

<i>Possible Cause</i>	<i>Check</i>	<i>Remedy</i>
(1) Incorrect valve adjustment.	Check valve clearance.	Adjust clearance.
(12) Defective magnetos.	(Par. 23 for disassembly instructions)	
(a) Burnt out armature.	Check armature.	Replace armature.
(b) Breaker points pitted or worn.	Inspect points.	Clean breaker points or replace.
(c) Breaker points improperly adjusted.	Check breaker point gap.	Adjust gap to 0.018 to 0.020 in.
(d) Loose or defective cables.	Examine cables.	Replace if worn or oil-sunk.
(e) Burnt out capacitor.	Test capacitor.	Replace capacitor.
(f) Dirty rotating disc, collector rings, or brushes.	Inspect parts.	Clean or replace defective parts.
(g) High tension wire shorted.	Check for short.	Replace if broken, or insulation damaged.
(11) Water in cylinder.	Check cylinder head gasket. Check head and block for cracks. Check exhaust pipe for water.	Tighten head bolts or replace gasket. Adjust downward pitch of exhaust pipe.
(14) Air or compression leaks from loose bolts or defective gaskets.	Check for oil or air leaks.	Tighten bolts or replace gaskets.

**5. Engine Kicks Back When Being Cranked.**

<i>Possible Cause</i>	<i>Check</i>	<i>Remedy</i>
(1) Magnetos advanced too far.	Check magneto timing.	Adjust timing.
(2) Crankshaft and camshaft gears improperly meshed.	Check timing.	Correct timing.

**c. Engine Starts But Misfires.**

<i>Possible Cause</i>	<i>Check</i>	<i>Remedy</i>
(1) Loose electrical connections.	Check connections.	Tighten connections.

<i>Possible Cause</i>	<i>Check</i>	<i>Remedy</i>
(2) Defective spark plugs.	Check plugs for cracked insulation, cleanliness, and correct gap.	Clean, or replace. Adjust spark gap.
(3) Defective ignition cables.	Examine cables.	Replace worn cables.
(4) Defective magnetos.	See subparagraph a(12) above.	
(5) Improper timing.	See subparagraph a(10) above.	
(6) Poor compression.		
(a) Leaky valves	Check valve condition.	See parts. Corrective Maintenance, for proper action.
(b) Improper valve clearance.	Check clearance.	
(c) Leaky spark plug gasket.	Check plug gasket.	
(d) Loose head, and gasket.	Check head bolts.	Check for air leaks.
(e) Valves not seating properly.	Check valves for warp and valve seat for carbon.	
(f) Worn or sticking piston rings.	Check compression.	
(g) Scored cylinders, worn pistons.	Check engine compression.	
(h) Broken valve springs, bent and stems.	Inspect valve springs and stems.	
(7) Mixture too lean.	Check compensating jet.	Set jet in center of venturi tube.
(8) Mixture too rich.	Check choke rod position.	Push choke down.

**d. Engine Backfires Through Carburetor.**

<i>Possible Cause</i>	<i>Check</i>	<i>Remedy</i>
(1) Fuel contains water or dirt.	Check fuel and strainer.	Use fresh fuel. Replace strainer screen.
(2) Air leak between carburetor and cylinder head.	Check intake manifold gasket.	Replace worn gasket.