p>9-6</p> <p>9-7</p> <p>5-10</p> <p>5-8</p> <p>6-1</p> <p></p> <p>3-3</p> <p>4-21</p> <p>4-47</p> <p>4-26</p>

Complaint	Possible causes	Remedy	Page	
Erratic idling	Abnormal condition in ignition system 1. Ignition timing out of adjustment. 2. Defective spark plug, or plug gap too large. 3. Cracked cap in distributor, there being leakage inside. 4. Leaky high-tension cords. 5. Cracked rotor in distributor, there being leakage inside.	Adjust as prescribed. Replace, or adjust. Replace. Replace. Replace.	9-9 9-6 9-6 	
	Abnormal condition in fuel system 1. Carburetor idling adjustment is disturbed. 2. Clogged pilot jet in carburetor. 3. Float level out of adjustment. 4. Air cleaner is dirty and clogged. 5. Air is being sucked in due to loose joints or broken parts. 6. Broken carburetor packing.	Adjust as prescribed. Clean. Adjust as prescribed. Clean or replace. Retighten, or replace. Replace.	5-11 5-8 5-10 6-1 	
	Abnormal condition in engine. 1. Exhaust ports clogged with carbon. 2. Valve clearance out of adjustment. 3. Poorly seating valves. 4. Blown cylinder head gasket.	Clean. Adjust as prescribed. Repair. Replace.	 4-47 4-21 	
	Abnormal detonation	Abnormal condition in ignition system 1. Spark plugs are tending to overheat. 2. Ignition timing out of adjustment. 3. Defective breaker contact points. 4. Loose connection in high-tension or low-tension circuit.	Change plug heat value. Adjust as prescribed. Replace. Retighen.	9-5 9-9 9-6 9-2
		Abnormal condition in fuel system 1. Air-fuel mixture too lean. 2. Carburetor is dirty inside. 3. Float level out of adjustment. 4. Water inside carburetor. 5. Air is leaking in through inlet manifold joint.	Clean and adjust. Clean. Adjust as prescribed. Clean. Retighten.	5-8 5-10
		Abnormal condition in engine 1. Excessive carbon deposit on piston crowns or cylinder head. 2. Blown cylinder head gasket, resulting in low compression pressure. 3. Valve clearance out of adjustment. 4. Valves tending to seize. 5. Weakened valve springs.	Clean. Replace. Adjust as prescribed. Replace. Replace.	4-17 4-47 4-23

Complaint	Possible causes	Remedy	Page
Overheating	Abnormal condition in ignition system 1. Ignition timing out of adjustment. 2. Wrong heat value of spark plugs. 3. Breaker point gap out of adjustment in distributor.	Adjust as prescribed. 9-9 Change heat value. 9-5 Adjust as prescribed. 9-9	
	Abnormal condition in fuel and exhaust systems 1. Float level set too low. 2. Clogged jets in carburetor. 3. Loose inlet manifold. 4. Clogged exhaust ports.	Adjust as prescribed. 5-10 Clean. 5-8 Retighten. Clean.	
	Abnormal condition in cooling system 1. Not enough coolant. 2. Loose or broken water pump belt. 3. Erratically working thermostat. 4. Poor water pump performance. 5. Leaky radiator cores.	Refill. 7-10 Adjust or replace. 7-8 Replace. 7-8 Replace. Repair or replace.	
	Abnormal condition in lubrication system 1. Clogged oil filter. 2. Clogged oil strainer. 3. Deteriorated oil pump performance. 4. Oil leakage from oil pan or pump. 5. Wrong kind of lubrication oil. 6. Not enough oil in oil pan.	Replace. 4-54 Clean. Replace. 4-54 Repair. Change. 4-55 Replenish. 4-55	
	Others 1. Dragging brakes. 2. Slipping clutch. 3. Blown cylinder head gasket.	Adjust. 18-14 Adjust or replace. 12-3 Replace.	
	Abnormal engine noise	Crankshaft noise 1. Worn-down bearings, resulting in excessively large running clearances 2. Worn connecting-rod bearings. 3. Distorted connecting rods. 4. Worn crankshaft journals. 5. Worn crankpins.	Replace. 4-28/ 4-30 Replace. 4-29 Repair or replace. 4-28 Repair by grinding, or replace crankshaft. 4-31 Repair by grinding, or replace crankshaft. 4-29
Noise due to pistons, rings, pins or cylinders 1. Abnormally worn bores of cylinders. 2. worn pistons, rings or pins. 3. Pistons tending to seize. 4. Broken piston rings.		Rebore to next oversize or replace. 4-25 Replace and, as necessary, rebore to next oversize. 4-26 Replace. Replace.	

Complaint	Possible causes	Remedy	Page
	Others 1. Excessively large camshaft thrust play. 2. Excessively large crankshaft thrust clearance. 3. Valve clearance too large. 4. Not enough engine oil.	Replace. Adjust as prescribed. Adjust as prescribed. Replenish.	4-24 4-30 4-46 4-55
High fuel consumption	Abnormal condition in ignition system 1. Ignition timing out of adjustment. 2. Leaky high-tension cords. 3. Breaker point gap maladjusted. 4. Wrong heat value of spark plugs. 5. Cracked distributor cap or rotor. Abnormal condition in fuel system 1. Float level set too high. 2. Fuel leakage from tank, pipe or carburetor. 3. Erratic returning action of choke valve. 4. Clogged breather in carburetor. 5. Air cleaner is dirty and clogged. Abnormal condition in engine 1. Leakage of combustion gases from cylinder head. 2. Valve seating poorly. 3. Valve clearance out of adjustment. Others 1. Dragging brakes. 2. Slipping clutch.	Adjust as prescribed. Replace. Adjust or replace. Change heat value. Replace. Adjust as prescribed. Repair or replace. Repair and adjust. Clean. Clean or replace. Retighten, or replace head gasket. Repair. Adjust as prescribed. Adjust as prescribed. Adjust or replace.	9-9 9-9 9-5 9-6 5-10 5-8 6-1 4-21 4-47 18-16 12-3
Excessive engine oil consumption	Oil leakage 1. Oil drain plugs loose. 2. Loose oil pan securing bolts. 3. Broken oil pan gasket. 4. Leaky oil seals. 5. Blown cylinder head gasket. 6. Oil filter malpositioned or loose. "Oil pumping" (Oil finding its way into combustion chambers.) 1. Oil rings are worn or broken. 2. Piston ring end gaps are not staggered as prescribed. 3. Badly worn ring grooves. 4. Worn pistons or cylinders.	Retighten. Retighten. Replace. Replace. Replace. Set the pump right, or retighten mounting bolts. Replace. Reposition rings. Replace pistons. Replace pistons and, as necessary, rebore.	 4-27 4-35 4-27 4-26

Complaint	Possible causes	Remedy	Page
	Oil leakage along valve stems 1. Defective valve stem oil seals. 2. Badly worn valves or valve guide bushes.	Replace. Replace.	4-19

3-2. Carburetor

Complaint	Possible causes	Remedy	Page
Fuel overflow from carburetor	1. Float valve is worn or dirty with foreign matter.	Clean or replace.	5-8
	2. Float level is set too high.	Adjust as prescribed.	5-10
	3. Float is ruptured and contains some fuel.	Replace.	
	4. Broken or otherwise defective gasket.	Replace.	
	5. Loose float chamber securing screws.	Retighten.	
	6. Fuel pump discharge pressure too high.	Adjust.	

3-3. Exhaust and Muffler

Complaint	Possible causes	Remedy	Page
Poor muffling performance	1. Loose exhaust pipe connection. 2. Broken muffler gasket. 3. Broken manifold, pipe or muffler. 4. Exhaust manifold loose in place. 5. Interference between body and muffler.	Retighten. Replace. Repair or replace. Retighten. Repair, eliminating any contact.	

3-4. Clutch

Complaint	Possible causes	Remedy	Page
Slipping clutch	1. Loss of clearance at the tip of release fork.	Adjust as prescribed.	12-5
	2. Clutch facings dirty with oil.	Replace.	12-3
	3. Clutch facings excessively worn.	Replace.	
	4. Weakened diaphragm spring.	Replace.	4-32
	5. Distorted pressure plate or flywheel surface.	Replace.	
	6. Not enough play of clutch pedal.	Adjust and, as necessary, replace clutch facings.	

Complaint	Possible causes	Remedy	Page
Dragging clutch	<ol style="list-style-type: none"> 1. Excessive clutch pedal play. 2. Weakened diaphragm spring, or worn spring tip. 3. Damaged or worn splines of transmission input shaft. 4. Excessively wobbly clutch disc. 5. Clutch facings broken or dirty with oil. 	<p>Adjust as prescribed. Replace.</p> <p>Replace.</p> <p>Replace. Replace.</p>	12-5
Clutch vibration	<ol style="list-style-type: none"> 1. Glazed (glass-like) clutch facings. 2. Clutch facings dirty with oil. 3. Wobbly clutch disc, or poor facing contact. 4. Weakened torsion springs (in clutch disc). 5. Clutch disc rivets loose. 6. Distorted pressure plate or flywheel surface. 7. Weakened engine mounts (cushion pads). 	<p>Repair or replace. Replace.</p> <p>Replace.</p> <p>Replace.</p> <p>Replace the disc.</p> <p>Replace. Retighten or replace.</p>	4-32
Noisy clutch	<ol style="list-style-type: none"> 1. Worn or broken release (throw-out) bearing. 2. Excessive rattle of clutch disc hub. 3. Cracked clutch disc. 4. Pressure plate and diaphragm spring are rattling. 	<p>Replace. Replace the disc.</p> <p>Replace. Replace.</p>	12-4 12-4
Grabbing clutch	<ol style="list-style-type: none"> 1. Clutch facings are soaked with oil. 2. Clutch facings are excessively worn. 3. Rivet heads are showing out of the facing. 4. Torsion springs are weakened. 	<p>Replace. Replace. Replace. Replace.</p>	12-3 12-3

3-5. Transmission

Complaint	Possible causes	Remedy	Page
Gears slipping out of mesh	<ol style="list-style-type: none"> 1. Distorted shift rod. 2. Worn shift fork shaft. 3. Worn locating steel balls. 4. Weakened springs for locating steel balls. 5. Worn shift fork. 6. Excessive rattle in thrust direction of gears. 7. Worn ring of hub in synchronizers. 8. Worn bearings of input shaft or counter-shaft. 	<p>Repair or replace. Replace.</p> <p>Replace.</p> <p>Replace.</p> <p>Replace.</p> <p>Replace.</p> <p>Replace. Replace.</p>	14-13 14-12 14-11
Gears refusing to disengage	<ol style="list-style-type: none"> 1. Weakened or broken synchronizer springs. 2. Worn inner groove of synchronizer ring. 3. Synchronizer ring is seized on the cone. 4. Distorted shift fork shaft or shift fork. 5. Worn shift fork. 	<p>Replace. Replace. Replace the ring. Replace. Replace.</p>	14-11

Complaint	Possible causes	Remedy	Page
Excessive gear noise	1. Not enough oil in transmission.	Replenish.	14-19
	2. Defective synchronizer.	Replace.	
	3. Gears rattling in thrust direction.	Replace.	
	4. Broken or worn bearings.	Replace.	14-11
Hard shifting	1. Clutch pedal play too large, resulting in a "dragging clutch."	Adjust as prescribed.	12-5
	2. Clutch disc facings are worn.	Replace.	12-3
	3. Clutch disc facings are dirty with oil.	Replace.	
	4. Distorted or unevenly worn shift fork shaft.	Replace.	
	5. Broken locating balls.	Replace.	
	6. Worn synchronizer sleeve.	Replace.	14-12
	7. Worn synchronizer hub.	Replace.	
	8. Worn gear shift control shaft joint bush.	Replace.	

3-6. Differential

Complaint	Possible causes	Remedy	Page
Breakage (case, gears, bearings, etc.)	1. Insufficient or wrong kind of gear oil.	Replenish or change.	14-19
	2. Excessive backlash due to worn side gear thrust washer.	Adjust or replace.	14-20
	3. Loose bolts securing final gear.	Replace.	14-21
Gear noise	1. Damaged gear teeth or improper mesh of differential drive gear and final gear.	Replace	14-19
	2. Improper tooth contact in the mesh between differential drive gear and final gear.	Prescribed.	
	3. Insufficient or wrong kind of gear oil.	Replenish or replace.	
	4. Broken or otherwise damaged teeth of final gear or differential drive gear.	Replace.	
Bearing noise	1. (Constant noise) Insufficient or wrong kind of gear oil.	Replenish or change.	14-19
	2. (Constant noise) Damaged or worn bearings or worn parts.	Replace.	

3-7. Drive Shaft

Complaint	Possible causes	Remedy	Page
Vibration and noise	1. Distorted drive shaft.	Replace.	
Noise occurring at standing start or during coasting	1. Worn drive shaft splines, due to lack of lubrication.	Replace.	

3-8. Brakes

Complaint	Possible causes	Remedy	Page
Not enough braking force	1. Brake oil leakage from brake lines.	Locate the leaking point and repair.	18-16
	2. Drum-to-shoe clearance out of adjustment.	Adjust as prescribed.	
	3. Overheated brakes.	Determine the cause or overheating, and repair.	18-12
	4. Poor contact of shoes on brake drum.	Adjust for proper contact.	
	5. Brake shoes stained with oil or wet with water.	Replace.	18-12
	6. Badly worn brake shoe linings.	Replace.	18-12
Uneven braking (Brakes not working in unison.)	1. Shoe linings are wet with water or stained with oil in some brakes.	Clean or replace.	18-12
	2. Drum-to-shoe clearance out of adjustment in some brakes.	Adjust as prescribed.	18-16
	3. Drum is out of round in some brakes.	Replace.	18-12
	4. Wheel tires are inflated unequally.	Inflate equally.	17-12
	5. Defective wheel cylinders	Repair or replace.	17-13
	6. Disturbed front wheel alignment	Adjust as prescribed.	
Pedal stroke too large	1. Drum-to-shoe clearance out of adjustment.	Adjust as prescribed.	18-16
	2. Air trapped in the brake oil circuit.	Bleed air out as prescribed.	18-16
	3. Brake pedal improperly adjusted.	Adjust as prescribed.	18-16
	4. Brake oil leakage.	Locate the leaking point and repair.	
	5. Not enough oil in the brake fluid reservoir.	Replenish.	18-16
	6. Excessively worn brake drums.	Replace.	18-12
	7. Distorted or poorly contacting brake shoes.	Repair or replace.	18-12
	8. Defective cup in master cylinder.	Replace.	
	9. Worn brake shoes.	Replace.	

Complaint	Possible causes	Remedy	Page
Dragging brake	<ol style="list-style-type: none"> 1. Clogged return port in master cylinder. 2. Brake shoes improperly mounted on backing plate. 3. Weakened or broken return springs in the brake. 4. Defective wheel cylinders. 5. Sluggish parking-brake cables or linkage. 6. Brake shoes improperly adjusted. 	<p>Clean. Repair.</p> <p>Replace.</p> <p>Repair or replace. Repair or replaces. Adjust as prescribed.</p>	18-16
Pedal pulsation (Pedal pulsates when depressed for braking.)	<ol style="list-style-type: none"> 1. Damaged or out-of-round brake drums. 2. Damaged wheel bearings. 	<p>Replace.</p> <p>Replace.</p>	18-12
Braking noise	<ol style="list-style-type: none"> 1. Glazed shoe linings, or foreign matters stuck to linings. 2. Worn or loose shoe linings. 3. Broken front wheel bearings. 4. Distorted or loose backing plates. 	<p>Repair or replace.</p> <p>Replace.</p> <p>Replace.</p> <p>Replace, or retighten, securing bolts.</p>	18-12 18-12

3-9. Front Suspension and Steering System

Complaint	Possible causes	Remedy	Page
Hard steering	<ol style="list-style-type: none"> 1. Wheel tires not adequately inflated. 2. Tie rod ends tending to seize. 3. Linkage connections tending to seize. 4. Steering gearcase out of adjustment. 5. Unevenly worn steering shaft bush. 6. Poorly lubricated or worn joints in linkage. 7. Disturbed front wheel alignment. 	<p>Adjust the pressure.</p> <p>Replace.</p> <p>Repair or replace.</p> <p>Adjust as prescribed.</p> <p>Replace.</p> <p>Lubricate or replace.</p> <p>Adjust as prescribed.</p>	17-12 17-8 17-13
Wobbly steering wheel	<ol style="list-style-type: none"> 1. Wheel tires inflated unequally. 2. Wobbly wheels. 3. Large difference in tire diameter between right and left wheels. 4. Loose hub nuts. 5. Damaged or worn wheel bearings. 6. Worn or loose tie rod ends. 7. Steering gearcase out of adjustment. 8. Steering gearcase mounted loose. 	<p>Adjust the pressure.</p> <p>Repair or replace.</p> <p>Replace.</p> <p>Retighten.</p> <p>Replace.</p> <p>Replace or retighten.</p> <p>Adjust as prescribed.</p> <p>Retighten.</p>	17-12 17-8

Complaint	Possible causes	Remedy	Page	
Steering wheel pulling to one side	1. Unevenly worn wheel tires.	Replace.	18-16	
	2. Brake dragging in one road wheel.	Repair.	17-12	
	3. Wheel tires unequally inflated.	Adjust the pressure.		
	4. Worn or distorted link rods.	Replace.		
	5. Disturbed front wheel alignment.	Adjust as prescribed.	17-13	
	Shocks coming to steering wheel	1. Tire inflating pressure too high.	Reduce to the specification.	17-12
		2. Poor shock absorber performance.	Replace.	
		3. Differences in tire diameter amount the four road wheels.	Adjust.	
	4. Worn steering linkage connections.	Replace.		
	5. Worn or broken front wheel bearings.	Replace.		
	6. Loose front wheel.	Retighten.		
	7. Steering wheel loose in place.	Retighten the nut.		
	8. Weakened front coil spring.	Replace		
Rapid wear or uneven wear of wheel tires	1. Wheel tires improperly inflated.	Adjust the pressure.	17-12	
	2. Differences in diameter among the four tires.	Adjust or replace.		
	3. Worn or loose road wheel bearings.	Repalce.		
	4. Wobbly wheel tires.	Repair or replace.	17-13	
	5. Wheel tires improperly "rotated" to result in unbalance.	Adjust.		
	6. Disturbed front wheel alignment.	Adjust as prescribed.	17-13	
Steering noise	1. Loose bolts and nuts.	Retighten.		
	2. Broken or otherwise damaged wheel bearings.	Replace.		
	3. Worn or sticky tie rod ends.	Replace.		
	4. Linkage joints needing grease.	Lubricate or replace.		

3-10. Starting Motor

Complaint	Possible causes	Remedy	Page
Starter runs but pinion will not mesh into ring gear.	1. Worn pinion of starter clutch.	Replace.	
	2. Defective splines, resulting in sticky pinion plunging motion.	Repair or replace.	
	3. Worn bush.	Replace.	
	4. Wrong pinion plunging position.	Adjust.	
	5. Worn teeth of ring gear.	Replace.	

Complaint	Possible causes	Remedy	Page
Starter will not run at all, or runs but runs too slow to crank with full force.	Battery trouble	Repair or retighten.	11-14
	1. Poor contact in battery terminal connection.	Retighten.	11-14
	2. Loose grounding cable connection.	Recharge.	
	3. Battery run down.	Replace.	
4. Battery voltage too low due to battery deterioration.			
	Ignition switch trouble	Replace.	
	1. Poor contacting action.	Retighten.	
	2. Lead wire socket loose in place.	Repair.	
	3. Open-circuit between ignition switch and magnet switch.		
	Magnet switch trouble	Retighten.	
	1. Lead wire socket loose in place.	Replace, or repair.	
	2. Burnt contact plate, or poor contacting action.	Replace.	
	3. Open-circuit in pull-in coil.	Replace.	
4. Open-circuit in holding coil.			
	Starter proper trouble	Repair or replace.	10-7
	1. Brushes are seating poorly or worn down.	Repair or replace.	10-6
	2. Burnt commutator.	Replace.	10-6
	3. Open-circuit in armature winding.	Replace.	
4. Worn-down starter.			
Starter does not stop running.	1. Fused contact points of magnet-switch contact plate.	Repair or replace.	
	2. Short-circuit between turns of magnet-switch coil (layer short-circuit).	Replace.	
	3. Failure of returning action in ignition switch.	Replace.	

3-11. Alternator

Complaint	Possible causes	Remedy	Page
Battery quickly becomes over-discharged.	1. Loose or broken "V" belt.	Adjust or replace.	7-8
	2. Open-circuit in stator winding.	Repair or replace.	11-8
	3. Open-circuit in rotor winding.	Repair or replace.	11-7
	4. Excessively worn slip ring brushes.	Replace.	11-8
	5. Weakened brush springs.	Replace.	
	6. Regulator setting too low. (Regulated voltage too low.)	Adjust as prescribed.	11-9
	7. Poor contacting action of low-speed point in regulator.	Repair.	11-9
	8. Fused high-speed contact point in regulator.	Repair, or replace.	

Complaint	Possible causes	Remedy	Page
	9. Improper acid concentration in or low level of battery electrolyte. 10. Defective battery cell plates 11. Insufficient contact in battery terminal connection. 12. Open-circuit between two "F" terminals (one on regulator and the other on alternator), or high resistance. 13. Excessive electrical load.	Replace, or replenish. Replace the battery. Clean and retighten. Repair. Advise the user to economize.	11-12 11-14
Battery tends to become overcharged.	1. Regulated voltage set too high. 2. Poorly grounded "E" terminal of regulator. 3. Open-circuit in voltage-regulator pressure coil. 4. Fused low-speed point of regulator. 5. Poor contacting action of high-speed point of regulator. 6. Open-circuit or high resistance between two "N" terminals (one on alternator and the other on regulator).	Adjust as prescribed. Repair. Replace. Repair or replace. Repair or replace. Repair.	11-9
Alternator noise	1. Worn, loose or otherwise defective bearings.	Replace.	

3-12. Wiper Motor

Complaint	Possible causes	Remedy	Page
Wiper will not run.	1. Fuse is set loose or blown off. 2. Incomplete metal-to-metal contact in connector. 3. Worn or floating brushes. 4. Dirty or burnt commutator. 5. Short-circuited or fused field coil. 6. Loose terminal connection on wiper switch.	Tighten or replaces. Repair. Replace or repair. Repair or replace. Replace. Repair.	
Wiper will not stop running.	1. Defective wiper switch.	Replace or repair.	
Wiper stops at wrong position.	1. Improper wiper arm setting. 2. Cover plate incorrectly positioned in place.	Repair. Repair.	
Poor wiping action.	1. Insufficient pressure of wiper arm. 2. Deteriorated or hardened blade. 3. Blade improperly set. 4. Windshield dirty with oil.	Replace. Replace. Repair or replace. Clean.	

3-13. Fuel Meter

Complaint	Possible causes	Remedy	Page
Faulty meter indication	<ol style="list-style-type: none"> 1. Incomplete metal-to-metal contact in terminal connections. 2. Defective receiver gauge due to burnt point or deformed bimetal element. 3. Erratic float movement. 4. Defective grounding (for float and gauge). 	<p>Retighten.</p> <p>Replace.</p> <p>Repair or replace.</p> <p>Repair.</p>	
No indication	<ol style="list-style-type: none"> 1. Open-circuit. 2. Open-circuited heat wire. 3. Burnt point. 4. Deformed bimetal element. 5. Open-circuited resistor. 	<p>Repair.</p> <p>Replace.</p> <p>Replace.</p> <p>Replace.</p> <p>Replace.</p>	20-2/ 20-3

3-14. Turn Signal Lights

Complaint	Possible causes	Remedy	Page
Flashing frequency is higher on one side, or flashing occurs only on one side, right or left.	<ol style="list-style-type: none"> 1. Lights are imperfectly grounded. 2. Lights of wrong watt ratings are used. 3. One of the light bulbs is blown on right or left side or on front or rear side. 4. Defective turn signal relay. 5. Open-circuit or high resistance between switch and lights. 	<p>Repair.</p> <p>Replace.</p> <p>Replace.</p> <p>Replace.</p> <p>Repair.</p>	
No flashing on occurs on both sides, right and left.	<ol style="list-style-type: none"> 1. Blown fuse in turn signal circuit. 2. Open-circuit or high resistance between battery and switch. 3. Defective turn signal relay. 	<p>Replace.</p> <p>Repair.</p> <p>Replace.</p>	
Flashing frequency is too low, or no flashing occurs on both sides.	<ol style="list-style-type: none"> 1. Lights of a smaller watt rating than the specification rating are used. 2. One of the lights on right or left side or on front or rear side is poorly grounded. 3. Supply voltage is too low. 4. Fuse set loose in place, resulting in poor contact. 5. Incomplete metal-to-metal contact in connector. 6. Defective turn signal relay. 	<p>Replace.</p> <p>Repair.</p> <p>Recharge the battery.</p> <p>Repair or replace.</p> <p>Repair.</p> <p>Replace.</p>	11-14
Flashing frequency is too high.	<ol style="list-style-type: none"> 1. Lights of a larger wattage than the specification are used. 2. Defective flasher. 	<p>Replace.</p> <p>Replace.</p>	

3-15. Speedometer

Complaint	Possible causes	Remedy	Page
Faulty indication	<ol style="list-style-type: none"> 1. Damaged speedometer drive or driven gear. 2. Defective drive cable. 3. Drive cable incompletely or improperly tied into the meter. 4. Defective speedometer. 	Replace. Replace. Set right. Replace.	
Speedometer noise	<ol style="list-style-type: none"> 1. Inadequately lubricated or defective cable. 	Lubricate or replace.	

3-16. Water Temperature Meter

Complaint	Possible causes	Remedy	Page
Faulty indication	<ol style="list-style-type: none"> 1. Incomplete metal-to-metal contact in terminal connections. 2. Receiver gauge defective (due to burnt point or deformed bimetal element). 3. Defective temperature gauge. 	Repair and tighten. Replace. Replace.	
No indication	<ol style="list-style-type: none"> 1. Open-circuit. 2. Defective receiver gauge (open-circuited heat wire, deformed bimetal element or pointer). 3. Defective temperature gauge. 	Repair Replace. Replace.	20-2/ 20-3

3-17. Oil Pressure Warning Light

Complaint	Possible causes	Remedy	Page
Turning ignition switch on (for engine starting) does not light this light.	<ol style="list-style-type: none"> 1. Light bulb is blown. 2. Blown-off fuse. 3. Defective oil pressure switch. 4. Open-circuit between light and ignition switch. 5. Open-circuit between light and pressure switch. 	Replace. Replace. Replace. Repair. Repair.	
Light remains burning even after engine starts up.	<ol style="list-style-type: none"> 1. Not enough oil in engine oil pan. 2. Oil pressure too low. 3. Defective oil pressure switch. 	Replenish. Repair or replace the pump. Replace.	4-55 4-53

3-18. Charge Warning Light

Complaint	Possible causes	Remedy	Page
Turning ignition switch on (for engine starting) does not light this light.	<ol style="list-style-type: none"> 1. Light bulb is blown. 2. Blown- off fuse. 3. Open-circuit. 4. High resistance in circuit wire due to loose connection. 	Replace. Replace. Replace. Retighten.	
Light remains burning even after engine starts up.	<ol style="list-style-type: none"> 1. Alternator is not producing full output. 2. Defective voltage regulator. 3. Ground-circuit formed between light and the battery. 	Repair. Repair or replace. Repair.	3-14 11-9

3-19. Horn

Complaint	Possible causes	Remedy	Page
Horn will not sound off.	<ol style="list-style-type: none"> 1. Blown-off fuse. 2. Broken circuit wire. 3. Defective horn. 	Replace. Repair. Replace.	
Poor sound quality	<ol style="list-style-type: none"> 1. Incomplete contacting action inside horn switch. 2. Improper point gap or burnt point inside the horn. 3. Cracked diaphragm 	Repair. Repair or replace. Replace.	