

TROUBLE SHOOTING - BASIC PROCEDURES

ABC123

Entire Article
2000 Chevrolet Camaro

ARTICLE BEGINNING

GENERAL TROUBLE SHOOTING

*** PLEASE READ THIS FIRST ***

NOTE: This is GENERAL information. This article is not intended to be specific to any unique situation or individual vehicle configuration. The purpose of this Trouble Shooting information is to provide a list of common causes to problem symptoms. For model-specific Trouble Shooting, refer to SUBJECT, DIAGNOSTIC, or TESTING articles available in the section(s) you are accessing.

ACCESSORIES & ELECTRICAL

CHARGING SYSTEM TROUBLE SHOOTING

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BASIC CHARGING SYSTEM TROUBLE SHOOTING CHART

CONDIT ION	POSSI BLE CAUSE	CORRECTI ON
Vehicle Will Not Start	Dead battery	Check battery cells, alternator belt tension and alternator output
	Loose or corroded battery connections	Check all charging system connections
	Ignition circuit or switch mal function	Check and replace as necessary
Alternator Light Stays On With Engine Runni ng	Loose or worn alternator drive belt	Check alternator drive tension and condition, See Belt Adjustment in TUNE-UP article in the TUNE-UP section
	Loose alternator wiring connections	Check all charging system connections

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Short in alternator light wiring See Indicator Warning Lights in STANDARD INSTRUMENTS in the ACCESSORIES & EQUIPMENT section

Defective alternator stator or diodes See Bench Tests in ALTERNATOR article

Defective regulator See Regulator Check in ALTERNATOR article

AA
Alternator Light Stays Off With Ignition Switch ON
Blown fuse See WIRING DIAGRAMS

Defective alternator See Testing in ALTERNATOR article

Defective indicator light bulb or socket See Indicator Warning Lights in STANDARD INSTRUMENTS in the ACCESSORIES & EQUIPMENT section

AA
Alternator Light Stays OFF With Ignition Switch ON
Short in alternator wiring See On-Vehicle Tests in ALTERNATOR article

Defective rectifier bridge See Bench Tests in ALTERNATOR article

AA
Lights or Fuses Burn Out Frequently
Defective alternator wiring See On-Vehicle Tests in ALTERNATOR article

Defective regulator See Regulator Check in ALTERNATOR article

Defective battery Check and replace as necessary

AA
Ammeter Gauge Shows Discharge
Loose or worn drive belt Check alternator drive belt tension and condition. See Belt Adjustment in TUNE-UP article in the TUNE-UP section

Defective wiring Check all wires and

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	wire connections
Defective alternator or regulator	See Bench Tests and On-Vehicle Tests in ALTERNATOR article
Defective ammeter, or improper ammeter wiring connection	See Testing in STANDARD INSTRUMENTS in the ACCESSORIES & EQUIPMENT section
AAAAA Noisy Alternator	Loose drive pulley Tighten drive pulley attaching nut
	Loose mounting bolts Tighten all alternator mounting bolts
	Worn or dirty bearings See Bearing Replacement ALTERNATOR article
Defective diodes or stator	See Bench Test in ALTERNATOR article
AAAAA Battery Does Stay Charged	Loose or worn drive belt Check alternator drive belt tension and condition. See Belt Adjustment in appropriate TUNE-UP article in the TUNE-UP section
	Loose or corroded battery connections Check all charging system connections
	Loose alternator connections Check all charging system connections
	Defective alternator or battery See On-Vehicle Tests and Bench Tests in ALTERNATOR article
Add-on electrical accessories exceeding alternator capacity	Install larger alternator
AAAAA Battery Overcharged- Uses Too Much Water	Defective battery Check alternator output and repair as necessary
	Defective alternator See On-Vehicle Test and Bench Tests in

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ALTERNATOR article

Excessive alternator voltage Check alternator output and repair as necessary

AA

IGNITION SYSTEM TROUBLE SHOOTING

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Ignition Secondary Trouble Shooting Chart

AA;

3 START: Visually inspect Spark Plug Wires, Coil Wires, 3
3 Plug Wire Boots, Rotor, and Distributor Cap for 3
3 signs of damage. 3

AAU

AA;

UAAAA;	UAAAA;
3 OK 3	3 NOT OK 3
AAAAAU	AAAAAU

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA;

3 * To test secondary ignition 3
3 system, modify a Spark Plug 3
3 by attaching a ground wire 3
3 to the body of the plug and 3
3 widening the gap to 1/4-3/8". 3
3 Disconnect spark plug wire 3
3 and insert test plug. Ground 3
3 plug, crank engine, and 3
3 check for spark. 3

AAAAAAAAAAAAAAAAAAAAAAAAAAAA;

3 * Repair or replace 3
3 damaged components 3
3 as necessary 3

AAAAAAAAAAAAAAAAAAAAU

AAAAAAAAAAAAAAAAAAAAAAAAAAAAU

AAAAAAAAAAAAAAAAAAAAAAAAAAAA;

UAAAA;	UAAAA;
3 GOOD SPARK 3	3 NO SPARK 3
AAAAAU	AAAAAU

AAAAAAAAAAAAAAAAAAAAAAAAAAAA;

3 * If plug sparks, driveability 3
3 problem is most likely NOT 3
3 in the ignition system. 3

AAAAAAAAAAAAAAAAAAAAAAAAAAAA;

3 * Remove coil wire from the 3
3 distributor and attach the 3
3 modified spark plug. Ground 3
3 the plug and crank engine 3
3 while checking for spark. 3

AAAAAAAAAAAAAAAAAAAAU

AAAAAAAAAAAAAAAAAAAAAAAAAAAA;

UAAAA;	UAAAA;
3 GOOD SPARK 3	3 NO SPARK 3

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AAAAAAAAAAAAAAÜ	AAAAAAAAAAAAAAÜ
ÜAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA¿	ÜAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA¿
3 * If plug has a good spark,	3 * Proceed to the IGNITION
3 the problem is in the plug	3 PRIMARY TROUBLE SHOOTING
3 wires, distributor cap, or	3 CHECK CHART below in this
3 rotor. Replace components	3 article.
3 as necessary.	3 AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAÜ
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAÜ	

Igni ti on Pri mary Troubl e Shooti ng Chart

ÜAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA¿	ÜAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA¿
3 START: Visually inspect primary ignition wires for	3
3 broken, frayed, split, or cut wires. Also check	3
3 for loose, corroded, or disconnected connectors.	3
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAÜ	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAÜ
ÜAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA¿	ÜAAAAAAAAAA¿
ÜAAA¿	ÜAAAA¿
3 OK	3 NOT OK
AAAAÜ	AAAAÜ
ÜAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA¿	ÜAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA¿
3 * Check that battery voltage	3 * Repair or replace damaged
3 is at least 11.5 volts.	3 components as necessary.
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAÜ	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAÜ
ÜAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA¿	ÜAAAA¿
ÜAAA¿	ÜAAA¿
3 NOT OK	3 OK
AAAAÜ	AAAAÜ
ÜAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA¿	ÜAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA¿
3 * Replace or recharge the	3 * Check for battery voltage
3 battery.	3 at the positive terminal of
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAÜ	3 the coil.
ÜAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA¿	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAÜ
ÜAAA¿	ÜAAAA¿
3 OK	3 NOT OK
AAAAÜ	AAAAÜ
ÜAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA¿	ÜAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA¿
3 * Check air Gap of the Pick-Up	3 * Check resistance of ballast
3 coil in the distributor.	3 resistor (if used) for the
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAÜ	3 correct resistance value.
ÜAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA¿	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAÜ
ÜAAA¿	ÜAAAAAA¿
3 OK	3 NOT OK
AAAAÜ	AAAAÜ
ÜAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA¿	ÜAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA¿
3 * Check Pick-Up coil for	3 * Adjust or replace as
3 correct resistance value.	3 necessary.
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAÜ	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAÜ
ÜAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA¿	ÜAAA¿
ÜAAAAAA¿	ÜAAA¿

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3 NOT OK 3	3 OK 3	3
AAAAAAAAAAU	AAAAAU	3
UAAAAAAAAAAAAAAAAAAAAAAAAAAAAA;	UAAAAAAAAAAAAAAAAAAAAAAAAAAAAA;	3
3 * Replace Pick-Up coil if	3 * Check control module for	3
3 not to specification.	3 good ground connections.	3
AAAAAAAAAAAAAAAAAAAAAAAAAAAAA	AAAAAAAAAAAAAAAAAAAAAAAAAAAAA	3
	UAAA;	3
	3 OK 3	3
	AAAAU	3
UAAAAAAAAAAAAAAAAAAAAAAAAAAAAA;		3
3 * If vehicle fails to run at this point, go to		3
3 the appropriate article in the ENGINE		3
3 PERFORMANCE section.		3
AAAAAAAAAAAAAAAAAAAAAAAAAAAAA	UAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	3
	UAAAAAAAAAAAAAAAAAAAAAAAAAAAAA;	
UAAA;	UAAAAAAAA;	
3 OK 3	3 NOT OK 3	
AAAAU	AAAAAAU	
UAAAAAAAAAAAAAAAAAAAAAAAAAAAAA;	UAAAAAAAAAAAAAAAAAAAAAAAAAAAAA;	
3 * Check wires from the battery/	3 * Replace ballast resistor	3
3 ignition switch to the coil.	3 if the measured resistance	3
3 Also check the coil primary	3 value is not within	3
3 and secondary resistance.	3 specification.	3
AAAAAAAAAAAAAAAAAAAAAAAAAAAAA	AAAAAAAAAAAAAAAAAAAAAAAAAAAAA	

STARTER TROUBLE SHOOTING

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BASIC STARTER TROUBLE SHOOTING CHART

CONDI TI ON	POSSI BLE CAUSE	CORRECTI ON
Starter Fails to Operate	Dead battery or bad connections between starter and battery	Check battery charge and all wires and connections to starter
	Igni ti on swi tch faulty or mi sadj uste d	Adj ust or repl ace i gni ti on swi tch
	Open ci rcui t between starter swi tch i gni ti on terminal on starter relay	Check and repair wi res and connections as necessary
	Starter relay or starter	See Testi ng i n STARTER

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	defective	article
	Open solenoid pull-in wire	See Testing in STARTER article
Starters Does Not Operate and Headlights Dim	Weak battery or dead cell	Charge or replace battery as necessary
	Loose or corroded battery connections	Check that battery connections are clean and tight
	Internal ground in starter windings	See Testing in STARTER article
	Grounded starter fields	See Testing in STARTERS
	Armature rubbing on pole shoes	See STARTER article
Starters Turns but Engine Does Not Rotate	Starter clutch slipping	See STARTER article
	Broken clutch housing	See STARTER article
	Pinion shaft rusted or dry	See STARTER article
	Engine basic timing incorrect	See Ignition Timing in TUNE-UP article
	Broken teeth on engine flywheel	Replace flywheel and check for starter pinion gear damage
Starters Will Not Crank Engine	Faulty overrunning clutch	See STARTER article
	Broken clutch housing	See STARTER article
	Broken flywheel teeth	Replace flywheel and check for starter pinion gear damage
	Armature shaft sheared or reduction gear teeth stripped	See STARTER article
	Weak battery	Charge or replace battery as necessary
	Faulty solenoid	See On-Vehicle Tests in

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STARTER article

Poor grounds

Check all ground connections for tight and clean connections

Ignition switch faulty or misadjusted

Adjust or replace ignition switch as necessary

Starter Cranks Engine Slowly

Battery weak or defective

Charge or replace battery as necessary

Engine overheated

See ENGINE COOLING SYSTEM article

Engine oil too heavy

Check that proper viscosity oil is used

Poor battery-to-starter connections

Check that all between battery and starter are clean and tight

Current draw too low or too high

See Bench Tests in STARTER article

Bent armature, loose pole shoes screws or worn bearings

See STARTER article

Burned solenoid contacts

Replace solenoid

Faulty starter

Replace starter

Starter Engages Engine Only Momentarily

Engine timing too far advanced

See Ignition Timing in TUNE-UP article

Overrunning clutch not engaging properly

Replace overrunning clutch. See STARTER article

Broken starter clutch

See STARTER article

Broken teeth on engine flywheel

Replace flywheel and check starter pinion gear for damage

Weak drive assembly thrust spring

See STARTER article

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	Weak hold-in coil	See Bench Tests in STARTER article
AAAAA	Starter Drive Will Not Engage	Defective point assembly
		See Testing in STARTER article
	Poor point assembly ground	See Testing in STARTER article
	Defective pull-in coil	Replace starter solenoid
AAAAA	Starter Relay Does Not Close	Dead battery
		Charge or replace battery as necessary
	Faulty wiring	Check all wiring and connections leading to relay
	Neutral safety switch faulty	Replace neutral safety switch
AAAAA	Starter Drive Will Not Disengage	Starter relay faulty
		Replace starter relay
		Tighten starter attach bolts
	Worn drive end bushing	See STARTER article
	Damaged engine flywheel teeth	Replace flywheel and starter pinion gear for damage
	Drive yolk return spring broken or missing	Replace return spring
	Faulty ignition switch	Replace ignition switch
	Insufficient clearance between winding leads to solenoid terminal and main contact in solenoid	Replace starter solenoid
	Starter clutch not disengaging	Replace starter clutch
AAAAA	Starter Relay Operates but	Ignition starter switch contacts sticking
		Replace ignition switch
		Check all wiring between relay and

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Solenoid Does Not		solenoid or replace relay or solenoid as necessary
	Broken lead or loose soldered connections	Repair wire or wire connections as necessary
AA		
Solenoid Plunger Vibrates When Switch is Engaged	Weak battery	Charge or replace battery as necessary
	Solenoid contacts corroded	Clean contacts or replace solenoid
	Faulty wiring	Check all wiring leading to solenoid
	Broken connections inside switch cover	Repair connections or replace solenoid
AA		
Low Current Draw	Open hold-in wire Worn brushes or weak	Replace solenoid Replace brushes or brush springs as necessary
AA		
High Pitched Whine During Cranking Before Engine Fires but Engine Fires and Cranks Normally	Distance too great between starter pinion and flywheel	Align starter or check that correct starter and flywheel are being used
AA		
High Pitched Whine After Engine Fires With Key Released. Engine Fires and Cranks Normally	Distance too small between starter pinion and flywheel Flywheel runout contributes to the intermittent nature	
AA		

AIR CONDITIONING & HEAT
AIR CONDITIONING TROUBLE SHOOTING

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AA

Insufficient, Erratic,
or No Heat

- ù Low Coolant Level
- ù Incorrect thermostat.
- ù Restricted coolant flow through heater core.
- ù Heater hoses plugged.
- ù Misadjusted control cable.
- ù Sticking heater control valve.
- ù Vacuum hose leaking.
- ù Vacuum hose blocked.
- ù Vacuum motors inoperative.
- ù Blocked air inlet.
- ù Inoperative heater blower motor.
- ù Oil residue on heater core fins.
- ù Dirt on heater core fins.

AA

Too Much Heat

- ù Improperly adjusted cables.
- ù Sticking heater control valve.
- ù No vacuum to heater control valve.
- ù Temperature door stuck open.

AA

Air Flow Changes During
Acceleration

- ù Vacuum system leak.
- ù Bad check valve or reservoir.

AA

Air From Defroster At All
Times

- ù Vacuum system leak.
- ù Improperly adjusted control cables.
- ù Inoperative vacuum motor.

AA

Blower Does Not Operate
Correctly

- ù Blown fuse.
- ù Blower motor windings open.
- ù Resistors burned out.
- ù Motor ground connection loose.
- ù Wiring harness connections loose.
- ù Blower motor switch inoperative.
- ù Blower relay inoperative.
- ù Fan binding or foreign object in housing.
- ù Fan blades broken or bent.

AA

BRAKES

BRAKE SYSTEM TROUBLE SHOOTING

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problem symptoms. For model-specific Trouble Shooting, refer to SUBJECT, DIAGNOSTIC, or TESTING articles available in the section(s) you are accessing.

BRAKE SYSTEM TROUBLE SHOOTING CHART

AA

CONDIT ION	POSSIBLE CAUSE	CORRECTI ON
------------	----------------	-------------

AA

Brakes Pull Left or Right	Incorrect tire pressure	Inflate tires to proper pressure
	Front end out of alignment	See WHEEL ALIGNMENT
	Mismatched tires	Check tires sizes
	Restricted brake lines or hoses	Check hose routing
	Loose or malfunctioning caliper	See DISC BRAKES or BRAKE SYSTEM
	Bent shoe or oily linings	See DRUM BRAKES or BRAKE SYSTEM
	Malfunctioning rear brakes	See DRUM, DISC BRAKES or BRAKE SYSTEM
	Loose suspension parts	See SUSPENSION
AA		
Noises Without Brakes Applied	Front linings worn out	Replace linings
	Dust or oil on drums or rotors	See DRUM, DISC BRAKES or BRAKE SYSTEM
AA		
Noises With Brakes Applied	Insulator on outboard shoe damaged	See DISC BRAKES or BRAKE SYSTEM
	Incorrect pads or linings	Replace pads or linings
AA		
Brake Rough, Chatters or Pulsates	Excessive lateral runout	Check rotor runout
	Parallelism not to specifications	Reface or replace rotor
	Wheel bearings not adjusted	See SUSPENSION
	Rear drums out-of-round	Reface or replace drums

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	Disc pad reversed, steel against rotor	Remove and reinstall pad
Excessive Pedal Effort	Malfunctioning power unit	See POWER BRAKES or BRAKE SYSTEM
	Partial system failure	Check fluid and pipes
	Worn disc pad or lining	Replace pad or lining
	Caliper piston stuck or sluggish	See DISC BRAKES or BRAKE SYSTEM
	Master cylinder piston stuck	See MASTER CYLINDERS or BRAKE SYSTEM
	Brake fade due to incorrect pads for linings	Replace pads or linings
	Linings or pads glazed	Replace pads or linings
	Worn drums	Reface or replace drums
Excessive Pedal Travel	Partial brake system failure	Check fluid and pipes
	Insufficient fluid in master cylinder	See MASTER CYLINDERS or BRAKE SYSTEM
	Air trapped in system	See BRAKE BLEEDING or BRAKE SYSTEM
	Rear brakes not adjusted	See Adjustments in DRUM BRAKES or BRAKE SYSTEM
	Bent shoe or lining	See DRUM BRAKES or BRAKE SYSTEM
	Plugged master cylinder cap	See MASTER CYLINDERS or BRAKE SYSTEM
	Improper brake fluid	Replace brake fluid
Pedal Travel Decreasing	Compensating port plugged	See MASTER CYLINDERS or BRAKE SYSTEM

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Uneven rotor wear

See DISC BRAKES or
BRAKE SYSTEM

Drums out-of-round

Reface or replace drums

AA

ENGINE MECHANICAL

COOLING SYSTEM TROUBLE SHOOTING

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COOLING SYSTEM TROUBLE SHOOTING

AA

CONDI TI ON	POSSI BLE CAUSE	CORRECTI ON
Overheating	Cool ant Leak	Fi ll /Pressure Test System
	A/C Condenser Fi ns Cl ogged	Remove/Clean Condenser
	Radi ator Fi ns Cl ogged	Remove/Clean Radi ator
	Thermostat Stuck Cl osed	Repl ace Thermostat
	Cl ogged Cool ing System Passages	Clean/FI ush Cool ing System
	Water Pump Mal functi on	Repl ace Water Pump
	Fan Cl utch Mal functi on	Repl ace Fan Cl utch
	Retarded Igni ti on Ti mi ng	Reset Igni ti on Ti mi ng
	Cool ing Fan Mal functi on	Test Cool ing Fan/ Ci rcui t
	Cool ing Fan Motor Mal functi on	Test Fan Motor
	Cool ing Fan Relay Mal functi on	Test Fan Relay
	Faul ty Radi ator Cap	Repl ace Radi ator Cap

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Broken/Slipping Fan Belt	Replace Fan Belt
Restricted Exhaust	Repair Exhaust System
AAAAA	AAAAA
Corrosion	Clean/Flush System
AAAAA	AAAAA
Coolant Leakage	Replace Hose
Leaky Water Pump	Replace Water Pump
Damaged Radiator Seam	Replace/Repair Radiator
Leaky Thermostat Cover	Replace Thermostat Cover
Cylinder Head Problem	Check Head/Head Gasket
Leaky Freeze Plugs	Replace Freeze Plugs
AAAAA	AAAAA
Recovery System Inoperative	
Loose and/or Defective Radiator Cap	Replace Radiator Cap
Overflow Tube Clogged and/or Leaking	Repair Tube
Recovery Bottle Vent Restricted	Clean Vent
AAAAA	AAAAA
No Heater Core Flow	
Collapsed Heater Hose	Replace Heater Hose
Plugged Heater Core	Clean/Replace Heater Core
Faulty Heater Valve	Replace Heater Valve
AAAAA	AAAAA

GASOLINE ENGINE - MECHANICAL TROUBLE SHOOTING

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BASIC GASOLINE ENGINE - MECHANICAL TROUBLE SHOOTING CHART
 AAAAA
 CONDITION POSSIBLE CAUSE CORRECTION
 AAAAA

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External Oil Leakage	Fuel pump improperly seated or worn gasket	Remove pump, replace gasket and seat properly
	Oil pan gasket broken or pan bent	Straighten pan and replace gasket
	Timing chain cover gasket broken	Replace timing chain cover gasket
	Rear main oil seal worn	Replace rear main oil seal
	Oil pan drain plug not seated properly	Remove and reinstall drain plug
	Camshaft bearing drain hole blocked	Remove restriction
	Oil pressure sending switch leaking	Remove and reinstall sending switch
Excessive Oil Consumption	Worn valve stems or guides	Replace stems or guides, See ENGINES
	Valve "O" ring seals damaged	Replace "O" ring seals, See ENGINES
	Plugged oil drain back holes	Remove restrictions
	Improper PCV valve operation	Replace PCV valve
	Engine oil level too high	Remove excess oil
	Engine oil too thin	Replace thicker oil
	Valve stem oil deflectors damaged	Replace oil deflectors
	Incorrect piston rings	Replace piston rings, See ENGINES
	Piston ring gaps not staggered	Reinstall piston rings, See ENGINES
	Insufficient piston ring tension	Replace rings, See ENGINES
	Piston ring grooves or oil return slots clogged	Replace piston rings, See ENGINES
	Piston rings sticking in grooves	Replace piston rings, See ENGINES
	Piston ring grooves excessively worn	Replace piston and rings, See ENGINES
	Compression rings installed upside down	Replace compression rings correctly, See ENGINES
	Worn or scored cylinder walls	Rebore cylinders or replace block
	Mismatched oil ring expander and rail	Replace oil ring expander and rail, See ENGINES
	Intake gasket dowels too long	Replace intake gasket dowels
	Excessive main or connecting rod bearing clearance	Replace main or connecting rod bearings, See ENGINES

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AAA		
No Oil Pressure	Low oil level	Add oil to proper level
	Oil pressure sender or gauge broken	Replace sender or gauge
	Oil pump malfunction	Remove and overhaul oil pump, See ENGINES
	Oil pressure relief valve sticking	Remove and reinstall valve
	Oil pump passages blocked	Overhaul oil pump, See ENGINES
	Oil pickup screen or tube blocked	remove restriction
	Loose oil inlet tube	Tighten oil inlet tube
	Loose camshaft bearings	Replace camshaft bearings, See ENGINES
	Internal leakage at oil passages	Replace block or cylinder head
AAA		
Low Oil Pressure	Low engine oil level	Add oil to proper level
	Engine oil too thin	Remove and replace with thicker oil
	Excessive oil pump clearance	Reduce oil pump clearance, See ENGINES
	Oil pickup tube or screen blocked	Remove restrictions
	Main, rod or cam bearing clearance excessive	Replace bearing to reduce clearance, See ENGINES
AAA		
High Oil Pressure	Improper grade of oil	Replace with proper oil
	Oil pressure relief valve stuck closed	Eliminate binding
	Oil pressure sender or gauge faulty	Replace sender or gauge
AAA		
Noisy Main Bearings	Inadequate oil supply	Check oil delivery to main bearings
	Excessive main bearing clearance	Replace main bearings, See ENGINES
	Excessive crankshaft end play	Replace crankshaft, See ENGINES
	Loose flywheel or torque converter	Tighten attaching bolts
	Loose or damaged vibration damper	Tighten or replace vibration damper
	Crankshaft journal s out-of-round	Re-grind crankshaft journal s
	Excessive belt tension	Loosen belt tension
AAA		
Noisy Connecting Rods	Excessive bearing clearance or missing bearing	Replace bearing, See ENGINES
	Crankshaft rod journal	Re-grind crankshaft

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	out-of-round	journal
	Misaligned connecting rod or cap	Remove rod or cap and realign
	Incorrectly tightened rod bolts	Remove and re-tighten rod bolts
AAAAA	Excessive piston-to-bore clearance	Install larger pistons, See ENGINES
Noisy Pistons and Rings	Bore tapered or out-of-round	Rebore block
	Piston ring broken	Replace piston rings, See ENGINES
	Piston pin loose or seized	Replace piston pin, See ENGINES
	Connecting rods misaligned	Realign connecting rods
	Ring side clearance too loose or tight	Replace with larger or smaller rings
	Carbon build-up on piston	Remove carbon
AAAAA	Worn or bent push rods	Replace push rods, See ENGINES
Noisy Valve Train	Worn rocker arms or bridged pivots	Replace push rods, See ENGINES
	Dirt or chips in valve lifters	Remove lifters and remove dirt/chips
	Excessive valve lifter leak-down	Replace valve lifters, See ENGINES
	Valve lifter face worn	Replace valve lifters, See ENGINES
	Broken or cocked valve springs	replace or reposition springs
	Too much valve stem-to-guide clearance	Replace valve guides, See ENGINES
	Valve bent	Replace valve, See ENGINES
	Loose rocker arms	Retighten rocker arms, See ENGINES
	Excessive valve seat run-out	Reface valve seats, See ENGINES
	Missing valve lock	Install new valve lock
	Excessively worn camshaft lobes	Replace camshaft, See ENGINES
	Plugged valve lifter oil holes	Eliminate restriction or replace lifter
	Faulty valve lifter check ball	Replace lifter check ball, See ENGINES
	Rocker arm nut installed upside down	Remove and reinstall correctly
	Valve lifter incorrect for engine	Remove and replace valve lifters
	Faulty push rod seat or lifter plunger	Replace plunger or push rod
AAAAA		

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ENGINE PERFORMANCE

CARBURETOR TROUBLE SHOOTING:

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BASIC COLD START SYMPTOMS TROUBLE SHOOTING CHART

CONDITION	POSSIBLE CAUSE	CORRECTION
Engine Won't Start	Choke not closing	Check choke operation, see FUEL SYSTEMS
	Choke linkage bent	Check linkage, see FUEL SYSTEM
Engine Starts, Then Dies	Choke vacuum kick setting too wide	Check setting and adjust see, FUEL SYSTEMS
	Fast idle RPM too low	Reset RPM to specification, see TUNE-UP
	Fast idle cam index incorrect	Reset fast idle cam index, see FUEL SYSTEMS
	Vacuum leak	Inspect vacuum system for leaks
	Low fuel pump outlet	Repair or replace pump, see FUEL SYSTEMS
	Low carburetor fuel level	Check float setting see FUEL SYSTEM
Engine Quiets Under Load	Choke vacuum kick setting incorrect	Reset vacuum kick setting, see FUEL SYSTEMS
	Fast idle cam index incorrect	Reset fast idle cam index, see FUEL SYSTEM

TROUBLE SHOOTING - BASIC PROCEDURES

ABC123 **Entire Article**
2000 Chevrolet Camaro

```

                Incorrect hot fast idle          Reset fast idle RPM,
                speed RPM                        see TUNE-UP
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
Engine Starts,    Choke vacuum kick set too      Reset vacuum kick,
Runs Up, Then    narrow                          see FUEL SYSTEMS
Idles, Slowly
With Black Smoke  Fast idle cam index                          Reset fast idle cam
                incorrect                          index, see FUEL
                                                         SYSTEMS

```

```

                Hot fast idle RPM too low        Reset fast idle RPM,
                                                         see TUNE-UP
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

```

```

BASIC HOT START SYMPTOMS TROUBLE SHOOTING CHART
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
CONDITION        POSSIBLE CAUSE                               CORRECTI ON
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
Engine Won't     Engine flooded                               Allow fuel to
Start                                                    evaporate
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

```

```

BASIC COLD ENGINE DRIVEABILITY SYMPTOMS TROUBLE SHOOTING CHART
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
CONDITION        POSSIBLE CAUSE                               CORRECTI ON
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
Engine Stalls in Choke vacuum kick setting                     Reset choke vacuum
Gear                                                    kick, see FUEL
                                                         SYSTEMS

```

```

                Fast idle RPM incorrect          Reset fast idle RPM,
                                                         see TUNE-UP

```

```

                Fast idle cam index              Reset fast idle cam
                incorrect                          see FUEL SYSTEMS
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
Acceleration Sag Defective choke control                     Replace choke
or Stall                                                control switch

```

```

                Choke vacuum kick setting       Reset choke vacuum
                incorrect                          kick see, FUEL
                                                         SYSTEMS

```

```

                Float level incorrect            Adjust float level ,
                (too low)                          FUEL SYSTEMS

```

```

                Accelerator pump defective      Repair or replace
                                                         pump see FUEL
                                                         SYSTEMS

```

```

                Secondary throttles not         Inspect lockout
                closed                          adjustment, see FUEL

```


TROUBLE SHOOTING - BASIC PROCEDURES

ABC123

Entire Article
2000 Chevrolet Camaro

Defective fuel pump, lines or filter	Inspect pump, lines and filter
---	-----------------------------------

Air door setting incorrect	Adjust air door setting, see FUEL
----------------------------	--------------------------------------

AA

DIESEL ENGINE TROUBLE SHOOTING

NOTE: This is GENERAL information. This article is not intended to be specific to any unique situation or individual vehicle configuration. The purpose of this Trouble Shooting information is to provide a list of common causes to problem symptoms. For model-specific Trouble Shooting, refer to SUBJECT, DIAGNOSTIC, or TESTING articles available in the section(s) you are accessing.

NOTE: Diesel engines mechanical diagnosis is the same as gasoline engines for items such as noisy valves, bearings, pistons, etc. The following trouble shooting covers only items pertaining to diesel engines.

BASIC DIESEL ENGINE TROUBLE SHOOTING CHART

AA

CONDI TION	POSSI BLE CAUSE	CORRECTI ON
------------	-----------------	-------------

Engine Won't Crank	Bad battery connections or dead batteries	Check connections and/or replace batteries
--------------------	--	--

	Bad starter connections or bad starter	Check connections and/or replace batteries
--	---	--

AA

Engine Cranks Slowly, Won't Start	Bad battery connections or dead batteries	Check connections and/or replace batteries
-----------------------------------	--	--

	Engine oil too heavy	Repl ace engi ne oi l
--	----------------------	-----------------------

AA

Engine Cranks Normally, But Will Not Start	Glow plugs not functioning	Check glow plug system, see FUEL SYSTEMS
--	----------------------------	---

	Glow plug control not functioning	Check controller, see FUEL SYSTEMS
--	-----------------------------------	------------------------------------

	Fuel not injected into cylinders	Check fuel injectors, see FUEL SYSTEMS
--	----------------------------------	---

	No fuel to injection pump	Check fuel delivery system
--	---------------------------	----------------------------

	Fuel filter blocked	Repl ace fuel fi lter
--	---------------------	-----------------------

	Fuel tank filter blocked	Repl ace fuel tank fi lter
--	--------------------------	----------------------------

	Fuel pump not operating	Check pump operati on and/or repl ace pump
--	-------------------------	---

TROUBLE SHOOTING - BASIC PROCEDURES

ABC123

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2000 Chevrolet Camaro

FUEL SYSTEMS

AA		
Engine Idles	Blocked fuel filter	Replace fuel filter
Correctly,	Injection pump timing	Reset pump timing, see
Misfires Above	incorrect	FUEL SYSTEMS
Idle	Incorrect or contaminated fuel	Replace fuel
AA		
Engine Won't	Fast idle adjustment	Reset fast idle, see
Return To Idle	incorrect	TUNE-UP
	Internal injection pump malfunction	Replace injection pump, see FUEL SYSTEMS
	External linkage binding	Check linkage and remove binding
AA		
Fuel Leaks On	Loose or broken fuel line	Check lines and connections
Ground	Internal injection pump seal leak	Replace injection pump, see FUEL SYSTEMS
AA		
Cylinder	Injector nozzles sticking	Test injectors, see
Knocking Noise	open	FUEL SYSTEMS
	Very low nozzle opening pressure	Test injectors and/or replace
AA		
Loss of Engine	Restricted air intake	Remove restriction
Power	EGR valve malfunction	Replace EGR valve
	Blocked or damaged exhaust system	Remove restriction and/or replace components
	Blocked fuel tank filter	Replace filter
	Restricted fuel filter	Remove restriction and/or replace filter
	Block vent in gas cap	Remove restriction and/or replace cap
	Tank-to-injection pump fuel supply blocked	Check fuel lines and connections
	Blocked fuel return system	Remove restriction
	Incorrect or contaminated fuel	Replace fuel
	Blocked injector nozzles	Check nozzle for blockage, see FUEL SYSTEMS
	Low compression	Check valves, rings, pistons, see ENGINE
AA		
Loud Engine	Basic timing incorrect	Reset timing, see
Noise With Black		FUEL SYSTEMS
Smoke	EGR valve malfunction	Replace EGR valve
	Internal injection pump malfunction	Replace injection pump, see FUEL SYSTEMS
	Incorrect injector pump	Check pressure, see

TROUBLE SHOOTING - BASIC PROCEDURES

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2000 Chevrolet Camaro

housing pressure		FUEL SYSTEMS
AA		
Engine Overheating	Cooling system leaks	Check cooling system and repair leaks
	Belt slipping or damaged	Check tension and/or replace belt
	Thermostat stuck closed	Remove and replace thermostat, see ENGINE COOLING
Head gasket leaking		Replace head gasket
AA		
Oil Light on at Idle	Low oil pump pressure	Check oil pump operation, see ENGINES
	Oil cooler or line restricted	Remove restriction and/or replace cooler
AA		
Engine Won't Shut Off	Injector pump fuel solenoid does not return fuel valve to OFF position	Remove and check solenoid and replace if needed
AA		

VACUUM PUMP DIAGNOSIS

Excessive Noise	Loose pump-to-drive assembly screws	Tighten screws
	Loose tube on pump assembly	Tighten tube
	Valves not functioning properly	Replace valves
Oil Leakage	Loose end plug	Tighten end plug
	Bad seal crimp	Remove and re-crimp seal
AA		

FUEL INJECTION TROUBLE SHOOTING

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BASIC FUEL INJECTION TROUBLE SHOOTING CHART

AA		
CONDITION	POSSIBLE CAUSE	CORRECTION
AA		
Engine Won't Start (Crank normally)	Cold start valve inoperative	Test valve and circuit
	Poor connection; vacuum or wiring	Check vacuum and electrical

TROUBLE SHOOTING - BASIC PROCEDURES

ABC123

Entire Article
2000 Chevrolet Camaro

connections

Contaminated fuel	Test fuel for water or alcohol
-------------------	--------------------------------

Defective fuel pump relay or circuit	Test relay and wiring
--------------------------------------	-----------------------

Battery too low	Charge and test battery
-----------------	-------------------------

Low fuel pressure	Test pressure regulator and fuel pump, check for restricted lines and filters
-------------------	---

No distributor reference pulses	Repair ignition system as necessary
---------------------------------	-------------------------------------

Open coolant temperature sensor circuit	Test sensor and wiring
---	------------------------

Shorted W.O.T. switch in T.P.S.	Disconnect W.O.T. switch, engine should start
---------------------------------	---

Defective ECM	Replace ECM
---------------	-------------

Fuel tank residual pressure valve leaks	Test for fuel pressure drop after shut down
---	---

AAAAA Hard Starting	AAAAA Disconnected hot air tube to air cleaner	AAAAA Reconnect tube and test control valve
------------------------	---	--

Defective Idle Air Control (IAC) valve	Test valve operation and circuit
--	----------------------------------

Shorted, open or misadjusted T.P.S.	Test and adjust or replace T.P.S.
-------------------------------------	-----------------------------------

EGR valve open	Test EGR valve and control circuit
----------------	------------------------------------

Poor Oxygen sensor signal	Test for shorted or circuit
---------------------------	-----------------------------

Incorrect mixture from PCV system	Test PCV for flow, check sealing of oil filter cap
-----------------------------------	--

AAAAA Poor High Speed	AAAAA Low fuel pump volume	AAAAA Faulty pump or
--------------------------	-------------------------------	-------------------------

TROUBLE SHOOTING - BASIC PROCEDURES

ABC123

Entire Article
2000 Chevrolet Camaro

Operation

restricted fuel
 lines or filters

Poor MAP sensor signal

Test MAP sensor,
 vacuum hose and
 wiring

Poor Oxygen sensor signal

Test for shorted or
 open sensor or
 circuit

Open coolant temperature
 sensor circuit

Test sensor and
 wiring

Faulty ignition operation

Check wires for
 cracks or poor con-
 nections, test
 secondary voltage
 with oscilloscope

Contaminated fuel

Test fuel for water
 or alcohol

Intermittent ECM ground

Test ECM ground
 connection for
 resistance

Restricted air cleaner

Replace air cleaner

Restricted exhaust system

Test for exhaust
 manifold back
 pressure

Poor MAF sensor signal

Check leakage
 between sensor and
 manifold

Poor VSS signal

If tester for ALCL
 hook-up is available
 check that VSS
 reading matches
 speedometer

AA

Ping or Knock on
 Acceleration

Poor Knock sensor signal

Test for shorted or
 open sensor or
 circuit

Poor Baro sensor signal

Test for shorted or
 open sensor or
 circuit

Improper ignition timing

See VEHICLE EMISSION

TROUBLE SHOOTING - BASIC PROCEDURES

ABC123

Entire Article
2000 Chevrolet Camaro

CONTROL LABEL (where applicable)

Check for engine overheating problems

Low coolant, loose belts or electric cooling fan inoperative

AA

NOTE: For additional electronic fuel injection trouble shooting information, see the appropriate article in the ENGINE PERFORMANCE section (not all vehicles have Computer Engine Control articles). Information is provided there for diagnosing fuel system problems on vehicles with electronic fuel injection.

IGNITION SYSTEM TROUBLE SHOOTING

NOTE: This is GENERAL information. This article is not intended to be specific to any unique situation or individual vehicle configuration. The purpose of this Trouble Shooting information is to provide a list of common causes to problem symptoms. For model-specific Trouble Shooting, refer to SUBJECT, DIAGNOSTIC, or TESTING articles available in the section(s) you are accessing.

Ignition Secondary Trouble Shooting Chart

AA;

3 START: Visually inspect Spark Plug Wires, Coil Wires, 3
3 Plug Wire Boots, Rotor, and Distributor Cap for 3
3 signs of damage. 3

AAU

AA;

UAAAA;	UAAAA;
3 OK 3	3 NOT OK 3
AAAAAU	AAAAAU

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA;

3 * To test secondary ignition 3
3 system, modify a Spark Plug 3
3 by attaching a ground wire 3
3 to the body of the plug and 3
3 widening the gap to 1/4-3/8". 3
3 Disconnect spark plug wire 3
3 and insert test plug. Ground 3
3 plug, crank engine, and 3
3 check for spark. 3

AAAAAAAAAAAAAAAAAAAAAAAAAAAA;

3 * Repair or replace 3
3 damaged components 3
3 as necessary 3

AAAAAAAAAAAAAAAAAAAAAU

AAAAAAAAAAAAAAAAAAAAAAAAAAAAU

AAAAAAAAAAAAAAAAAAAAAAAAAAAA;

UAAAA;	UAAAA;
3 GOOD SPARK 3	3 NO SPARK 3
AAAAAU	AAAAAU

TROUBLE SHOOTING - BASIC PROCEDURES

ABC123

Entire Article
2000 Chevrolet Camaro

ÚAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA¿
 3 * If plug sparks, driveability 3
 3 problem is most likely NOT 3
 3 in the ignition system. 3
 AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAU

ÚAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA¿
 3 * Remove coil wire from the 3
 3 distributor and attach the 3
 3 modified spark plug. Ground 3
 3 the plug and crank engine 3
 3 while checking for spark. 3
 AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAU

ÚAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA¿
 ÚAAAAAAAAAAA¿
 3 GOOD SPARK 3
 AAAAAAAAAAAA¿

ÚAAAAAAAAAAA¿
 3 NO SPARK 3
 AAAAAAAAAAU

ÚAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA¿
 3 * If plug has a good spark, 3
 3 the problem is in the plug 3
 3 wires, distributor cap, or 3
 3 rotor. Replace components 3
 3 as necessary. 3
 AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAU

ÚAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA¿
 3 * Proceed to the IGNITION 3
 3 PRIMARY TROUBLE SHOOTING 3
 3 CHECK CHART below in this 3
 3 article. 3
 AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAU

Igni ti on Pri mary Troubl e Shooti ng Chart

ÚAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA¿
 3 START: Visually inspect primary ignition wires for 3
 3 broken, frayed, split, or cut wires. Also check 3
 3 for loose, corroded, or disconnected connectors. 3
 AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAU

ÚAAAA¿
 3 OK 3
 AAAAAU

ÚAAAAAAA¿
 3 NOT OK 3
 AAAAAAU

ÚAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA¿
 3 * Check that battery voltage 3
 3 is at least 11.5 volts. 3
 AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAU

ÚAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA¿
 3 * Repair or replace damaged 3
 3 components as necessary. 3
 AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAU

ÚAAAAAAA¿
 3 NOT OK 3
 AAAAAAU

ÚAAAA¿
 3 OK 3
 AAAAAU

ÚAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA¿
 3 * Replace or recharge the 3
 3 battery. 3
 AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAU

ÚAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA¿
 3 * Check for battery voltage 3
 3 at the positive terminal of 3
 3 the coil. 3
 AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAU

ÚAAAA¿
 3 OK 3
 AAAAAU

ÚAAAAAAA¿
 3 NOT OK 3
 AAAAAAU

ÚAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA¿
 3 * Check air Gap of the Pick-Up 3
 3 coil in the distributor. 3
 AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAU

ÚAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA¿
 3 * Check resistance of ballast 3
 3 resistor (if used) for the 3
 3 correct resistance value. 3
 AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAU

TROUBLE SHOOTING - BASIC PROCEDURES

ABC123

Entire Article
2000 Chevrolet Camaro

ÚAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAÁ	3
ÚAAAAÁ	3
3 OK 3	3
AAAAÁÚ	3
ÚAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAÁ	3
3 * Check Pick-Up coil for	3
3 correct resistance value.	3
AAAAÁAAAAAAAAAAAAAAAAAAAAAAAAAAAAÁ	3
ÚAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAÁ	3
ÚAAAAÁ	3
3 NOT OK 3	3
AAAAÁÚ	3
ÚAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAÁ	3
3 * Replace Pick-Up coil if	3
3 not to specification.	3
AAAAÁAAAAAAAAAAAAAAAAAAAAAAAAAAAAÁ	3
ÚAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAÁ	3
ÚAAAAÁ	3
3 OK 3	3
AAAAÁÚ	3
ÚAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAÁ	3
3 * If vehicle fails to run at this point, go to	3
3 the appropriate article in the ENGINE	3
3 PERFORMANCE section.	3
AAAAÁAAAAAAAAAAAAAAAAAAAAAAAAAAAAÁ	3
ÚAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAÁ	3
ÚAAAAÁ	3
3 OK 3	3
AAAAÁÚ	3
ÚAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAÁ	3
3 * Check wires from the battery/	3
3 ignition switch to the coil.	3
3 Also check the coil primary	3
3 and secondary resistance.	3
AAAAÁAAAAAAAAAAAAAAAAAAAAAAAAAAAAÁ	3
ÚAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAÁ	3
ÚAAAAÁ	3
3 NOT OK 3	3
AAAAÁÚ	3
ÚAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAÁ	3
3 * Replace ballast resistor	3
3 if the measured resistance	3
3 value is not within	3
3 specification.	3
AAAAÁAAAAAAAAAAAAAAAAAAAAAAAAAAAAÁ	3

STARTER TROUBLE SHOOTING

NOTE: This is GENERAL information. This article is not intended to be specific to any unique situation or individual vehicle configuration. The purpose of this Trouble Shooting information is to provide a list of common causes to problem symptoms. For model-specific Trouble Shooting, refer to SUBJECT, DIAGNOSTIC, or TESTING articles available in the section(s) you are accessing.

BASIC STARTER TROUBLE SHOOTING CHART

AA		
CONDI TI ON	POSSI BLE CAUSE	CORRECTI ON
AA		
Starter Fails to Operate	Dead battery or bad connections between	Check battery charge and all wires and

TROUBLE SHOOTING - BASIC PROCEDURES

ABC123

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2000 Chevrolet Camaro

	starter and battery	connections to starter
	Ignition switch faulty or misadjusted	Adjust or replace ignition switch
	Open circuit between starter switch ignition terminal on starter relay	Check and repair wires and connections as necessary
	Starter relay or starter defective	See Testing in STARTER article
	Open solenoid pull-in wire	See Testing in STARTER article
Starts but Headlights Dim	Weak battery or dead cell	Charge or replace battery as necessary
	Loose or corroded battery connections	Check that battery connections are clean and tight
	Internal ground in starter windings	See Testing in STARTER article
	Grounded starter fields	See Testing in STARTERS
	Armature rubbing on pole shoes	See STARTER article
Starts but Engine Does Not Rotate	Starter clutch slipping	See STARTER article
	Broken clutch housing	See STARTER article
	Pinion shaft rusted or dry	See STARTER article
	Engine basic timing incorrect	See Ignition Timing in TUNE-UP article
	Broken teeth on engine flywheel	Replace flywheel and check for starter pinion gear damage
Starts but Crank Engine	Faulty overrunning clutch	See STARTER article
	Broken clutch housing	See STARTER article
	Broken flywheel teeth	Replace flywheel and check for starter pinion

TROUBLE SHOOTING - BASIC PROCEDURES

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2000 Chevrolet Camaro

gear damage

Armature shaft sheared or reduction gear teeth stripped See STARTER article

Weak battery Charge or replace battery as necessary

Faulty solenoid See On-Vehicle Tests in STARTER article

Poor grounds Check all ground connections for tight and clean connections

Ignition switch faulty or misadjusted Adjust or replace ignition switch as necessary

AA

Starter Cranks Engine Slowly Battery weak or defective Charge or replace battery as necessary

Engine overheated See ENGINE COOLING SYSTEM article

Engine oil too heavy Check that proper viscosity oil is used

Poor battery-to-starter connections Check that all between battery and starter are clean and tight

Current draw too low or too high See Bench Tests in STARTER article

Bent armature, loose pole shoes screws or worn bearings See STARTER article

Burned solenoid contacts Replace solenoid

Faulty starter Replace starter

AA

Starter Engages Engine Only Momentarily Engine timing too far advanced See Ignition Timing in TUNE-UP article

Overrunning clutch not engaging properly Replace overrunning clutch. See STARTER

TROUBLE SHOOTING - BASIC PROCEDURES

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2000 Chevrolet Camaro

contact in solenoid

Starter clutch not
disengaging

Replace starter clutch

Ignition starter switch
contacts sticking

Replace ignition switch

AA

Starter Relay
Operates but
Solenoid Does Not

Faulty solenoid switch,
switch connections or

Check all wiring
between relay and
solenoid or replace
relay or solenoid as
necessary

Broken lead or loose
soldered connections

Repair wire or wire
connections as
necessary

AA

Solenoid Plunger
Vibrates When
Switch is Engaged

Weak battery

Charge or replace
battery as necessary

Solenoid contacts
corroded

Clean contacts or
replace solenoid

Faulty wiring

Check all wiring
leading to solenoid

Broken connections inside
switch cover

Repair connections or
replace solenoid

Open hold-in wire

Replace solenoid

AA

Low Current Draw

Worn brushes or weak

Replace brushes or
brush springs as
necessary

AA

High Pitched Whine
During Cranking
Before Engine
Fires but Engine
Fires and Cranks
Normally

Distance too great
between starter
pinion and flywheel

Align starter or check
that correct starter
and flywheel are being
used

AA

High Pitched
Whine After Engine
Fires With Key
Released. Engine
Fires and Cranks
Normally

Distance too small between
starter pinion and flywheel
Flywheel runout contributes
to the intermittent nature

AA

TUNE-UP TROUBLE SHOOTING - GAS ENGINE VEHICLES

TROUBLE SHOOTING - BASIC PROCEDURES

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2000 Chevrolet Camaro

NOTE: This is GENERAL information. This article is not intended to be specific to any unique situation or individual vehicle configuration. The purpose of this Trouble Shooting information is to provide a list of common causes to problem symptoms. For model-specific Trouble Shooting, refer to SUBJECT, DIAGNOSTIC, or TESTING articles available in the section(s) you are accessing.

BASIC SPARK PLUG TROUBLE SHOOTING CHARTS

CONDITION	POSSIBLE CAUSE	CORRECTION
Normal Spark Plug Condition	Light Tan or Gray deposits	No Action
	Electrode not burned or fouled	No Action
	Gap tolerance not changed	No Action
Cold Fouling or Carbon Deposits	Overrich air/fuel mixture	Adjust air/fuel mixture, see ENGINE PERFORMANCE section
	Faulty choke	Replace choke assembly, see ENGINE PERFORMANCE section
	Clogged air filter	Clean and/or replace air filter
	Incorrect idle speed or dirty carburetor	Reset idle speed and/or clean carburetor
	Faulty ignition wires	Replace ignition wiring
	Prolonged operation at idle	Shut engine off during long idle
	Sticking valves or worn valve guide seals	Check valve train
Wet Fouling or Oil Deposits	Worn rings and pistons	Install new rings and pistons
	Excessive cylinder wear	Rebore or replace block
	Excessive valve guide clearance	Worn or loose bearing

TROUBLE SHOOTING - BASIC PROCEDURES

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2000 Chevrolet Camaro

Gap Bridged	Deposits in combustion chamber becoming fused to electrode	Clean combustion chamber of deposits
AA		
Blistered Electrode	Engine overheating	Check cooling system
	Wrong type of fuel	Replace with correct fuel
	Loose spark plugs	Retighten spark plugs
	Over-advanced ignition timing	Reset ignition timing see ENGINE PERFORMANCE
AA		
Pre-Ignition or Melted Electrodes	Incorrect type of fuel	Replace with correct fuel
	Incorrect ignition timing	Reset ignition timing see ENGINE PERFORMANCE
	Burned valves	Replace valves
	Engine Overheating	Check cooling system
	Wrong type of spark plug, too hot	Replace with correct spark plug, see ENGINE PERFORMANCE
AA		
Chipped Insulators	Severe detonation	Check for over-advanced timing or combustion
	Improper gapping procedure	Re-gap spark plugs
AA		
Rust Colored Deposits	Additives in unleaded fuel	Try different fuel brand
AA		
Water In Combustion Chamber	Blown head gasket or cracked head	Repair or replace head or head gasket
AA		

NOTE: Before diagnosing an electronic ignition system, ensure that all wiring is connected properly between distributor, wiring connector and spark plugs. Ignition problem will show up either as: Engine Will Not Start or Engine Runs Rough.

BASIC ELECTRONIC IGNITION TROUBLE SHOOTING CHARTS		
AA		
CONDITION	POSSIBLE CAUSE	CORRECTION
AA		
Engine Won't	Open circuit between	Repair circuit

TROUBLE SHOOTING - BASIC PROCEDURES

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2000 Chevrolet Camaro

Start	distributor and bulkhead connector	
	Open circuit between bulkhead connector and ignition switch	Repair circuit
	Open circuit between ignition switch and starter solenoid	Repair circuit
Engine Runs Rough	Fuel lines leaking or clogged	Tighten fitting, remove restriction
	Initial timing incorrect	Reset ignition timing see ENGINE PERFORMANCE
	Centrifugal advance malfunction	Repair distributor advance
	Defective spark plugs or wiring	Replace plugs or plug wiring
Component Failure	Spark arc-over on cap, rotor or coil	Replace cap, rotor or coil
	Defective pick-up coil	Replace pick-up coil
	Defective ignition coil	Replace ignition coil
	Defective vacuum unit	Replace vacuum unit
	Defective control module	Replace control module
<p>BASIC ELECTRONIC IGNITION TROUBLE SHOOTING CHARTS - USING OSCILLOSCOPE PATTERNS</p>		
CONDITION	POSSIBLE CAUSE	CORRECTION
Firing Voltage Lines are the Same, but Abnormally High	Retarded ignition timing	Reset ignition timing, see ENGINE PERFORMANCE section
	Fuel mixture too lean	Readjust carburetor, see ENGINE PERFORMANCE
	High resistance in coil wire	Replace coil wire
	Corrosion in coil tower terminal	Clean and/or replace coil

TROUBLE SHOOTING - BASIC PROCEDURES

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2000 Chevrolet Camaro

<p>Corrosion in distributor coil terminal</p> <p>AAAAA Firing Voltage Lines are the Same but Abnormally Low</p>	<p>Clean and/or replace distributor cap</p> <p>Fuel mixture too rich</p> <p>Breaks in coil wire causing arcing</p> <p>Cracked coil tower causing arcing</p> <p>Low coil output</p> <p>Low engine compression</p> <p>AAAAA One or More, But Not All Firing Voltage Lines are Higher Than Others</p> <p>EGR valve stuck open</p> <p>High resistance in spark plug wires</p> <p>Cracked or broken spark plug insulator</p> <p>Intake vacuum leak</p> <p>Defective spark plugs</p> <p>Corroded spark plug terminals</p> <p>AAAAA One or More, But Not All Firing Voltage Lines Are Lower Than Others</p> <p>Breaks in plug wires causing arcing</p> <p>Cracked coil tower causing arcing</p> <p>Low compression</p> <p>Defective spark plugs</p> <p>Corroded spark plugs</p>	<p>Readjust carburetor, see ENGINE PERFORMANCE</p> <p>Replace coil wire</p> <p>Replace coil</p> <p>Replace coil</p> <p>Determine cause and repair</p> <p>Readjust carburetor, see ENGINE PERFORMANCE</p> <p>Clean and/or replace valve</p> <p>Replace spark plug wires</p> <p>Replace spark plugs</p> <p>Repair leak</p> <p>Replace spark plugs</p> <p>Replace spark plugs</p> <p>Readjust carburetor, see ENGINE PERFORMANCE</p> <p>Replace plug wires</p> <p>Replace coil</p> <p>Determine cause and repair</p> <p>Replace spark plugs</p> <p>Replace spark plugs</p>
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TROUBLE SHOOTING - BASIC PROCEDURES

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2000 Chevrolet Camaro

Cylinders Not Firing 	Cracked distributor cap terminals Shorted spark plug wire Mechanical problem in engine Defective spark plugs Spark plugs fouled	Replace distributor cap Determine cause and repair Determine cause and repair Replace spark plugs Replace spark plugs
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BASIC DRIVEABILITY PROBLEMS TROUBLE SHOOTING TABLE

CONDITION	POSSIBLE CAUSE	CORRECTION
Hard Starting	Binding carburetor linkage	Eliminate binding
	Binding choke linkage	Eliminate binding
	Binding choke piston	Eliminate binding
	Restricted choke vacuum	Check vacuum lines for blockage
	Worn or dirty needle valve and seat	Clean carburetor, see ENGINE PERFORMANCE
	Float sticking	Readjust or replace float see the ENGINE PERFORMANCE section
	Incorrect choke adjustment	Reset choke adjustment see ENGINE PERFORMANCE
	Defective coil	Replace coil
Detonation	Improper spark plug gap	Regap spark plugs
	Incorrect ignition timing	Reset ignition timing see ENGINE PERFORMANCE
	Over-advanced ignition timing	Reset ignition timing see ENGINE PERFORMANCE
	Defective spark plugs	Replace spark plugs
	Fuel lines clogged	Clean fuel lines

TROUBLE SHOOTING - BASIC PROCEDURES

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Entire Article
2000 Chevrolet Camaro

EGR system mal function	Check and repair EGR system
PCV system mal function	Repair PCV system
Vacuum leaks	Check and repair vacuum system
Loose fan belts	Tighten or replace fan belts, see ENGINE PERFORMANCE
Restricted airflow	Remove restriction
Vacuum advance mal function	Check distributor operation
AAAAA Dieseling	AAAAA Eliminate binding
Binding carburetor linkage	
Binding throttle linkage	Eliminate binding
Binding choke linkage or fast idle cam	Eliminate binding
Defective idle solenoid	Replace idle solenoid see ENGINE PERFORMANCE
Improper base idle speed	Reset idle speed, see see ENGINE PERFORMANCE
Incorrect ignition timing	Reset ignition timing see ENGINE PERFORMANCE
Incorrect idle mixture setting	Reset idle mixture, see ENGINE PERFORMANCE
AAAAA Faulty Acceleration	AAAAA Reset ignition timing see ENGINE PERFORMANCE
Incorrect ignition timing	
Engine cold and choke too lean	Adjust choke and allow engine to warm-up
Defective spark plugs	Replace spark plugs
Defective coil	Replace coil
AAAAA Faulty Low Speed Operation	AAAAA Clean idle transfer slots, see FUEL
Clogged idle transfer slots	
Restricted idle air bleeds and passages	Disassemble and clean carburetor, see FUEL

TROUBLE SHOOTING - BASIC PROCEDURES

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2000 Chevrolet Camaro

Clogged air cleaner	Replace air filter
Defective spark plugs	Replace spark plugs
Defective ignition wires	Replace ignition wire see ENGINE PERFORMANCE
Defective distributor cap	Replace distributor cap
Faulty High Speed Operation	Reset ignition timing see ENGINE PERFORMANCE
Defective distributor centrifugal advance	Replace advance mechanism
Defective distributor vacuum advance	Replace advance unit
Incorrect spark plugs or plug gap	Check gap and/or replace spark plugs
Faulty choke operation	Check choke and repair as required
Clogged vacuum passages	Remove restrictions
Improper size or clogged main jet	Check jet size and clean, see FUEL
Restricted air cleaner	Check filter and replace as necessary
Defective distributor cap, rotor or coil	Replace cap, rotor or coil
Misfire at All Speeds	Replace spark plugs
Defective spark plug wires	Replace spark plug wires
Defective distributor cap, rotor, or coil	Replace cap, rotor, or coil
Cracked or broken vacuum hoses	Replace vacuum hoses
Vacuum leaks	Repair vacuum leaks
Fuel lines clogged	Remove restriction

TROUBLE SHOOTING - BASIC PROCEDURES

ABC123

Entire Article
2000 Chevrolet Camaro

AA		
Hesitation	Cracked or broken vacuum hoses	Replace vacuum hoses
	Vacuum leaks	Repair Vacuum leaks
	Binding carburetor linkage	Eliminate binding
	Binding throttle linkage	Eliminate binding
	Binding choke linkage or fast idle cam	Eliminate binding
	Improper float setting	Readjust float setting, see FUEL
	Cracked or broken ignition wires	Replace ignition wires
AA		
Rough idle, Missing or Stalling	Incorrect curb idle or fast idle speed	Reset idle speed, see see ENGINE PERFORMANCE
	Incorrect basic timing	Reset ignition timing see ENGINE PERFORMANCE
	Improper idle mixture adjustment	Reset idle mixture, see ENGINE PERFORMANCE
	Improper feedback system operation	Check feedback system see ENGINE PERFORMANCE
	Incorrect spark plug gap	Reset spark plug gap, see ENGINE PERFORMANCE
	Moisture in ignition components	Dry components
	Loose or broken ignition wires	Replace ignition wires
	Damaged distributor cap or rotor	Replace distributor cap or rotor
	Faulty ignition coil	Replace ignition coil
	Fuel filter clogged or worn	Replace fuel filter
	Damaged idle mixture screw	Replace idle mixture screw, see FUEL
	Improper fast idle cam adjustment	Reset fast idle cam adjustment, see TUNE-

TROUBLE SHOOTING - BASIC PROCEDURES

ABC123

Entire Article
2000 Chevrolet Camaro

see ENGINE PERFORMANCE

Improper EGR valve operation Replace EGR valve

Faulty PCV valve air flow Replace PCV valve

Choke binding or improper choke setting Reset choke or eliminate binding

Vacuum leak Repair vacuum leak

Improper float bowl fuel level Reset float adjustment, see FUEL

Clogged air bleed or idle passages Clean carburetor passages, see FUEL

Clogged or worn air cleaner filter Replace air filter

Faulty choke vacuum diaphragm Replace diaphragm, see ENGINE PERFORMANCE

Exhaust manifold heat valve inoperative Replace heat valve

Improper distributor spark advance Check distributor operation

Leaking valves or valve components Check and repair valvetrain

Improper carburetor mounting Remove and remount carburetor

Excessive play in distributor shaft Replace distributor

Loose or corroded wiring connections Repair or replace as required

AAAAA
 Engine Surges Improper PCV valve airflow Replace PCV valve

Vacuum leaks Repair vacuum leaks

Clogged air bleeds Remove restriction

EGR valve malfunction Replace EGR valve

Restricted air cleaner filter Replace air filter

TROUBLE SHOOTING - BASIC PROCEDURES

ABC123

Entire Article
2000 Chevrolet Camaro

Cracked or broken vacuum hoses Replace vacuum hoses

Cracked or broken ignition wires Replace ignition wires

Vacuum advance malfunction Check unit and replace as necessary

Defective or fouled spark plugs Replace spark plugs

AA
 Ping or Spark Incorrect ignition timing Reset ignition timing
 Knock see ENGINE PERFORMANCE

Distributor centrifugal or vacuum advance malfunction Check operation and replace as necessary

Carburetor setting too lean Readjust mixture setting, see ENGINE PERFORMANCE

Vacuum leak Eliminate vacuum leak

AA
 Poor Gasoline EGR valve malfunction Replace EGR valve
 Mileage Cracked or broken vacuum hoses Replace vacuum hoses

Vacuum leaks Repair vacuum leaks

Defective ignition wires Replace wires

Incorrect choke setting Readjust setting, see ENGINE PERFORMANCE

Defective vacuum advance Replace vacuum advance

Defective spark plugs Replace spark plugs

Binding carburetor power piston Eliminate binding

Dirt in carburetor jets Clean and/or replace jets

Incorrect float adjustment Readjust float setting, see FUEL

Defective power valve Replace power valve, see ENGINE PERFORMANCE

TROUBLE SHOOTING - BASIC PROCEDURES

ABC123

Entire Article
2000 Chevrolet Camaro

Incorrect idle speed	Readjust idle speed
AAA	AAA
Engine Stalls	Improper float level Readjust float level
	Leaking needle valve and seat
	Replace needle valve and seat
	Vacuum leaks
	Eliminate vacuum leaks
AAA	AAA

VACUUM PUMP - DIESEL TROUBLE SHOOTING

NOTE: This is GENERAL information. This article is not intended to be specific to any unique situation or individual vehicle configuration. The purpose of this Trouble Shooting information is to provide a list of common causes to problem symptoms. For model-specific Trouble Shooting, refer to SUBJECT, DIAGNOSTIC, or TESTING articles available in the section(s) you are accessing.

NOTE: Diesel engines mechanical diagnosis is the same as gasoline engines for items such as noisy valves, bearings, pistons, etc. The following trouble shooting covers only items pertaining to diesel engines.

VACUUM PUMP (DIESEL) TROUBLE SHOOTING CHART
 AAA

CONDI TION	POSSI BLE CAUSE	CORRECTI ON
AAAAA	AAAAA	AAAAA
Excessi ve Noise	Loose pump-to-drive assembly screws	Tighten screws
	Loose tube on pump assembly	Tighten tube
	Val ves not functi oni ng properly	Repl ace val ves
AAAAA	AAAAA	AAAAA
Oil Leakage	Loose end plug Bad seal crimp	Tighten end plug Remove and re-crimp seal
AAAAA	AAAAA	AAAAA

MANUAL TRANSMISSION

MANUAL TRANSMISSION TROUBLE SHOOTING

NOTE: This is GENERAL information. This article is not intended to be specific to any unique situation or individual vehicle configuration. The purpose of this Trouble Shooting information is to provide a list of common causes to problem symptoms. For model-specific Trouble Shooting, refer to SUBJECT, DIAGNOSTIC, or TESTING articles available in the section(s) you are accessing.

TROUBLE SHOOTING - BASIC PROCEDURES

ABC123

Entire Article
2000 Chevrolet Camaro

MANUAL TRANSMISSION/TRANSAXLE TROUBLE SHOOTING

AA

Condition Possible Cause

AA

Noisy In Forward Gears . Low gear oil level,
. Loose bell housing bolts,
. Worn bearings or gears

AA

Clunk On Deceleration
(FWD Only) . Loose engine mounts,
. Worn inboard CV joints,
. Worn differential pinion shaft,
. Side gear hub counterbore
in case worn oversize

AA

Gear Clash When Shifting
Forward Gears . Clutch Out Of Adjustment,
. Shift linkage damaged or
out of adjustment,
. Gears or synchronizers damaged,
. Low gear oil level

AA

Transmission Noisy When
Moving (RWD Only) Quiet In
Neutral With Clutch Engaged . Worn rear outputshaft bearing

AA

Gear Rattle . Worn bearings,
. Wrong gear oil,
. Low gear oil,
. Worn gears

AA

Steady Ticking At Idle
(Increases With RPM) . Broken tooth on gear

AA

Gear Clash When Shifting
Forward Gears . Worn or broken synchronizers

AA

Loud Whine In Reverse . Normal condition (1)

AA

Noise When Stepping On Clutch . Bad release bearing,
. Worn pilot bearing

AA

Ticking Or Screeching As
Clutch Is Engaged . Faulty release bearing,
. Uneven pressure plate fingers

AA

Click Or Snap When Clutch
Is Engaged . Worn clutch fork,
. Worn or broken front bearing
retainer

AA

TROUBLE SHOOTING - BASIC PROCEDURES

ABC123

Entire Article
2000 Chevrolet Camaro

Transmi ssi on Shi fts Hard . Clutch not rel easi ng,
. Shi ft mechani sm bi ndi ng,
. Clutch i nstalled backwards
AA

Will Not Shi ft Into One Gear, Shi fts Into All Others . Bent shi ft fork,
. Worn detent balls
AA

Locked Into Gear, Cannot Shi ft . Clutch adjustment,
. Worn detent balls
AA

Transmi ssi on Jumps Out Of Gear . Pil ot beari ng worn,
. Bent shi ft fork,
. Worn gear teeth or face
. Excessi ve gear trai n end pl ay
. Worn synchroni zers
. Mi ssi ng detent ball spr i ng
. Shi ft mechani sm worn or out of adjustment
. Engi ne or transmi ssi on mount bolts loose or out of adjustment
. Transmi ssi on not ali gned
AA

Shi ft Lever Rattle . Worn shi ft lever or detents
. Worn shi ft forks
. Worn synchroni zers sl eeve
AA

Shi ft Lever Hops Under Accel erati on . Worn engi ne or transmi ssi on mounts
AA

(1) - Most uni ts use spur cut gears i n reverse and are noi sy
AA

POWERTRAIN

CLUTCH TROUBLE SHOOTING

NOTE: Thi s i s GENERAL i nformation. Thi s arti cle i s not i ntended to be speci fi c to any uni que si tuati on or i ndi vi dual vehi cle confi gurati on. The purpose of thi s Troubl e Shooti ng i nformation i s to provide a li st of common causes to probl em sympt oms. For model -speci fi c Troubl e Shooti ng, refer to SUBJECT, DIAGNOSTIC, or TESTI NG arti cles avai lable i n the secti on(s) you are accessi ng.

BASI C CLUTCH TROUBLE SHOOTING CHART
AA
CONDI TI ON POSSI BLE CAUSE CORRECTI ON

TROUBLE SHOOTING - BASIC PROCEDURES

ABC123

Entire Article
2000 Chevrolet Camaro

AA

Chattering or Grabbing	Incorrect clutch adjustment	Adjust clutch
	Oil, grease or glaze on facings	Disassemble and clean or replace
	Loose "U" joint flange	See DRIVE AXLES article
	Worn input shaft spline	Replace input shaft
	Binding pressure plate	Replace pressure plate
	Binding release lever	See CLUTCH article
	Binding clutch disc hub	Replace clutch disc
	Unequal pressure plate contact	Replace worn/misaligned components
	Loose/bent clutch disc	Replace clutch disc
	Incorrect transmission alignment	Realign transmission
	Worn pressure plate, disc or flywheel	Replace damaged components
	Broken or weak pressure springs	Replace pressure plate
	Sticking clutch pedal	Lubricate clutch pedal & linkage
	Incorrect clutch disc facing	Replace clutch disc
	Engine loose in chassis	Tighten all mounting bolts

AA

Failure to Release	Oil or grease on clutch facings	Clean or replace clutch clutch disc
	Incorrect release lever or pedal adjustment	See CLUTCH article
	Worn or broken clutch facings	Replace clutch disc
	Bent clutch disc or pressure plate	Replace damaged components

TROUBLE SHOOTING - BASIC PROCEDURES

ABC123

Entire Article
2000 Chevrolet Camaro

	Clutch disc hub binding on input shaft	Clean or replace clutch disc and/or input shaft
	Binding pilot bearing	Replace pilot bearing
	Sticking release bearing sleeve	Replace release bearing and/or sleeve
	Binding clutch cable	See CLUTCH article
	Defective clutch master	Replace master cylinder
	Defective clutch slave	Replace slave cylinder
	Air in hydraulic system	Bleed hydraulic system
Rattling	Weak or broken release lever spring	Replace spring and check alignment
	Damaged pressure plate	Replace pressure plate
	Broken clutch return spring	Replace return spring
	Worn splines on clutch disc or input shaft	Replace clutch disc and/or input shaft
	Worn clutch release bearing	Replace release bearing
	Dry or worn pilot bearing	Lubricate or replace pilot bearing
	Unequal release lever contact	Align or replace release lever
	Incorrect pedal free play	Adjust free play
	Warped or damaged clutch disc	Replace damaged components
Slipping	Pressure springs worn or	Release pressure plate
	Oily, greasy or worn facings	Clean or replace clutch disc
	Incorrect clutch alignment	Realign clutch assembly
	Warped clutch disc or pressure plate	Replace damaged components
	Binding release levers or clutch pedal	Lubricate and/or replace release components

TROUBLE SHOOTING - BASIC PROCEDURES

ABC123

Entire Article
2000 Chevrolet Camaro

Dry or worn pilot bearing	Lubri cate or repl ace bearing
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Worn input shaft bearing	Repl ace bearing
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AA

Transmi ssi on Click	Weak springs in pressure plate	Repl ace pressure plate
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Release fork loose on ball stud	Repl ace release fork and/or ball stud
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Oil on clutch disc damper	Repl ace clutch disc
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Broken spring in slave cylinder	Repl ace slave cylinder
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AA

DRIVE AXLE - NOISE DIAGNOSIS

Unrel ated Noi ses

Some driveline trouble symptoms are also common to the engine, transmission, wheel bearings, tires, and other parts of the vehicle. Ensure cause of trouble actually is in the drive axle before adjusting, repairing, or replacing any of its parts.

Non-Dri ve Axle Noi ses

A few conditions can sound just like drive axle noise and have to be considered in pre-diagnosis. The 4 most common noises are exhaust, tires, CV/universal joints and wheel trim rings.

In certain conditions, the pitch of the exhaust gases may sound like gear whine. At other times, it may be mistaken for a wheel bearing rumble.

Tires, especially radial and snow, can have a high-pitched tread whine or roar, similar to gear noise. Also, some non-standard tires with an unusual tread construction may emit a roar or whine.

Defective CV/universal joints may cause clicking noises or excessive driveline play that can be improperly diagnosed as drive axle problems.

Trim and moldings also can cause a whistling or whining noise. Ensure none of these components are causing the noise before disassembling the drive axle.

Gear Noi se

A "howling" or "whining" noise from the ring and pinion gear can be caused by an improper gear pattern, gear damage, or improper bearing preload. It can occur at various speeds and driving conditions, or it can be continuous.

Before disassembling axle to diagnose and correct gear noise, make sure that tires, exhaust, and vehicle trim have been checked as possible causes.

TROUBLE SHOOTING - BASIC PROCEDURES

ABC123

Entire Article
2000 Chevrolet Camaro

Chuckle

This is a particular rattling noise that sounds like a stick against the spokes of a spinning bicycle wheel. It occurs while decelerating from 40 MPH and usually can be heard until vehicle comes to a complete stop. The frequency varies with the speed of the vehicle.

A chuckle that occurs on the driving phase is usually caused by excessive clearance due to differential gear wear, or by a damaged tooth on the coast side of the pinion or ring gear. Even a very small tooth nick or a ridge on the edge of a gear tooth is enough the cause the noise.

This condition can be corrected simply by cleaning the gear tooth nick or ridge with a small grinding wheel. If either gear is damaged or scored badly, the gear set must be replaced. If metal has broken loose, the carrier and housing must be cleaned to remove particles that could cause damage.

Knock

This is very similar to a chuckle, though it may be louder, and occur on acceleration or deceleration. Knock can be caused by a gear tooth that is damaged on the drive side of the ring and pinion gears. Ring gear bolts that are hitting the carrier casting can cause knock. Knock can also be due to excessive end play in the axle shafts.

Clunk

Clunk is a metallic noise heard when an automatic transmission is engaged in Reverse or Drive, or when throttle is applied or released. It is caused by backlash somewhere in the driveline, but not necessarily in the axle. To determine whether driveline clunk is caused by the axle, check the total axle backlash as follows:

1) Raise vehicle on a frame or twinpost hoist so that drive wheels are free. Clamp a bar between axle companion flange and a part of the frame or body so that flange cannot move.

2) On conventional drive axles, lock the left wheel to keep it from turning. On all models, turn the right wheel slowly until it is felt to be in Drive condition. Hold a chalk marker on side of tire about 12" from center of wheel. Turn wheel in the opposite direction until it is again felt to be in Drive condition.

3) Measure the length of the chalk mark, which is the total axle backlash. If backlash is one inch or less, drive axle is not the source of clunk noise.

Bearing Whine

Bearing whine is a high-pitched sound similar to a whistle. It is usually caused by malfunctioning pinion bearings. Pinion bearings operate at drive shaft speed. Roller wheel bearings may whine in a similar manner if they run completely dry of lubricant. Bearing noise will occur at all driving speeds. This distinguishes it from gear whine, which usually comes and goes as speed changes.

TROUBLE SHOOTING - BASIC PROCEDURES

ABC123

Entire Article
2000 Chevrolet Camaro

Bearing Rumble

Bearing rumble sounds like marbles being tumbled. It is usually caused by a malfunctioning wheel bearing. The lower pitch is because the wheel bearing turns at only about 1/3 of drive shaft speed.

Chatter On Turns

This is a condition where the entire front or rear of vehicle vibrates when vehicle is moving. The vibration is plainly felt as well as heard. Extra differential thrust washers installed during axle repair can cause a condition of partial lock-up that creates this chatter.

Axle Shaft Noise

Axle shaft noise is similar to gear noise and pinion bearing whine. Axle shaft bearing noise will normally distinguish itself from gear noise by occurring in all driving modes (Drive, cruise, coast and float), and will persist with transmission in Neutral while vehicle is moving at problem speed.

If vehicle displays this noise condition, remove suspect axle shafts, replace wheel seals and install a new set of bearings. Re-evaluate vehicle for noise before removing any internal components.

Vibration

Vibration is a high-frequency trembling, shaking or grinding condition (felt or heard) that may be constant or variable in level and can occur during the total operating speed range of the vehicle.

The types of vibrations that can be felt in the vehicle can be divided into 3 main groups:

- * Vibrations of various unbalanced rotating parts of the vehicle.
- * Resonance vibrations of the body and frame structures caused by rotating of unbalanced parts.
- * Tip-in moans of resonance vibrations from stressed engine or exhaust system mounts or driveline flexing modes.

DRIVE AXLE - RWD TROUBLE SHOOTING

NOTE: This is GENERAL information. This article is not intended to be specific to any unique situation or individual vehicle configuration. The purpose of this Trouble Shooting information is to provide a list of common causes to problem symptoms. For model-specific Trouble Shooting, refer to SUBJECT, DIAGNOSTIC, or TESTING articles available in the section(s) you are accessing. For definitions of listed noises or sounds, see DRIVE AXLE - NOISE DIAGNOSIS under POWERTRAIN.

DRIVE AXLE (RWD) TROUBLE SHOOTING

AA

TROUBLE SHOOTING - BASIC PROCEDURES

ABC123

Entire Article
2000 Chevrolet Camaro

CONDI TION	POSSIBLE CAUSE	CORRECTI ON
Knocki ng or Cl unki ng		
	Di fferenti al Si de Gear Clearance	Check Clearance
	Worn Pi ni on Shaft	Repl ace Pi ni on Shaft
	Axl e Shaft End Pl ay	Check End Pl ay
	Mi ssi ng Gear Teeth	Check Di fferenti al / Repl ace Gear
	Wrong Axl e Backl ash	Check Backl ash
	Mi sal i gned Dri vel i ne	Real i gn Dri vel i ne
Cl i nki ng Duri ng Engagemen t		
	Si de Gear Clearance	Check Clearance
	Ring and Pi ni on Backl ash	Check Backl ash
	Worn/Loose Pi ni on Shaft	Repl ace Shaft/Beari ng
	Bad "U" Joi nt	Repl ace "U" Joi nt
	Sti cki ng Sl i p Yoke	Lube Sl i p Yoke
	Broken Rear Axl e Mount	Repl ace Mount
	Loose Drive Shaft Fl ange	Check Fl ange
Cl i ck/Chatter On Turns		
	Di fferenti al Si de Gear Clearance	Check Clearance
	Wrong Turn On Pl ates (1)	Repl ace Cl utch Pl ates
	Wrong Di fferenti al Lubri cant (1)	Change Lubri cant
Knock Or Cl i ck		
	Fl at Spot on Rear Wheel Bearing	Repl ace Wheel Beari ng
Low Vi brati on At All Speeds		
	Faul ty Wheel Bearing	Repl ace Wheel Bearing
	Faul ty "U" Joi nt	Repl ace "U" Joi nt
	Faul ty Drive Shaft	Bal ance Drive Shaft
	Faul ty Compani on Fl ange	Repl ace Fl ange

TROUBLE SHOOTING - BASIC PROCEDURES

ABC123

Entire Article
2000 Chevrolet Camaro

Faulty Slip Yoke Flange Replace Flange

(1) - Limited slip differential only.

AA

FWD AXLE SHAFTS & CV JOINTS TROUBLE SHOOTING

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BASIC FWD AXLE SHAFTS & CV JOINTS TROUBLE SHOOTING CHART

CONDITION	POSSIBLE CAUSE
Grease Leaks	CV boot torn or cracked
Clicking Noise on Cornering	Damaged outer CV
Clunk Noise on Acceleration	Damaged inner CV
Vibration or Shudder on Acceleration	Sticking, damaged or worn CV Misalignment or spring height

STEERING & SUSPENSION

MANUAL STEERING GEAR TROUBLE SHOOTING

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BASIC MANUAL STEERING GEAR TROUBLE SHOOTING CHART

CONDITION	POSSIBLE CAUSE	CORRECTION
Rattle or Chucking Noise in Rack and Pinion	Rack and pinion mounting bracket loose	Tighten all mounting bolts
	Lack of/or incorrect lubricant	Correct as necessary

TROUBLE SHOOTING - BASIC PROCEDURES

ABC123

Entire Article
2000 Chevrolet Camaro

	Steering gear mounting bolts loose	Tighten all mounting bolts
Excessive Play	Front wheel bearing improperly adjusted	See FRONT SUSPENSION article
	Loose or worn steering linkage	See STEERING LINKAGE article
	Loose or worn steering gear shift	See MANUAL STEERING GEAR article
	Steering arm loose on gear shaft	See MANUAL STEERING GEAR article
	Steering gear housing bolts loose	Tighten all mounting bolts
	Steering gear adjustment too loose	See MANUAL STEERING GEAR article
	Steering arms loose on knuckles	Tighten and check steering linkage
	Rack and pinion mounting loose	Tighten all mounting bolts
	Rack and pinion out of adjustment	See adjustment in STEERING article
	Tie rod end loose	Tighten and check steering linkage
	Excessive Pitman shaft-to-ball nut lash	Repair as necessary
Poor Returnability	Lack of lubricant in ball joint or linkage	Lubricate and service systems
	Binding in linkage or ball joints	See STEERING LINKAGE and SUSPENSION article
	Improper front end alignment	See WHEEL ALIGNMENT article
	Improper tire pressure	Inflate to proper pressure
	Tie rod binding	Inflate to proper pressure
	Shaft seal rubbing shaft	See STEERING COLUMN

TROUBLE SHOOTING - BASIC PROCEDURES

ABC123

Entire Article
2000 Chevrolet Camaro

article AA		
Excessive Vertical Motion	Improper tire pressure	Inflate to proper pressure
	Tires, wheels or rotors out of balance	Balance tires then check wheels and rotors
	Worn or faulty shock absorbers	Check and replace if necessary
	Loose tie rod ends or steering	Tighten or replace if necessary
	Loose or worn wheel bearings	See SUSPENSION article
AA		
Steering Pulls to One Side	Improper tire pressure	Inflate to proper pressure
	Front tires are different sizes	Rotate or replace if necessary
	Wheel bearings not adjusted properly	See FRONT SUSPENSION article
	Bent or broken suspension components	See FRONT SUSPENSION article
	Improper wheel alignment	See WHEEL ALIGNMENT article
	Brakes dragging	See BRAKES article
AA		
Instability	Low or uneven tire pressure	Inflate to proper pressure
	Loose or worn wheel bearings	See FRONT SUSPENSION article
	Loose or worn idler arm bushing	See FRONT SUSPENSION article
	Loose or worn strut bushings	See FRONT SUSPENSION article
	Incorrect front wheel alignment	See WHEEL ALIGNMENT article
	Steering gear not	See MANUAL STEERING

TROUBLE SHOOTING - BASIC PROCEDURES

ABC123

Entire Article
2000 Chevrolet Camaro

centered	GEARS article
Springs or shock	Check and replace if necessary
Improper cross shaft	See MANUAL STEERING GEAR article

AA

POWER STEERING TROUBLE SHOOTING

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BASIC POWER STEERING TROUBLE SHOOTING CHART

AA

CONDI TION	POSSI BLE CAUSE	CORRECTI ON
AA		
Rattle or Chuck ing Noi se	Pressure hoses touch ing engi ne parts	Adj ust to proper cl earance
	Loose Pi tman shaft	Adj ust or repl ace i f necess ary
	Tie rods ends or Pi tman arm loose	Tighten and check system
	Rack and pi nion mounts loose	Tighten all mount ing bol ts
	Free play in worm and	See POWER STEERI NG GEAR arti cle
	Loose sector shaft or thrust bearing adj ustment	See POWER STEERI NG GEAR
	Free play in pot coupl ing	See STEERI NG COLUMN arti cle
	Worn shaft serrations	See STEERI NG COLUMN arti cle
AA		
Growl in Steering Pump	Excessi ve pressure in hoses	Restrict ed hoses, see POWER STEERI NG GEAR arti cle
	Scored pressure pl ates	See POWER STEERI NG GEAR

TROUBLE SHOOTING - BASIC PROCEDURES

ABC123

Entire Article
2000 Chevrolet Camaro

article

Scored thrust plates or rotor	See POWER STEERING GEAR article
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Extreme wear of cam ring	See POWER STEERING GEAR article
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AAAAA
Rattle in Steering Pump Vanes not installed See POWER STEERING PUMP article

Vanes sticking in rotor	See POWER STEERING PUMP article
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AAAAA
Swish noise in Pump Defective flow control valve See POWER STEERING PUMP article

AAAAA
Groan in Steering Pump Air in fluid See POWER STEERING PUMP article

Poor pressure hose connection	Tighten and check, replace if necessary
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AAAAA
Squawk When Turning Damper "O" ring on valve spool cut See POWER STEERING PUMP article

AAAAA
Moan or Whine in Pump Pump shaft bearing scored Replace bearing and fluid

Air in fluid or fluid level low	See POWER STEERING PUMP article
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Hose or column grounded	Check and replace if necessary
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Cover "O" ring missing or damaged	See POWER STEERING PUMP article
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Valve cover baffle missing or damaged	See POWER STEERING PUMP article
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Interference of components in pump	See POWER STEERING PUMP article
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Loose or poor bracket alignment	Correct or replace if necessary
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AAAAA
Hissing When Parking Internal leakage in steering gear Check valved assembly first

AAAAA
Chi rp in Steering Pump Loose or worn power steering belt Adjust or replace if necessary

TROUBLE SHOOTING - BASIC PROCEDURES

ABC123

Entire Article
2000 Chevrolet Camaro

AAA

Buzzing When Not Steering	Noisy pump	See POWER STEERING PUMP article
	Free play in steering shaft bearing	See STEERING COLUMN article
	Bearing loose on shaft serrations	See STEERING COLUMN article
AAA		
Clicking Noise in Pump	Pump slippers too long	See POWER STEERING PUMP article
	Broken slipper springs	See POWER STEERING PUMP article
	Excessive wear or nicked rotors	See POWER STEERING PUMP article
	Damaged cam contour	See POWER STEERING PUMP article
AAA		
Poor Return of Wheel	Wheel rubbing against turn signal	See STEERING COLUMN SWITCHES article
	Flange rubbing steering gear adjuster	See STEERING COLUMN article
	Tight or frozen steering shaft bearing	See STEERING COLUMN article
	Steering gear out of adjustment	See POWER STEERING GEAR article
	Sticking or plugged spool valve	See POWER STEERING PUMP article
	Improper front end alignment	See WHEEL ALIGNMENT article
	Wheel bearings worn or loose	See FRONT SUSPENSION article
	Tie rods or ball joints binding	Check and replace if necessary
	Intermediate shaft joints binding	See STEERING COLUMN article
	Kinked pressure hoses	Correct or replace if necessary

TROUBLE SHOOTING - BASIC PROCEDURES

ABC123

Entire Article
2000 Chevrolet Camaro

Loose housing head spanner nut	See POWER STEERING GEAR article
Damaged valve lever	See POWER STEERING GEAR article
Sector shaft adjusted too tight	See ADJUSTMENTS in POWER STEERING GEAR article
Worm thrust bearing adjusted too tight	See ADJUSTMENTS in POWER STEERING GEAR article
Reaction ring sticking in cylinder	See POWER STEERING GEAR article
Reaction ring sticking in housing head	See POWER STEERING GEAR article
Steering pump internal leakage	See POWER STEERING PUMP article
Steering gear-to-column misalignment	See STEERING COLUMN article
Lack of lubrication in linkage	Service front suspension
Lack of lubrication in ball joints	Service front suspension
Increased Effort When Turning Wheel Fast Foaming, Milky Power Steering Fluid, Low Fluid Level or Low Pressure	High internal pump leakage Power steering pump belt slipping Low fluid level Engine idle speed too low Air in pump fluid system Pump output low Steering gear malfunctioning Low fluid level
See POWER STEERING PUMP article	See POWER STEERING PUMP article
Adjust or replace if necessary	Adjust or replace if necessary
Check and fill to proper level	Check and fill to proper level
Adjust to correct setting	Adjust to correct setting
See POWER STEERING PUMP article	See POWER STEERING PUMP article
See POWER STEERING PUMP article	See POWER STEERING PUMP article
See POWER STEERING GEAR article	See POWER STEERING GEAR article
Check and fill to proper level	Check and fill to proper level

TROUBLE SHOOTING - BASIC PROCEDURES

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2000 Chevrolet Camaro

Loose fan belt	Adjust or replace if necessary
Insufficient pump pressure	See POWER STEERING PUMP article
Sticky flow control valve	See POWER STEERING PUMP article
Linkage hitting oil pan at full turn	Replace bent components
AA	
Kick Back or Free Play	Air in pump fluid system See POWER STEERING PUMP article
Worn poppet valve in steering gear	See POWER STEERING PUMP article
Excessive over center lash	See POWER STEERING GEAR article
Thrust bearing out of adjustment	See POWER STEERING GEAR article
Free play in pot coupling	See POWER STEERING PUMP article
Steering gear coupling loose on shaft	See POWER STEERING PUMP article
Steering disc mounting bolts loose	Tighten or replace if necessary
Coupling loose on worm shaft	Tighten or replace if necessary
Improper sector shaft adjustment	See POWER STEERING GEAR article
Excessive worm piston side play	See POWER STEERING GEAR article
Damaged valve lever	See POWER STEERING GEAR article
Universal joint loose	Tighten or replace if necessary
Defective rotary valve	See POWER STEERING GEAR article
AA	

TROUBLE SHOOTING - BASIC PROCEDURES

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2000 Chevrolet Camaro

No Power When Parking	Sticking flow control valve	See POWER STEERING PUMP article
	Insufficient pump pressure output	See POWER STEERING PUMP article
	Excessive internal pump leakage	See POWER STEERING PUMP article
	Excessive internal gear leakage	See POWER STEERING PUMP article
	Flange rubs against gear adjust plug	See STEERING COLUMN article
	Loose pump belt	Adjust or replace if necessary
	Low fluid level	Check and add proper amount of fluid
	Engine idle too low	Adjust to correct setting
	Steering gear-to-column misaligned	See STEERING COLUMN article
AA		
No Power, Left Turn	Left turn reaction seal "O" ring worn	See POWER STEERING GEAR article
	Left turn reaction seal damaged/missing	See POWER STEERING GEAR article
	Cylinder head "O" ring damaged	See POWER STEERING PUMP article
AA		
No Power, Right Turns	Column pot coupling bottomed	See STEERING COLUMN article
	Right turn reaction seal "O" ring worn	See POWER STEERING GEAR article
	Right turn reaction seal damaged	See POWER STEERING GEAR article
	Internal leakage through piston end plug	See POWER STEERING GEAR article
	Internal leakage through side plugs	See POWER STEERING GEAR article
AA		
Lack of Effort	Left and/or right	Replace, see POWER

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2000 Chevrolet Camaro

in Turning	reaction seal sticking in cylinder head	STEERING GEAR article
AA		
Wanders to One Side	Front end alignment incorrect	See WHEEL ALIGNMENT article
	Unbalanced steering gear valve	See POWER STEERING GEAR article
AA		
Low Pressure Due to Steering Pump	Flow control valve stuck or inoperative	See POWER STEERING PUMP article
	Pressure plate not flat against cam ring	See POWER STEERING PUMP article
	Extreme wear of cam ring	Replace and check adjustments
	Scored plate, thrust plate or rotor	See POWER STEERING PUMP article
	Vanes not installed properly	See POWER STEERING PUMP article
	Vanes sticking in rotor slots	See POWER STEERING PUMP article
	Cracked/broken thrust or pressure plate	See POWER STEERING PUMP article
AA		

STEERING COLUMN TROUBLE SHOOTING

NOTE: This is GENERAL information. This article is not intended to be specific to any unique situation or individual vehicle configuration. The purpose of this Trouble Shooting information is to provide a list of common causes to problem symptoms. For model-specific Trouble Shooting, refer to SUBJECT, DIAGNOSTIC, or TESTING articles available in the section(s) you are accessing.

BASIC STEERING COLUMN TROUBLE SHOOTING CHART

AA		
CONDI TI ON	POSSI BLE CAUSE	CORRECTI ON
AA		
Noise in Steering	Coupling pulled apart	See STEERING COLUMNS article
	Column not correctly aligned	See STEERING COLUMNS article
	Broken lower joint	Replace joint

TROUBLE SHOOTING - BASIC PROCEDURES

ABC123

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2000 Chevrolet Camaro

Horn contact ring not	See STEERING COLUMN article
Bearing not lubricated	See STEERING COLUMN article
Shaft snap ring not properly seated	Reseat or replace snap ring
Plastic spherical joint not lubricated	See STEERING COLUMN article
Shroud or housing loose	Tighten holding screws
Lock plate retaining ring not seated	See STEERING COLUMN article
Loose sight shield	Tighten holding screws

AA

High Steering Shaft Effort	Column assembly misaligned	See STEERING COLUMN article
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Improperly installed dust shield	Adjust or replace
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Tight steering universal joint	See STEERING COLUMN article
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AA

High Shift Effort	Column is out of alignment	See STEERING COLUMN article
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Improperly installed dust shield	Adjust or replace
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Seals or bearings not lubricated	See STEERING COLUMNS article
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Mounting bracket screws too long	Replace with new shorter screws
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Burrs on shift tube	Remove burrs or replace tube
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Lower bowl bearing assembled wrong	See STEERING COLUMN article
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Shift tube bent or broken	Replace as necessary
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Improper adjustment of shift levers	See STEERING COLUMN article
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AA

TROUBLE SHOOTING - BASIC PROCEDURES

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2000 Chevrolet Camaro

Improper Trans. Shifting	Sheared shift tube joint	Replace as necessary
	Sheared lower shaft lever	Replace as necessary
	Improper shift lever adjustment	See STEERING COLUMN article
	Improper gate plate adjustment	See STEERING COLUMN article
AA		
Excess Play in Column	Instrument panel bracket bolts loose	Tighten bolts and check bracket
	Broken weld nut on jacket	See STEERING COLUMN article
	Instrument bracket capsule sheared	See STEERING COLUMN article
	Column bracket/jacket bolts loose	Tighten bolts and check bracket
AA		
Steering Locks in Gear	Release lever mechanism	See STEERING COLUMN article
AA		

SUSPENSION TROUBLE SHOOTING

NOTE: This is GENERAL information. This article is not intended to be specific to any unique situation or individual vehicle configuration. The purpose of this Trouble Shooting information is to provide a list of common causes to problem symptoms. For model-specific Trouble Shooting, refer to SUBJECT, DIAGNOSTIC, or TESTING articles available in the section(s) you are accessing.

BASIC SUSPENSION TROUBLE SHOOTING CHART

AA		
CONDI TI ON	POSSI BLE CAUSE	CORRECTI ON
AA		
Front End Noise	Loose or worn wheel	See Wheel Bearing Adjustment in SUSPENSION
	Worn shocks or shock mountings	Replace struts or strut mountings
	Worn struts or strut mountings	Replace struts or strut mountings
	Loose or worn lower control arm	See SUSPENSION

TROUBLE SHOOTING - BASIC PROCEDURES

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2000 Chevrolet Camaro

Loose steering gear-to-frame bolts	See STEERING
Worn control arm bushings	See SUSPENSION
Ball joints not lubricated	Lubricate ball joints & see Ball Joint Checking in SUSPENSION
Front Wheel Shake, Shimmy, or Vibration	Tires or wheels out of balance
	Check tire balance
	Incorrect wheel alignment
	See WHEEL ALIGNMENT
	Drive shaft unbalanced
	Check drive shaft balance
	Loose or worn wheel bearings
	See WHEEL ALIGNMENT
	Loose or worn tie rod ends
	See SUSPENSION
	Worn upper ball joints
	See Ball Joint Checking in SUSPENSION
	Worn shock absorbers
	Replace shock absorbers
	Worn strut bushings
	Replace strut bushings
Car Pulls to One Side	Mismatched or uneven tires
	Check tire condition
	Broken or sagging springs
	See SUSPENSION
	Loose or worn strut bushings
	See SUSPENSION
	Improper wheel alignment
	See WHEEL ALIGNMENT
	Improper rear axle alignment
	Check rear axle alignment
	Power steering gear unbalanced
	See STEERING
	Front brakes dragging
	See BRAKES
Abnormal Tire Wear	Unbalanced tires
	Check tire balance & rotation
	Sagging or broken springs
	See SUSPENSION

TROUBLE SHOOTING - BASIC PROCEDURES

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2000 Chevrolet Camaro

Incorrect front end alignment	See WHEEL ALIGNMENT
Faulty shock absorbers	Replace chock absorbers
AAAAA	AAAAA
Scuffed Tires	Toe-In incorrect
	See WHEEL ALIGNMENT
Suspension arm bent or twisted	See appropriate SUSPENSION article
AAAAA	AAAAA
Springs Bottom or Sag	Bent or broken springs
	See SUSPENSION
Leaking or worn shock absorbers	Replace shock absorbers
Frame misalignment	Check frame for damage
AAAAA	AAAAA
Spring Noises	Loose "U" Bolts
	See SUSPENSION
Loose or worn bushings	See SUSPENSION
Worn or missing interliners	See SUSPENSION
AAAAA	AAAAA
Shock Absorber Noise	Loose shock mountings
	Check & tighten mountings
Worn bushings	Replace bushings
Air in system	Bleed air from system
Undercoating on shocks	Remove undercoating
AAAAA	AAAAA
Car Leans or Sways on Corners	Loose stabilizer bar
	See SUSPENSION
Faulty shocks or mountings	Replace shocks or mountings
Broken or sagging springs	See SUSPENSION
AAAAA	AAAAA
Shock Absorbers	Worn seals or reservoir
	See SUSPENSION
Leaking	tube crimped
AAAAA	AAAAA
Broken Springs	Loose "U" bolts
	See SUSPENSION
Inoperative shock absorbers	Replace shock absorbers
AAAAA	AAAAA

WHEEL ALIGNMENT TROUBLE SHOOTING

NOTE: This is GENERAL information. This article is not intended to be specific to any unique situation or individual vehicle

TROUBLE SHOOTING - BASIC PROCEDURES

ABC123

Entire Article
2000 Chevrolet Camaro

configuration. The purpose of this Trouble Shooting information is to provide a list of common causes to problem symptoms. For model-specific Trouble Shooting, refer to SUBJECT, DIAGNOSTIC, or TESTING articles available in the section(s) you are accessing.

BASIC WHEEL ALIGNMENT TROUBLE SHOOTING CHART

AA

CONDITION	POSSIBLE CAUSE	CORRECTION
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AA

Premature Tire Wear	Improper tire inflation	Check tire pressure
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	Front alignment out of tolerance	See ALIGNMENT SPECS in WHEEL ALIGNMENT section
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	Suspension components worn	See SUSPENSION section
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	Steering system components worn	See STEERING section
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	Improper standing height	See WHEEL ALIGNMENT
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	Uneven or sagging springs	See SUSPENSION section
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	Bent wheel	See WHEEL ALIGNMENT
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	Improper torsion bar adjustment	See SUSPENSION section
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	Loose or worn wheel bearings	See WHEEL BEARING ADJ. in SUSPENSION section
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	Worn or defective shock	Replace shock absorbers
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	Tires out of balance	Check tire balance
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AA

Pulls to One Side	Improper tire inflation	Check tire pressure
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	Brake dragging	See BRAKE section
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	Mismatched tires	See WHEEL ALIGNMENT
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	Broken or sagging spring	See SUSPENSION section
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	Broken torsion bar	See SUSPENSION section
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	Power steering valve not centered	See STEERING section
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	Front alignment out of tolerance	See WHEEL ALIGNMENT section
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TROUBLE SHOOTING - BASIC PROCEDURES

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2000 Chevrolet Camaro

Defective wheel bearing	See WHEEL BEARINGS in SUSPENSION section
Uneven sway bar links	See SUSPENSION section
Frame bent	Check for frame damage
Steering system bushing worn	See STEERING section
AA Hard Steering	AA Idler arm bushing too tight See STEERING LINKAGE in STEERING section
Ball joint tight or seized	See SUSPENSION section
Steering linkage too tight	See STEERING LINKAGE in STEERING section
Power steering fluid low	Add proper amount of fluid
Power steering drive belt loose	See STEERING section
Power steering pump defective	See STEERING section
Steering gear out of adjustment	See STEERING section
Incorrect wheel alignment	See WHEEL ALIGNMENT
Damaged steering gear	See STEERING section
Damaged suspension	See SUSPENSION section
Bent steering knuckle or supports	See SUSPENSION section
AA Vehicle "Wanders"	AA Strut rod or control arm bushing worn See SUSPENSION section
Loose or worn wheel bearings	See WHEEL BEARINGS in SUSPENSION section
Improper tire inflation	Check tire pressure
Stabilizer bar missing or defective	See SUSPENSION section
Wheel alignment out of tolerance	See Adjustment in WHEEL ALIGNMENT section

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2000 Chevrolet Camaro

Broken spring See SUSPENSION section

Defective shock absorbers Replace shock absorbers

Worn steering & suspension components See SUSPENSION section

AA
Front End Shimmy Tire out of balance/round Check tire balance

Excessive wheel runout See WHEEL ALIGNMENT

Insufficient or improper caster See WHEEL ALIGNMENT section

Worn suspension or steering components See SUSPENSION section

Defective shock absorbers Replace shock absorber

Wheel bearings worn or loose See WHEEL BEARING ADJ. in SUSPENSION section

Power steering reaction Bracket loose See STEERING section

Steering gear box (rack) mounting loose See STEERING section

Steering gear adjustment loose See STEERING section

Worn spherical joints See SUSPENSION section

AA
Toe-In Not Lower control arm bent See SUSPENSION section

Adjustable Frame bent Check frame for damage

AA
Camber Not Control arm bent See SUSPENSION section

Adjustable Frame bent Check frame for damage

Hub & bearing not seated properly See SUSPENSION section

AA

END OF ARTICLE