SUPERCHARGERS

TROUBLESHOOTING GUIDE

For all Holley Automotive Superchargers

This material is not intended to replace your installation instructions. This information is provided as a helpful supplement. Holley Superchargers are designed for trouble-free installation and operation. However, since individuals who have little experience with engine tuning and modification do most installations, this information is provided so that you may identify the most common after installation problems. If, after exploring the suggestions, you still have a problem or have questions, please don't hesitate to contact our Technical Service Dept. 1-270-781-9741, Monday through Friday, 7:00 a.m. to 5:00 p.m. We are here to help before and after the sale. The suggestions are listed in order of likelihood of the fix.

Engine hesitates or "bogs" during initial acceleration (after engine is at operating temperature).
Too small of an accelerator pump in carb(s). Either increase the pump size or the nozzle size or both.
Check for sufficient fuel pressure.
Check for restricted fuel filter or lines.
Check for retarded ignition timing.

Engine backfires when cold.
Allow engine to warm up before rapidly opening the throttle(s).
Install a larger accelerator pump or the nozzle size or both.
Install a choke system.

Engine backfires when warm.
Install a larger accelerator pump.
Check for a lean fuel condition (carb too small, too small primary or secondary jet size or check for restricted fuel filter(s) or fuel lines).
Check for vacuum leaks.
Check ignition timing (timing may need to be advanced).
Check for improperly adjusted intake valve(s) (valve staying open during cylinder firing)

Engine idles too high.
Check for a vacuum leak (use soapy water and watch for bubbles disappearing into leaking area or spray WD 40 in the general area, if the RPM of the engine goes up, there is a leak that must be sealed).
Check for too much ignition advance.
Check for excessive fuel bowl level in carb(s).
Check for leaking needle and seat.
Check for binding linkage.

Headers glow red.
Check for lean condition (need larger jets or larger carb).
Check for vacuum leak.
Check for excessively retarded ignition timing.
Check engine temperature.
Check camshaft timing.

Blower makes noise when new.
The Teflon that Holley uses to seal and properly clearance the blower will generally make noise while it is breaking in. This is normal and will not effect the life of the blower or the engine. This noise may last up to several hours of running time.
Check the oil level in the blower. Be sure it is filled to the proper level.
Be sure that the cardboard has been removed on the bottom of the blower (where air goes into the manifold).

Blower makes "rattle" noise.
Idle is set too low causing harmonic vibration to transmit via drive belts to blower drive.
Noise is from another source—remove the drive belt and run the engine to isolate the noise.
Shaft and coupler are loose (rare in new units).

Blower turned freely on the bench, but is tight or won't turn by hand on the engine.
Check to be sure that the blower is not over-tightened. If so, the case may distort enough to cause rotor-to-case interference (may result in severe damage).
Check the top surface of the intake manifold with a straight edge on the engine. If the manifold is not installed flat or the intake gaskets are differing thinknesses or if the block is out of square, the manifold will twist when tightened down, deforming the blower contact surface.
Check for debris in rotor area.

Engine speed increases and decreases while idling.
The engine is running too rich.
Carb is too big (too much CFM rating).
Camshaft design can cause this effect if the life and duration are substantial.
Worn throttle shaft on carb(s).

Engine blows out black exhaust smoke.
The fuel mixture is too rich. Reduce the jetting size (use caution to be sure not to go lean) or increase the power valve to a higher factor to prevent it from opening too soon. Look for leaking needle and seat in carb and excessive fuel pressure.

Engine runs too rich and spark plugs are black and sooty.
See "Engine blows black smoke".

Engine runs too lean and spark plugs are very white.
Check for vacuum leak.
Insufficient fuel pressure.
Jets in carb too small.
Restriction in fuel supply.

Engine detonates (knocks).
Too much ignition advance. Retard the timing until detonation is eliminated.
Insufficient fuel octane. You should run 92 octane or better fuel only.
Too much boost.
Compression ratio too high.
Lean fuel condition.
Severe vacuum leak.
Wrong camshaft for application.

No low RPM or bottom end power.
Air cleaner too restrictive.
Fuel delivery problem.
Secondary on carb(s) not opening or not fully opening.
Linkage bind.
Wrong camshaft application.
Timing advance is insufficient.
Camshaft is retarded.
Not enough boost.
Compression ratio too low.

No high RPM or top end power.
Carb too small.
Secondary on carb(s) not opening.
Linkage binding.
Fuel delivery problem.
Blower drive belt is slipping.
Blower displacement is too small for application.

Engine won't rev very high.
Refer to "No high RPM or top end power".

Engine has vacuum at low RPM.
This is normal while the engine is not under boost.

Blower belt comes off or slips.
Idler is not adjusted correctly (incorrect belt tension).
Pulleys are not in line with each other.
One or more engine pulleys are out of round.
Belt is too long.
Blower is being driven beyond recommended RPM range.

Oil leaks from the front cover area or snout.
Oil level in the blower is too high.
Wrong type of oil in blower.
Front seal worn (normally found on older installations only).
Severe overtightening of the drive belt tension causing the snout to pull down during expansion.
Worn pulley sleeve (normally found on older installations only).
Seals at end of rotors worn out allowing boost to pressurize the gear oil area (normally found on older installation only).

Engine runs hot.
Check for lean fuel condition.
Ignition timing retarded.
No thermostat in place or too high a temp rated thermostat.
Insufficient radiator size.
Too much boost.
Compression ratio too high.
Inadequate water pump.

Engine runs too cold.
Thermostat missing or too low a temperature rating.

Excessive engine oil blow-by
The PVC line is installed in the intake manifold—it must be installed at the carb base.
Leaking piston rings.
Cracked piston or ring.
Worn valve guides.
Excessive engine operating temperatures.

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