

CARBURETION TROUBLE SHOOTING

NOTE — This is a general troubleshooting guide. Not all steps will apply to all carburetors. When using this guide, locate the symptom in column one that corresponds to your problem and determine the possible causes in column two. Match the number of the possible cause with the same number in column three, and you will have the correction required.

CONDITION	POSSIBLE CAUSE	CORRECTION
COLD STARTING SYMPTOM		
▶ Engine cranks but will not start	1) Choke not closing (frozen) 2) Choke cable or linkage binding or out of adjustment 3) Faulty cold start or thermo-start valve 4) No fuel to carburetor 5) Faulty fuel pump	1) Inspect choke plate and coil; free up and adjust 2) Free up and adjust 3) Test, replace if needed 4) Add fuel if needed, check for pinched or blocked fuel line or filter 5) Test and/or replace
▶ Flooding	1) Faulty fuel inlet needle and/or seat 2) Dirt holding needle off seat 3) Excessive fuel pump pressure 4) Improper fuel/float level (too high) 5) Restricted (dirty) air cleaner 6) Ruptured, split internal carburetor seals or gaskets 7) Choke plate setting (vacuum kick) too narrow 8) Wrong fast idle cam index 9) Fast idle RPM too low	1) Replace 2) Clean and reinstall 3) Test, replace if needed 4) Adjust float level and drop 5) Clean and/or replace 6) Replace as needed 7) Adjust, check linkage 8) Check linkage, adjust fast idle cam setting 9) Adjust RPM
▶ Engine stalls after starting	1) Choke plate setting (vacuum kick) too wide 2) Fast idle RPM too low 3) Wrong fast idle cam index 4) Vacuum leak 5) Low fuel pump output 6) Fuel/float level too low 7) Faulty intake manifold gasket 8) Incorrect fuel/air mixture setting 9) Faulty idle fuel shut off valve 10) Idler jet blocked 11) Damaged idle adjust screw	1) Adjust, check linkage 2) Adjust RPM 3) Check choke control lever; set cam index correctly 4) Locate and repair 5) Test and/or replace 6) Adjust float level and float drop 7) Replace gasket 8) Adjust fuel/air mixture 9) Replace shut off valve 10) Clean 11) Replace screw
▶ Engine starts; idles rough and erratic	1) Flooding in carburetor 2) Vacuum leak 3) Incorrect idle RPM 4) Damaged idle adjust screw 5) Clogged slow jet 6) Incorrect fast idle cam index setting 7) Carburetor seals leaking 8) Carburetors not synchronized; dual carburetor models only 9) Incorrect fuel/float level 10) Idling air and/or bypass holes blocked 11) Faulty anti-dieseling solenoid valve 12) Worn throttle shafts 13) Stuck anti-stall dashpot	1) See <i>Flooding</i> in this table 2) Locate and correct 3) Adjust fast idle RPM 4) Replace screw 5) Clean 6) Adjust fast idle cam setting 7) Locate and replace 8) Synchronize carburetors 9) Adjust float drop and float setting 10) Clean 11) Replace solenoid 12) Replace 13) Replace dashpot

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CARBURETION TROUBLE SHOOTING (Cont.)

CONDITION	POSSIBLE CAUSE	CORRECTION
HOT STARTING SYMPTOM		
▶ Engine cranks but will not start	<ol style="list-style-type: none"> 1) Engine flooded, fuel level too high 2) Fuel vapors in carburetor bowl 3) Fuel line hot, touching engine block or exhaust 	<ol style="list-style-type: none"> 1) Adjust float drop and setting; inspect needle and seat for proper seating; check for dirt 2) Inspect bowl vent operation and correct 3) Inspect and reroute fuel line
COLD ENGINE DRIVEABILITY SYMPTOM		
▶ Engine stalls when put in gear	<ol style="list-style-type: none"> 1) Incorrect choke vacuum kick setting 2) Fast idle RPM too low 3) Incorrect fast idle cam setting 4) Improper choke adjustment 	<ol style="list-style-type: none"> 1) Inspect and correct 2) Adjust fast idle RPM 3) Correct cam positioning 4) Adjust choke
▶ Hesitation, stalling during acceleration	<ol style="list-style-type: none"> 1) Defective choke control switch 2) Incorrect choke vacuum kick setting 3) Low fuel/float level 	<ol style="list-style-type: none"> 1) Test, replace if needed 2) Adjust vacuum kick 3) Adjust float drop and setting; check fuel level
Backfire	<ol style="list-style-type: none"> 4) Faulty accelerator pump or blocked pump discharge 	<ol style="list-style-type: none"> 4) Inspect, adjust pump stroke, plunger; test fuel discharge quantity; check pump spray direction
Stumble	<ol style="list-style-type: none"> 5) Secondary throttle not closed, wrong lockout adjustment 6) Bypass holes and ducts blocked 7) Incorrect intake air preheater setting 8) Incorrect carburetor synchronization; on dual carburetor models 9) Main and/or air corrector jets blocked 10) Faulty power valve 11) Plugged heat crossover system 	<ol style="list-style-type: none"> 5) Adjust secondary throttles 6) Clean preheater assembly 7) Set to proper season 8) Synchronize carburetors 9) Inspect and clean 10) Replace 11) Clean and test heat crossover valve; clean passages
WARM ENGINE DRIVEABILITY SYMPTOM		
▶ Low power, Surging high speed operation	<ol style="list-style-type: none"> 1) Main jets clogged 2) Fuel filter dirty (restricted) 3) Pinched, blocked fuel line 4) Air cleaner dirty (restricted) 5) Faulty power valve 6) Throttle linkage out of adjustment; not opening fully 7) Low fuel pump output 8) Improper fuel level 9) Carburetor seals leaking 	<ol style="list-style-type: none"> 1) Clean 2) Replace filter 3) Inspect and repair 4) Replace air cleaner 5) Adjust or replace 6) Inspect and adjust linkage 7) Replace after testing 8) Adjust float/fuel level 9) Replace seals, gaskets
▶ Carburetors cannot be synchronized (Dual Carburetor models)	<ol style="list-style-type: none"> 1) Weak return springs 2) Linkage binding, needs adjusting 3) Blocked idler jets 4) Faulty mixture control screw(s) 5) Faulty carburetor seals 6) Vacuum leak(s); Check for leak at brake unit 7) Carburetors not tightened to intake manifold properly 	<ol style="list-style-type: none"> 1) Replace springs 2) Inspect, clean and adjust 3) Clean jets 4) Replace screw(s) 5) Replace seals as needed 6) Locate and correct leak 7) Evenly tighten carburetor screws; check torque

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CARBURETION TROUBLE SHOOTING (Cont.)

CONDITION	POSSIBLE CAUSE	CORRECTION
▶ High fuel consumption	<ol style="list-style-type: none"> 1) Fuel system leak 2) Wrong size jets 3) Faulty fuel inlet needle and/or seat 4) Fuel mixture setting incorrect 5) Dirty air cleaner 6) Excessive accelerator pump discharge 7) Intake air preheater not ON or OFF according to season 8) Enrichment system does not switch off 9) Choke valve not opening all the way 10) Secondary throttle opens too early 	<ol style="list-style-type: none"> 1) Locate and repair leak 2) Install correct jets 3) Replace needle and seat 4) Adjust idle RPM and mixture 5) Clean or replace 6) Test and adjust fuel discharge quantity 7) Temperature above 50°F (10°C), preheater should be OFF 8) Free up vacuum plunger 9) Adjust choke valve 10) Inspect secondary throttle linkage, adjust or repair as needed

GASOLINE FUEL INJECTION TROUBLE SHOOTING

CONDITION	POSSIBLE CAUSE	CORRECTION
COLD START SYMPTOM		
▶ Engine cranks, will not start	<ol style="list-style-type: none"> 1) Fuel pump not working 2) "Cold" control pressure incorrect (CIS) 3) Auxiliary air valve does not open 4) Cold start valve does not operate 5) Cold start valve leaking 6) Sensor plate stop set incorrectly (CIS) 7) Sensor plate and/or plunger sticking 8) Vacuum leak 9) Fuel system leak 10) Faulty Thermo Time switch 11) Distributor triggering contacts (AFC) 12) Temperature sensors 1 & 2 (AFC) 	<ol style="list-style-type: none"> 1) Check fuel pump and double fuse relay, replace as necessary 2) Replace warm-up regulator if pressure not to specification 3) Replace valve 4) Check electrical power to valve, replace valve if necessary 5) Replace valve 6) Adjust to specifications 7) Free up or replace as needed 8) Repair vacuum leaks 9) Repair fuel leaks 10) Replace switch 11) Repair or replace as needed 12) Replace as necessary
▶ Engine hard starting	<ol style="list-style-type: none"> 1) "Cold" control pressure incorrect (CIS) 2) Auxiliary air valve does not open 3) Cold start valve does not open 4) Cold start valve leaking 5) Sensor plate stop set incorrectly (CIS) 6) Sensor plate and/or plunger stuck (CIS) 7) Vacuum leak(s) 8) Fuel leak(s) 9) Thermo Time switch does not close 	<ol style="list-style-type: none"> 1) Replace warm-up regulator 2) Replace valve 3) Check for electrical power to valve, replace valve if necessary 4) Replace cold start valve 5) Adjust sensor plate stop to specifications 6) Free up or replace as necessary 7) Repair vacuum leak(s) 8) Repair fuel leak(s) 9) Replace Thermo Time switch