

***EPW Engines and
Crankshaft Kits***

**EPW Engines
3845 W. Fort St.
Detroit, Michigan 48216**

1-800-241-6397

EPW Engines

The contents of this catalog were compiled by EPW in its entirety without independent verification of the accuracy of all applications. Because of the quantity and complexity of the numbers and combinations utilized, EPW cannot guarantee 100% accuracy, and therefore denies any and all responsibility for errors which may exist herein.

THE USER IS CAUTIONED TO ESTABLISH HIS OWN VERIFICATION WHENEVER OR WHEREVER DOUBT MAY EXIST and the user is solely responsible for use of the contents of this catalog.

ABBREVIATED CATALOG CODES	1	Truck V8	60-63
AMERICAN MOTORS		GMC	
4 & 6 Cyl "OHV" & "OHC"	5-6	Caballero & Spring	
V8	7	(See Chevrolet Passenger 3, 4, 6, V6 & V8)	
CHRYSLER, DODGE, PLYMOUTH		Truck 6 Cyl. (See Chevrolet Truck 4, 6 & V6)	
Passenger 4 & 6 Cyl. "OHV" & "OHC" (Domestic)	8-11	Truck V6	67
Passenger 4 & 6 Cyl. "OHV" & "OHC" (Import)	11-13	Truck V8 (See Chevrolet Truck V8)	
(Arrow, Challenger, Champ, Colt, Conquest, Sapporo)		HONDA	83-84
Passenger 6 Cyl. "L" Head	14	INTERNATIONAL (NAVISTAR)	
Passenger V8 & V10 "OHV"	14-15	Truck 4 & 6 Cyl	93-94
CHRYSLER INDUSTRIAL		Truck V8	94-95
6 Cyl. "L" Head	16	ISUZU	85
DODGE		MAZDA	86
Truck 6 Cyl. "L" Head	16	MISCELLANEOUS ENGINES	101-102
Truck - Industrial 4 & 6 Cyl. "OHV" & "OHC"	17-19	NISSAN	87-89
Truck - Industrial V8	20-22	OLDSMOBILE	
FORD, LINCOLN, MERCURY		4, 6 & V8 "OHV" & "OHC"	68-72
Passenger 4, 6 & V6	24-28	V8	73-74
Full Size Intermediates V8	29-30	PART NUMBER INDEX	110-120
Tractor & Industrial	36	PONTIAC	
Truck & Econoline 4, 6 & V6	31-32	4,6 & V6 "OHV" & "OHC"	75-80
Truck V8	34-35	V8	81-82
		TELEDYNE - CONTINENTAL	
GENERAL MOTORS		Clark	106-107
BUICK		Hyster/Yale	108
4, 6 & V6 Cyl. "OHV" & "OHC"	38-42	Continental	106
V8 "OHV"	43	Tow Motors	109
CADILLAC		TOYOTA	90-92
4, V6 & V8 "OHV" & "OHC"	44-45	VIN CODES	2-4
CHEVROLET		WILLYS - JEEP	
Passenger 3, 4, 6 & V6 "OHV" & "OHC"	46-51	4 Cyl	96
Passenger V8	52-53	6 & V6	97-98
Truck 4, 6 & V6	56-59	V8	99
Truck V6 (See GMC V6 Section)			

NOTE: Due to make and age, many engines are not listed under a specific category. Check the "Miscellaneous" listings on pages 101 and 102 of this catalog for these units. Information and prices can be obtained from the factory on any engines not listed.

EPW Engines Crankshaft Kits

SHORT BLOCKS INCLUDE:

Remanufactured Crankshaft &
Connecting Rods Fully Cleaned
and Machined
New or Remanufactured Camshaft**
New or Quality Tested Reclaimed
Sprockets or Timing Gears**
New Timing Chain most applications
Pistons and Rings
Rod and Main Bearings
Camshaft Bearings**
Freeze Plugs
Galley Plugs

**Except on Overhead Camshaft Engines

LONG BLOCKS INCLUDE:

SHORT BLOCK plus:
Head Assembly with
Valves, Springs,
Keepers, Rocker Arms
Hydraulic or Standard Lifters
Push Rods
Oil Pump++
Complete Set of Gaskets (Except
Valley Type Intake Manifold)

++Except Engines W/Oil Pump in
Front Cover - Oil Pump Kit
Included
Except Engines on Bulletin

RELATED SALES ITEMS

The following *new* items should be sold with all engines:

Oil
Oil Filter
Air Filter
Spark Plugs
Points and Condenser

PCV Valve
Spark Plug Wires
Crankcase Vents
Valve Lifters*
Oil Pump*

Thermostat
Anti-Freeze
Fuel Filter
Motor Mounts
Transmission Mount

The following items should be inspected, replaced or reconditioned as necessary:

Carburetor
Governor
Distributor
Water Pump
Hoses
All Sensors

Hose Clamps
Radiator
Crankshaft Pulley
Cylinder Heads*
Oil Pump Screen & Tube
Oil Pressure Sending Unit

Breather Cap
Alternator
Starter
Harmonic Balancer
Fuel Injectors
Oil Cooler

Crankshaft Kits

Crankshaft Kits Include Reground - Micropolished Crankshaft
Top Quality Main and Rod Bearings

*Applies to Short Blocks Only

EPW Engines

Important Installation Instructions

1. Replace oil pump with a new or properly reconditioned oil pump.
2. Check oil pump shaft to see that it turns freely.
3. Prime oil pump and lines. Important - Failure to do this can cause bearing failure (dry start). Make sure the oil pump shaft turns freely by hand.
4. Install new valve lifters.
5. Flush or boil out radiator.
6. Remove old gasket from oil pan, clean oil pan and gasket surfaces.
7. Clean all parts thoroughly - oil pan, valve cover, intake manifold, timing cover, etc.
8. Clean or replace oil pump screen & tube.
9. Use all new gaskets.
10. When starting engine do not accelerate above idle until oil pressure gauge reaches normal pressure.
11. Let engine run until normal operating temperature is reached. Adjust valves to factory specifications.
12. Check engine for oil or water leaks and correct if any.
13. Check engine for operating performance.
14. There are many causes for poor operating performance that are not the responsibility of the re manufactured engine such as:
 - A. Carburetor or Fuel Injection.
 - B. Distributor or distributor points.
 - C. Spark plugs and wires.
 - D. Cylinder heads on short block.
 - E. Governor if used.
 - F. Positive Crankcase Ventilation System.
 - G. Sensors (All)
15. All of the above should be completely reconditioned or replaced with new or quality remanufactured units.
16. Install new oil filter and clean air filter. Check for possible air leaks that could allow dirt to enter engine. Tighten all hose clamps and replace defective hoses. Re torque cylinder heads.
17. Fill out customer warranty card and mail to factory.
18. All engines with oil pump in the front cover, MUST have new timing cover and oil pump housing along with new gears installed for warranty protection.
19. Inspect engine at 300 and 1,000 miles. Tighten and Re torque as needed.

NOTE: FAILURE TO DO ANY OF THE ABOVE COULD VOID YOUR WARRANTY

EPW Engines

Priming Remanufactured Engines

Production Engine Remanufacturers have historically had a very small percentage of engine failures related to oil pumps and related parts, but over the past year, the percentages of these failures seems to be increasing. There also seems to be three common denominators associated with their failures. The engines were shipped over 200 miles to the installer, the engine sat in a warehouse for at least a month (before and/or after shipping) and the engine was hard to prime.

The vibrations during shipping have a tendency to shake all the oil down or at least out of the critical areas of the engine. Sitting in a warehouse does the same thing, but minus the vibration. The oil simply drains out and the bearings tend to dry up. With these two conditions, priming the oil system prior to start up becomes more critical.

Priming in the past was not difficult. The installer merely spun the oil pump with a drive rod and drill before installing the distributor. But, we now have engines that are distributorless and others that drive the oil pumps off other accessories. Some of these applications are:

- Four cylinder GM's such as the Olds Quad 4 use an oil pump that is driven by a gear on the crankshaft.
- Some imports like the Mitsubishi 2.6L use a chain to drive the oil pump.
- Some manufacturers use a gerotor style oil pump that slides over the nose of the crankshaft and is driven directly by the crankshaft.

In all of these cases, priming the oil system by turning the oil pump is very difficult, if not impossible. To properly prime the system to avoid dry start problems, the installer must attach a pressure primer to the oil galley to pump oil through the engine. Attach to main oil galley opening and prelube engine at 40 lbs for 5 minutes.

For additional information or assistance, please call 1-800-241-6397 and ask for Engine Assistance.

EPW Engines

EPW ENGINE CORE CREDIT POLICY

EPW price structure and policy is based on the expectation that all parts furnished with our replacement engine will be returned and must therefore charge for missing and broken parts. Engine must be assembled. It is nearly impossible to properly issue credit for loose parts. If engine core has a visible hole or crack, or if any main caps are missing, a 50% credit will be allowed. EPW will not allow the return of more cores than the customer purchases. Customer will be notified that core was not acceptable. Core will be returned freight collect if customer requests it.

Core credit requirements full credit will be issued under the following conditions

- A. Engine must be same type as originally purchased. Check casting numbers on block and heads, see catalog for correct casting number or call EPW for information.
- B. Engine must be fully assembled; customer will be charged for missing or broken parts.
- C. Engine must be free from visible cracks and holes and have all main caps properly bolted on.
- D. Engine must be in rebuildable condition. (No junkyard or rusted cores will be accepted.)
- E. Engine will be accepted or rejected by EPW only.
- F. Engine listed will be returned to the factory for inspection before credit is issued.
- G. Engine listed must have rebuildable cylinder heads and are subject to magna-flux inspection before credit is issued. If head or heads are not rebuildable, partial credit will be issued for engine.
- H. Part numbers with a #, indicate factory inspection before core credit is issued.

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EPW Engines Core Inspection

1. Check casting number on block, make sure it is the same as engine sold.
2. Check block for cracks, externally and internally.
3. Broken or missing crankshaft.
4. Broken or missing camshaft.
5. Spun main and/or rod bearings.
6. Missing main or rod caps.
7. Missing main cap bolts.
8. Missing or damaged crank gear.
9. Missing parts on heads: Valves, Valve Springs, Head Bolts, Rocker Arms, Push Rods.
10. Check crankshaft and or camshaft neck for damage to key way or seal area.
11. Check rear of crankshaft for damage.
12. Check block for any broken parts, stripped or broken out bolt holes.
13. Heads: Check casting number to make sure same as head sold.
14. Crankshaft: Check casting number to make sure same as crankshaft sold.
15. Drain all fluids from the core, stand unit on end to drain all fluids.

EPW Engines

Limited Warranty Crankshaft Kits

Crankshaft kits are warranted by EPW that are found to be defective in materials and workmanship before installation. The warranty carries replacement of crankshaft and bearing only, and no labor allowance is given or intended.

Because of the number of frequency of changes by original equipment manufacturers, application shown in the catalog cannot be 100% correct. It is the responsibility of the installing mechanic to make certain crankshaft and bearings are correct before they are installed. There shall be no warranty expressed or implied after installation. The date of installation shall be deemed to terminate the time limit of the implied warranty.

IMPORTANT CRANKSHAFT INSTALLATION CHECKS AND PROCEDURES:

It is the installer's responsibility to make certain crankshaft and bearings are correct in type and size before installation.

FOLLOW THESE CHECKS AND PROCEDURES:

1. Inspect main bearing saddles and connecting rods. If worn, cracked, out of round, or if caps have been filled, there will be incorrect oil clearance and bearing failure will result. Check rods for straightness.
2. Check all oil passages in block - must be open and clean.
3. Clean all parts and keep clean. Avoid burring or damage to main and rod journals.
4. Mate bearing halves with oil holes in block.
5. Do not mix main bearings and/or rod caps.
6. Use good lubricant on all bearings during assembly.
7. Torque mains, rods and flywheel bolts (to manufacturer's specifications).
8. Pilot bushings are required on some engines. Be sure to install correct (new) bushing, otherwise transmission may be damaged.
9. Before you start engine: PRESSURE PRIME THE OILING SYSTEM.

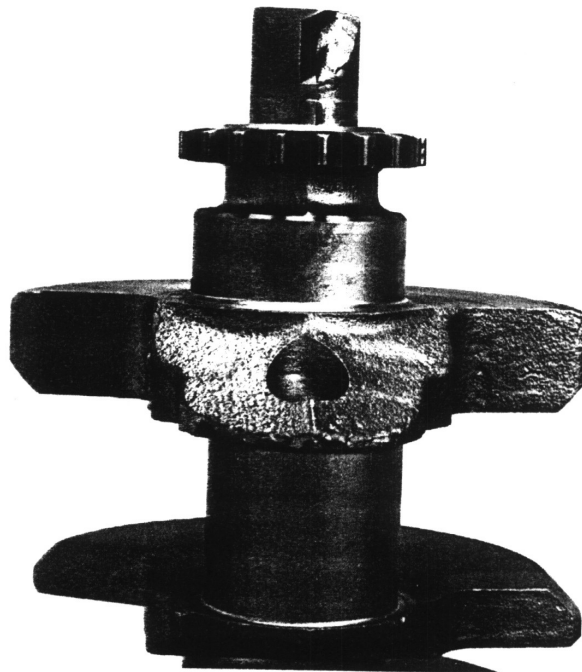
EPW Engines

Crankshaft Core Trade In Policy

Full core credit will be issued under the following conditions.

- A. All crankshaft cores returned must be in a EPW box.
- B. Crankshaft must be the same type as originally purchased in crankshaft kit.
- C. Broken crankshafts or crankshafts with mutilated pulley necks, worn keyways or weld on pulley neck, will not be accepted.
- D. Crankshaft core with worn thrust area will not be accepted.
- E. Crankshaft core with 2 or more down journals will not be accepted.
- F. Crankshaft will be accepted or rejected by EPW factory personnel only at EPW's place of business.

NOTE: For all crankshaft cores not returned in a EPW box, there will be a ten-dollar charge.
These boxes are necessary to minimize damage to cores.



Tech Topics

KSG INDUSTRIES, INC.

DETONATION AND PRE-IGNITION

How to Diagnose Piston Damaging Abnormal Combustion Problems

When the spark plug ignites the fuel-air mixture in an internal combustion engine, there is a controlled burn which last between one and a half and four thousandths of a second from start to finish. This burn must take place at exactly the right time so the piston can convert the expanding gases into usable work. Anything less than a controlled burn at the precise time is considered abnormal combustion. The possibility of abnormal combustion in today's automobiles has been greatly increased due to the removal of lead from gasoline and higher combustion temperatures created to produce

complete burning.

Today's automobiles are finely tuned and equipped with devices that make abnormal combustion a distinct probability. Potential troublemakers include the emission control system, lean fuel-air mixtures and advanced engine timing. For an efficient and clean running engine, everything must be in good order and proper balance: valve train action, carburetor calibration, ignition timing, fuel type and octane rating.

Regular maintenance is essential. A noticeable decrease in fuel economy, pinging, knocking or a sudden loss of engine power are danger signs. A qualified mechanic must diagnose the cause and correct it before serious damage occurs (See Figure A).

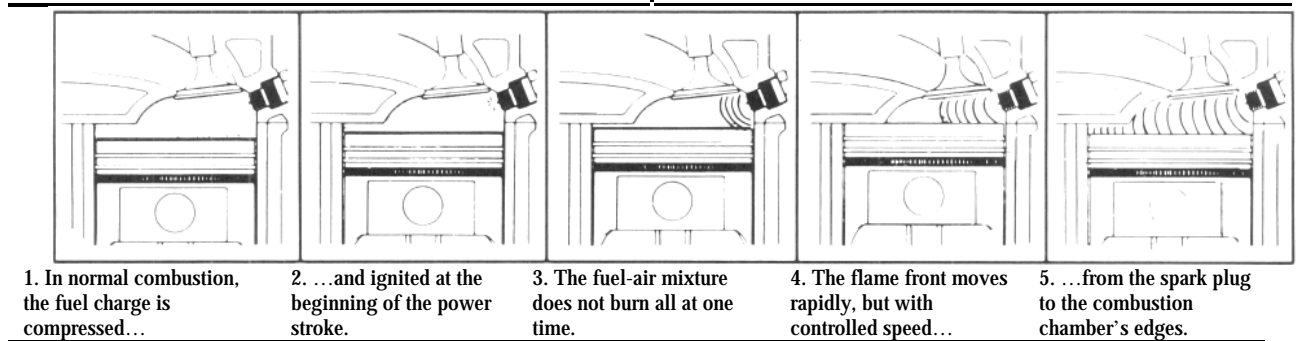


Figure A

Detonation

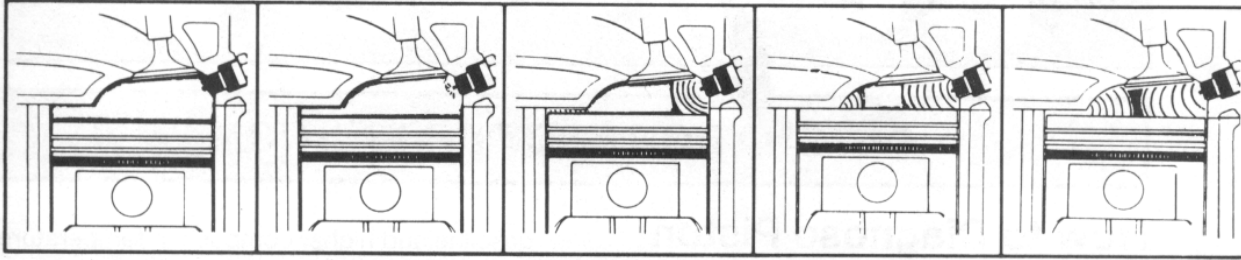
Anything less than a controlled burn at a precise time is “abnormal combustion”, generally divided into two types. The first is detonation, which occurs after the spark ignition.

When the charge first ignites, it tries to increase in volume. Since the burning fuel is confined between the piston and the cylinder head and cannot expand, it rapidly increases the pressure and temperature of the unburned gases high enough to ignite them prematurely.

Since the piston is not yet ready to convert this energy into useful work, it is dissipated as extra heat and a high-frequency vibration within the engine commonly called

“knock” or “ping”. The most common damage from detonation is ring land and crown erosion or breakage of the lower lands or crown.

Eroded particles may cause the rings to stick, leading to blowby, scuffing, scouring, power loss and high oil consumption. With severe detonation, the piston may overheat and soften to the point where thermal fatigue will fracture off a section of the top land.



1. In detonation, the fuel-air mixture is compressed normally.

2. Ignited by the spark plug, the burning fuel tries to expand.

3. Prevented from doing so, it raises pressure and temperature...

4. ...in the combustion chamber, igniting the unburned gases.

5. The resulting detonation causes the noise called “knock”.

Pre-ignition

The second type of abnormal combustion is pre-ignition. As the name suggest, the air-fuel mixture is ignited by an uncontrolled source before the spark plugs fire.

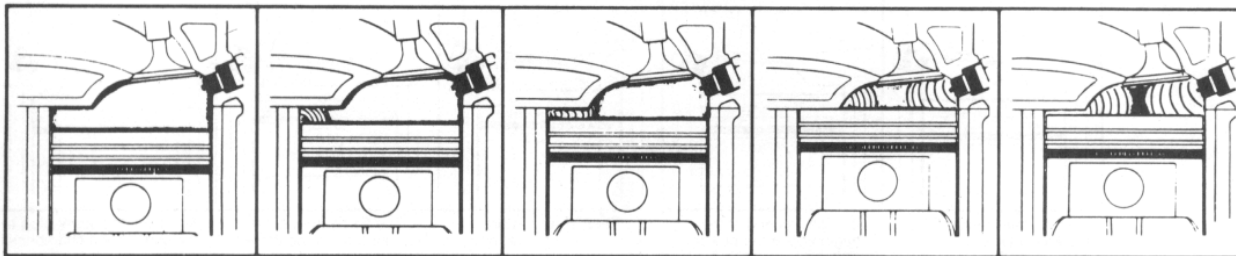
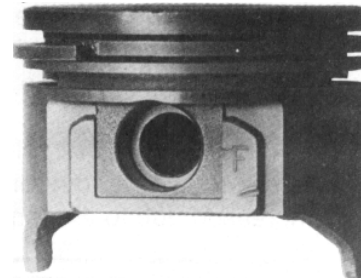
Common sources for pre-ignition are glowing combustion chamber deposits, head-gasket feather edges in the combustion chamber, cracked spark-plug insulators and spark plugs with too high a heat range for usual driving conditions.

Pre-ignitions or surface ignition can cause problems in several ways. Each time ignition begins at a hot spot in the

combustion chamber the energy released raises the temperature at that point. This, of course, increases the tendency to pre-ignite in the next engine cycle. This situation, known as “runaway” pre-ignition, soon becomes self sustaining, with pre-ignition coming earlier and earlier on the compression stroke. Damage due to overheating, such as thermal fatigue of the piston or burning of the cylinder head or head gasket may occur in only minutes under these conditions. The piston’s lower lands may also be broken off by very high cylinder pressures.

The pre-ignition source also behaves

like a very advanced spark ignition, increasing the tendency for the unburned gas to detonate in that cylinder.



1. In pre-ignition, the fuel-air mixture is compressed normally.

2. But a hot spot ignites the gases, creating the one flame front...

3. ...before the spark plug touches off the second flame front.

4. This increases the temperature and pressure in the chamber...

5. ...increasing the tendency to begin detonation.

Typical Piston Damage Caused by Abnormal Combustion

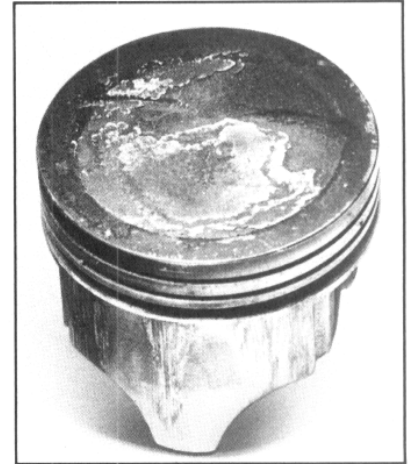
All these pistons show damage caused by detonation and pre-ignition. Failures include broken piston rings, sheared ring lands and holes in piston heads. Sometimes the pressures and temperatures from abnormal combustion are so high, they remove carbon deposits and actually scour the piston head clean.



Damage to piston head.



Ring land erosion.



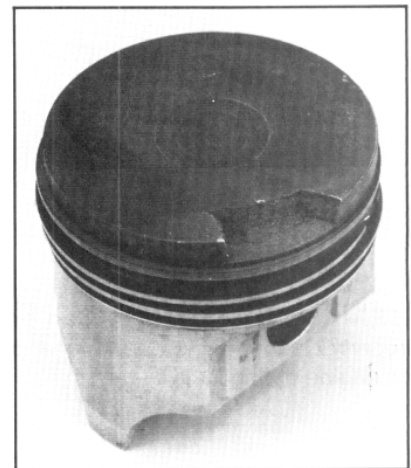
Carbon deposits - source of pre-ignition.



Melted top land, sheared secondary lands.



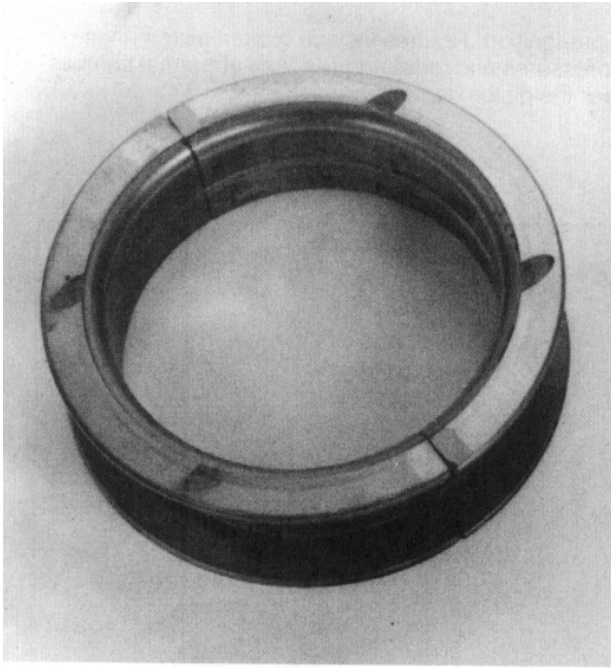
Secondary land damage indicates extreme temperatures and pressures.



Partially sheared top land shows the explosive force and high temperatures associated with abnormal combustion.

KSG INDUSTRIES, INC.

Causes of Engine Failure



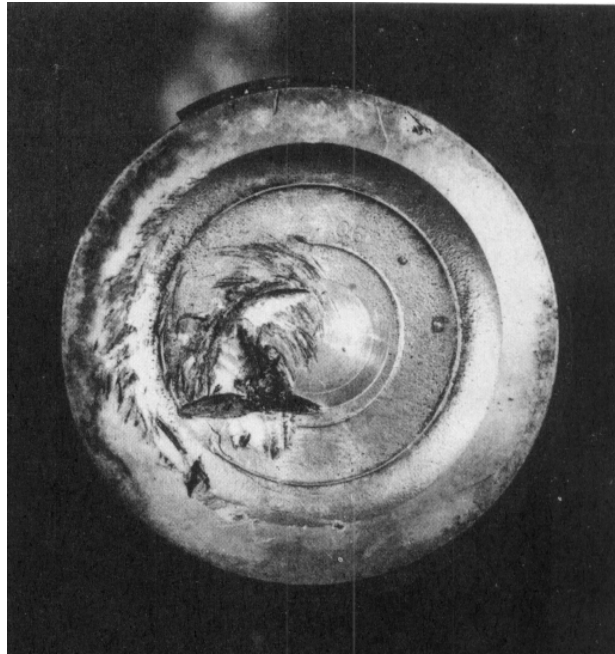
Thrust Failure - improper clutch adjustment or a faulty automatic transmission can cause dissipation of lubrication to the rear side of the thrust bearing leading to thrust bearing failures.

Causes leading to this bearing failure:

1. No free travel in the clutch
2. Improper pilot bushing
3. Misalignment of torque converter into front pump
4. Ballooning torque converter
5. Plugged or restricted cooler lines
6. Improperly functioning torque converter or transmission

Causes of Engine Failure

Material on Piston - Can be caused by improperly cleaned intake or material dropped down in the engine during installation.



Abbreviations

Acc	Accessory	ID	Inside Diameter
Adj	Adjustment	Ign	Ignition
AIR	Air Injection Reactor	Incl	Including
Alt	Alternator	Ind	Industrial
Alum	Aluminum	Int	Intake
Approx	Approximately	LD	Light Duty
Assy	Assembly	LPG	Liquid Propane Gas
A/T	Automatic Transmission	M/T	Manual Transmission
Auto	Automatic	Mech	Mechanical
Bal	Balance / Balancer	Med	Medium
BC	Barrel Carburetor	Mtg	Mounting
BDR	Bolt Down Rocker (non adjustable)	Mtr	Motor
Carb	Carburetor	Mts	Mounts
cc	Cubic Centimeter	No	Number
CFI	Central Fuel Injection	OD	Outside Diameter
Chgd	Charged	OHC	Overhead Cam
CID	Cubic Inch Displacement	OHV	Overhead Valves
Comb	Combustion	Pass	Passenger
Cyl	Cylinder	PCV	Positive Crankcase Ventilation
DI	Direct Injection	PG	Power Glide
Dia	Diameter	PTO	Power Takeoff
DIS	Distributor-less Ignition	Reg	Regular
Dist	Distributor	Rev	Reverse
DOHC	Dual Overhead Camshaft	RWD	Rear Wheel Drive
EEC	Electronic Engine Computer	S/B	Short Block
Eng	Engine	Send	Sending
Exc	Except	Ser	Serial
Exh	Exhaust	SHO	Special High Output
FI	Fuel Injection	SOHC	Single Overhead Camshaft
Fig	Figure	Std	Standard
FWD	Front Wheel Drive	TE	Thermactor Emissions
HD	Heavy Duty	TSU	Temperature Sending Unit
HEI	High Energy Ignition	Temp	Temperature
HO	High Output	Trans	Transmission
HSC	High Swirl Combustion	Trk	Truck
HSO	High Specific Output	Vac	Vacuum
Hsg	Housing	W/	With
Hyd	Hydraulic	W/O	Without
IDI	Indirect Injection		

Chrysler, AMC, Eagle & Jeep VIN Codes

1975-80 VIN Sample (11 Digit Number)

S22LAR10001

↑↑
5TH Digit 6TH Digit
Engine Code Model Year

1981-98 Vin Sample (17 Digit Number)

1B3BS48D4JN103705

↑↑
8TH Digit 10TH Digit
Engine Code Model Year

MODEL YEARS

Code	Year
D	1983
E	1984
F	1985
G	1986
H	1987
J	1988
K	1989
L	1990
M	1991
N	1992
P	1993
R	1994
S	1995
T	1996
U	1997
V	1998
W	1999
X	2000
Y	2001
Z	2002

Code	Make
A	AMC
CP	Eagle
CT	Chrysler Passenger
CT	Chrysler Truck
J	Jeep

ENGINE CODES

Code	Make	Engine	Years	Code	Make	Engine	Years
A	CP	1.5L 3V MPI	92-96	N	CP	2.0L 16V	95
A	CP	1.6L 2BC	83-86	N	CP	2.5L V6	95-96
A	CP	2.2L TURBO II	87-90	N	CT	3.7L	84-85
A	CP	2.2L MPI TURBO	92-94	N	CP	2.5L V6 24V	95-98
A	A	1.5L MPI (SOHC)		P	CP	2.5L TURBO	95
B	CP	1.7L 2BC	83	P	CP	5.2L 2BC	83-88
B	CP	2.0L 16V	96	P	CT	2.5L EFI	
B	CP	2.2L 2BC	81-82	P	J	2.5L 4 CYL	91-97
B	CP	3.0L MPI	92	R	CP	2.0L	90-95
B	CT	2.4L 16V MPI	96	R	CP	3.3L V6	90-96
B	A	1.8L MPI	90-94	R	CT	3.3L MPI	89-96
B	J	2.1L 4 CYL	91-95	R	A	2.0L MPI (DOHC)	
C	CP	1.8L MPI	93-96	S	CP	5.2L 4BC	87-93
C	CP	2.0L 16V	95-96	S	CP	2.4L 16V TURBO	95-96
C	CP	2.2L 2BC	83-89	S	CP	3.0L V6	92
C	CP	2.2L TURBO II	90-94	S	CT	3.0L (RAM)	90-93
C	CP	3.0L TURBO	92	S	CT	5.2L 4BC	86-88
C	CT	5.9L TURBO DIESEL	90-95	S	J	4.0L 6 CYL	91-97
C	CT	2.2L 2BC	84-88	T	CP	1.8L	83-89
C	A	1.8L MPI	93-96	T	CP	3.3L V6 MPI	90-94
D	CP	1.8L MPI	92	T	CT	5.2L 2BC	83-88
D	CP	2.0L 16V	93	T	CT	5.2L CNG	96
D	CP	2.2L TBI	83-94	T	A	1.8L MPI	90-94
D	CT	2.0L (RAM 50)	81-89	T	A	3.3L MPI	93-96
D	J	2.5L 4 CYL	89-90	T	J	4.2L 6 CYL	90
E	CP	2.0L 16V	93-95	U	CP	2.0L TURBO	96
E	CP	2.2L TURBO	83-89	U	CP	3.0L	90-92
E	CP	8.0L V10 MPI	92-96	U	CP	3.3L V6	90-91
E	CT	2.6L (RAM 50)	81-89	U	CT	5.2L 4BC	83-85
E	A	2.0L MPI	90-94	U	A	2.0L TURBO (DOHC)	
E	J	2.5L 4 CYL	89-90	U	A	3.0L MPI	
F	CP	2.0L TURBO	93-96	U	CT	5.2L 4BC	83-85
F	CP	2.2L 2BC HP	83-89	U	J	4.0L 6 CYL	89-90
F	CP	3.5L 24V MPI	93-96	V	CP	2.0L MPI	95-96
F	A	2.0L TURBO	90-96	V	CP	2.5L FLEX FUEL	92
F	A	3.5L 24V V6 MPI	93-96	V	CT	5.9L 2BC	84-85
F	J	2.5L 4 CYL	94-95	V		4.0L MPI	94-95
G	CP	2.4L MPI	93-96	W	CP	2.4L MPI	92-94
G	CP	2.6L 2BC	83-87	W	CP	2.5L TBI	92
G	CT	2.5L TBI	89-96	W	CT	2.4L (RAM 50)	90-93
G	CT	2.6L 2BC	84-88	W	CT	5.9L 4BC FEDERAL	83-88
G	A	2.4L MPI	95-96	W	CT	8.0L V10 EFI	
G	J	2.5L TBI	94-95	X	CP	2.2L LPG	95-96
H	CP	2.5L TBI	89-96	X	CP	2.4L 16V	87
H	CP	2.6 TURBO		X	CT	2.4L 16V	96
H	CP	3.0L V6	93-96	X	CT	3.9L MPI	92-96
H	CP	3.7L	81-83	X	CT	3.9L TBI	86-91
H	CT	3.7L	83-88	X	A	1.5L MPI (SOHC)	
H	A	2.5L TBI		Y	CP	2.0L 16V	95-96
H	A	3.0L V6		Y	CT	5.2L MPI	92-96
H	J	2.5L MPI	94-95	Y	CT	5.2L TBI	86-91
J	CP	2.5L TURBO	89-94	Y	A	1.6L MPI (DOHC)	89-92
J	CP	3.0L V6	93-96	Y	A	2.0L MPI	95-96
J	CP	3.3L V6 CNG	95	Y	J	5.2L MPI	94-96
J	CP	3.7L HD	83	Y	J	5.9L	91-96
J	CT	2.3L (RAM)	81-85	Z	CP	5.2 LPG	87-89
J	CT	2.5L TURBO	89-93	Z	CT	5.9L MPI	93-96
J	CT	3.3L V6 CNG	96	1	CT	5.9L 4BC	83-88
J	A	3.0L V6		2	CP	2.5L TURBO	83-88
K	CP	2.5L EFI	86-95	2	CT	5.2L 2BC	88-89
K	CP	3.0L TURBO	93-96	3	CP	3.0L EFI	87-96
K	CT	2.5L TBI	86-96	3	CT	3.0L EFI	86-87
K	A	3.0L V6 TURBO		3	CT	3.0L MPI	88-96
L	CP	2.4L DOHC		4	CP	5.2L 2BC HD	83-89
L	CP	3.8L MPI	91-96	4	A	2.5L TBI	89-92
L	CT	3.8L V6 MPI	91-96	5	CT	2.0L (RAM 50)	81-85
L	J	4.0L 6 CYL	89-90	5	CT	5.9L EFI	90-96
M	CP	3.5L DOHC		6	A	3.0L MPI	89-92
M	CT	3.7L 2BC	83	7	CP	5.2L LPG	87-89
M	CT	3.9L 2BC	86-88	7	CT	2.6L (RAM 50)	81-85
M	J	2.5L TURBO DIESEL	94-95	7	J	5.9L	89-91
M	J	4.2L 6 CYL	89	8	CP	2.2L 2BC HD	83-87
				8	CT	5.9L TURBO DIESEL	90-91
				9	CT	2.3L (RAM 50)	81-85

Ford, Lincoln & Mercury VIN Codes

1975-80 VIN Sample (11 Digit Number)

S22LAR10001

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1st Digit 5TH Digit
Model Year Engine Code

1981-98 Vin Sample (17 Digit Number)

1B3BS48D4JN103705

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8TH Digit 10TH Digit
Engine Code Model Year

MODEL YEARS

Code	Year
5	1975
6	1976
7	1977
8	1978
9	1979
A	1980
B	1981
C	1982
D	1983
E	1984
F	1985
G	1986
H	1987
J	1988
K	1989
L	1990
M	1991
N	1992
P	1993
R	1994
S	1995
T	1996
U	1997
V	1998
W	1999
X	2000
Y	2001
Z	2002

Code	Make
F	Ford Passenger
FT	Ford Truck
M	Mercury Lincoln

ENGINE CODES

Code	Make	Engine	Years	Code	Make	Engine	Years
A	F,FT	7.5L 4BC	75-78	R	FT	5.8L HP	92-95
A	F	2.3L 2BC	80-89	R	M	3.8L S/C	89-92
A	F	2.0L DOHC	93-96	S	F,M	6.5L 2BC	75-79
A	FT	2.3L SOHC	80-96	S	F	2.3L HSC HO	84-91
A	FT	2.0L DOHC	93	S	F,M	3.0L DOHC	96
A	M	2.3L 2BC	80-86	S	FT	6.6L 2BC	77-79
B	F	2.5L DOHC	93-96	S	FT	2.8L 2BC	83-86
B	F,FT	3.3L	80-82	S	M	2.3L HSC HO	85-91
B	F	2.5L DOHC	93	T	F,M	3.3L	75-79
C	F,M	7.5L POLICE	75-78	T	F	2.3L TURBO	81-88
C	F	2.2L SOHC	89-92	T	F	5.0L	90-95
C	F,M	4.1L	80	T	FT	2.9L MFI	86-92
C	F	3.8L	82-93	T	M	2.9L	88-89
C	M	3.8L S/C	89	T	M	5.0L EFI	91-92
D	F,FT	2.5L HSC	86-90	U	F,M	3.0L EFI	86-92
D	F,FT	7.3L TURBO	83	U	F	3.0L MFI	93-96
D	F,FT	4.2L	80-82	U	FT	3.0L EFI	86-96
D	F	5.0L COBRA	93-95	U	M	3.0L MFI	93-95
D	FT	5.0L COBRA	93	V	F	4.6L DOHC	93
D	M	4.2L 2BC	80-82	V	M	4.6L DOHC	93-96
D	M	2.5L HSC	86	W	F	2.3L TURBO	83-87
E	F	5.0L	90-91	W	F	4.6L SOHC	91-96
E	FT	5.0L	90-93	W	F,M	2.3L 2BC TURBO	79
E	M	5.0L MFI	93	W	FT	3.0L EFI	93-96
F	M	1.6L	83-85	W	FT	5.0L 2BC	80
F	F,FT	4.6L SOHC	91-93	W	M	4.6L SOHC	92-96
F	FT	5.0L 2BC	75-83	W	M	2.3L TURBO	83-87
F	FT	7.3L TURBO DIESEL	94-96	W	M	3.0L VAN	93-96
F	FT	5.0L 2BC	75-83	X	F,M	3.3L	83
G	F,FT	5.8L 2BC	80-91	X	F,M	2.3 HSC	85-94
G	FT	7.5L EFI	90-96	X	F	4.6L SOHC	96
G	M	5.8L 2BC	80-87	X	FT	4.0L EFI	90-96
H	F,M	5.8L	75-79	Y	F	3.0L DOHC	89-95
H	F,FT	2.0L DIESEL	84-87	Y	F	2.3L 2BC	74-79
H	F	1.3L	89-96	Y	FT	5.9L 2BC	73-76
H	FT	5.8L	75-96	Y	FT	4.6L EFI	83-96
H	FT	1.3L	88-93	Y	M	2.3L TURBO	74-79
J	F	1.9L	86-96	Z	F,M	2.8L 2BC	75-79
J	FT	1.9L	86-93	Z	FT	6.6L 2BC	80-82
J	FT	7.5L 4BC	72-74	1	F	3.0L FLEX FUEL	93-96
J	FT	7.0L MFI	91-96	1	FT	6.9L DIESEL	83-87
J	M	1.9L EFI	86-87	1	FT	3.9L 2BC	73-76
J	M	1.9L SEFI	91-96	2	F,M	1.6L OHC	81-85
K	F	1.3L	88-89	3	F	3.8L	82-87
K	F	1.9L	94-96	3	F,M	2.0L DOHC	95-96
K	FT	1.3L	88-93	3	FT	3.8L 2BC	83
K	FT	7.0L 4BC	79-91	3	M	3.8L CFI	82-87
K	FT	4.9L HD	78-79	4	F	3.8L	82-95
K	FT	7.3 DIESEL	94	4	FT	5.4L 2BC	74
K	M	1.9L SEFI	94-95	4	FT	3.8L EFI	94-96
L	F	2.2L SOHC	89-92	4	M	1.6L HO	83-85
L	F,M	4.1L	75-79	4	M	3.8L CFI	87
L	F,M	2.5L DOHC	95-96	4	M	3.8L EFI	87-96
L	FT	7.5L 4BC	80-87	5	F	1.6L OHC	83-85
L	FT	2.2L SOHC	88-93	5	FT	5.9L 2BC	74
L	FT	6.4L 2BC	72-79	5	M	1.6L EFI	83-85
M	F	2.3L MFI	91-93	6	F	2.3L LPG	82-85
M	F,M	5.0L	84-86	6	F,M	4.6L DOHC	96
M	F,M	5.0L EFI	87	6	M	1.6L DOHC	91-94
M	FT	6.4L 4BC	75-76	6	M	2.3L LPG	82-84
M	FT	7.3 DIESEL	88-95	7	FT	5.8L 2BC	80-81
N	F	3.2L DOHC	93	8	M	1.6L	83-85
N	F,M	3.4L DOHC	96	8	F,M	1.8L DOHC	91-96
N	FT	5.0L EFI	85-86	8	F	1.6L TURBO	84-85
P	F	3.2L SHO	93-95	8	M	1.6L TURBO	84-85
P	FT	2.2L	83-84	9	F	1.9L	85-90
R	F,M	6.5L 4BC	77	9	F	4.6L CNG	95-96
R	F	2.2L SOHC	89-92	9	FT	4.9L LPG	82-94
R	F	3.8L S/C	89-96	9	M	1.9L	85-87
R	F,M	2.3L HSC	84	9	M	4.6 CNG	96

General Motors VIN Codes

1975-80 VIN Sample (11 Digit Number)

S22LAR10001

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5TH Digit 6TH Digit
Engine Code Model Year

1981-98 Vin Sample (17 Digit Number)

1B3BS48D4JN103705

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8TH Digit 10TH Digit
Engine Code Model Year

MODEL YEARS

ENGINE CODES

Code	Year	Code	Make	Engine	Year	Code	Make	Engine	Year	Code	Make	Engine	Year			
5	1975	I	A	C,P	2.3L 2BC	75-77	I	M	C	3.3L 2BC	78-79	I	Z	O	4.3L	91-93
6	1976	I	A	C,O,P,B	3.8L 2BC	78-87	I	M	O,P,B,C	3.1L	93-96	I	Z	O	2.8L 2BC	82-84
7	1977	I	A	C	2.3L DOHC	90-94	I	M	O	2.0L FI	88	I	Z	P	6.6L 4BC	76-79
8	1978	I	A	O	2.3L 2BC	76-77	I	M	P	2.0L FI	87-90	I	O	O	1.8L	85-86
9	1979	I	A	O,P	2.3L DOHC	89-94	I	M	B	2.0L FI	87	I	O	P,B	1.8L EFI	82-84
A	1980	I	B	C	2.3L 2BC	75-77	I	N	O	5.7L DIESEL	78-85	I	O	P,B	1.8L TBI	85-86
B	1981	I	B	C,P,B	2.0L 2BC	83-84	I	N	C,P,B	5.7L DIESEL	80-85	I	I	C,O,P	2.5L 2BC	78-79
C	1982	I	B	O	2.3L 2BC	76-77	I	N	O,B	3.3L	89-93	I	I	C,P	2.8L 2BC	82-84
D	1983	I	B	O,B	3.8L FI	86	I	N	P	3.3L	92-93	I	I	C,B	2.0L FI	87-89
E	1984	I	B	B	5.7L 4BC	81	I	O	C	1.6L 1BC	79	I	I	O,B	3.8L	92-96
F	1985	I	C	C,B	3.2L 2BC	78-79	I	P	C,O,P,B	2.0L FI	83-86	I	I	O	2.0L FI	87-88
G	1986	I	C	C,P	1.6L 2BC	82-87	I	P	C,P,B	5.7L	92-96	I	I	P	3.8L EFI	92-96
H	1987	I	C	O,P,B	3.8L 2BC	75-77	I	P	O	4.2L DIESEL	79-80	I	2	C,O,P,B	3.8L 2BC	78-79
J	1988	I	C	O,P,B	3.8L FI	88-91	I	P	P	5.7L 2BC	76-77	I	2	C,P	2.5L EFI	82-84
K	1989	I	C	O	4.0L	95	I	R	C,O,P	2.5L EFI	82-87	I	2	C,P	2.5L TBI	85-86
L	1990	I	D	C,P	4.1L 1BC	75-79	I	R	C,P	2.5L FI	88-92	I	2	C	1.0L FI	87-94
M	1991	I	D	C,P	1.8L DIESEL	81-86	I	R	O,P,B	5.7L 4BC	77-80	I	3	C	3.8L TURBO	80-81
N	1992	I	D	C,O,P	3.1L	90-95	I	R	O,P	3.4L	94	I	3	O,P	2.3L SOHC	92-94
P	1993	I	D	C	2.3L DOHC	95	I	R	O	2.5L EFI	88-92	I	3	O,B	3.8L MFI	85-88
R	1994	I	D	P,B	2.3L DOHC	88-95	I	R	B	2.5L EFI	82-92	I	3	O,P,B	3.8L FI	88
S	1995	I	D	O	2.3L FI	87	I	S	C,P	5.0L EFI	83	I	3	B	2.3L	92-94
T	1996	I	D	O	2.3L DOHC	88-95	I	S	C,P	2.8L MFI	85-87	I	3	B	3.8L TURBO	78-85
U	1997	I	E	C	1.6L 1BC	76-87	I	S	C,P	2.8L FI	88-89	I	4	C	5.7L 4BC	78-79
V	1998	I	E	C,P	5.0L FI	88-93	I	S	C,P	3.4L	93-95	I	4	C	1.6L 2BC	85-88
W	1999	I	E	C,O,P	3.4L EFI	96	I	S	C	5.7L EFI	96	I	4	C,O,B	2.2L	92-96
X	2000	I	E	O,B	5.0L	91-92	I	S	O,P,B	4.3L 2BC	80	I	4	O,P,B	4.1L 4BC	81-84
Y	2001	I	E	O,B	3.0L 2BC	82-85	I	T	C,P	4.9L TURBO	80	I	4	P	2.2L OHV	95-96
Z	2002	I	F	C,P	2.5L 2BC	82-83	I	T	C,P,B	4.3L DIESEL	82-85	I	5	C,O,P,B	2.5L 2BC	80-83
		I	F	C,P	5.0L TPI	85-92	I	T	C	3.1L	90-94	I	5	C	1.0L 2BC	86-88
		I	F	P	5.0L FI	88-92	I	T	C,O,P,B	2.4L DOHC	96	I	5	C	1.6L FI	88-93
		I	F	O	4.3L 2BC	77-81	I	T	O,P	3.1L EFI	89-93	I	5	C	1.6L	98
Code	Make	I	G	C	5.0L 4BC	84-88	I	T	O	4.3L DIESEL	82-85	I	6	C	DOHC	83-88
		I	G	C	2.2L	90-91	I	T	B	3.1L FI	89-93	I	6	C	5.7L 4BC	89-96
C	Chevy	I	G	O,P	5.0L 2BC	79	I	U	C,P	5.0L 2BC	77-78	I	6	C	1.0L	98
O	Olds	I	G	O,P	1.8L 2BC	82	I	U	O,B	5.0L 2BC	78	I	6	C	1.6L	90-93
B	Buick	I	G	P	5.0L 4BC	84-87	I	U	O,P,B	2.5L TBI	85-87	I	6	P	1.6L SOHC	88-93
P	Pont	I	G	B	3.8L TURBO	78	I	U	O,P,B	2.5L FI	88-91	I	7	C,O,P,B	1.6L FI	80
		I	H	C	5.0L 4BC	78-88	I	V	C,O,P	2.5L 2BC	78-80	I	7	C,P	2.8L 2BC	82-83
		I	H	O,P,B	5.0L 4BC	78-87	I	V	C,B	4.3L DIESEL	82-85	I	7	C,B	5.0L CFI	86
		I	H	O	5.0L 4BC	77	I	V	O,P	2.5L 2BC	77	I	7	C	3.8L FI	89-93
		I	H	P	2.0L OHC	92-94	I	V	O	4.3L DIESEL	82-84	I	7	O,B	5.7L TBI	92
		I	H	B	5.7L 2BC	77	I	V	P	3.1L FI	89-90	I	7	P	5.7L	89
		I	I	C	5.0L 4BC	76-77	I	W	C,O,P,B	2.8L MFI	85-87	I	8	C	3.8L FI	86-89
		I	J	C,P	4.4L 2BC	79-82	I	W	C,O,P,B	2.8L FI	88-89	I	8	C	1.5L 2BC	92-96
		I	J	C	5.7L	90-95	I	W	C	3.1L	93	I	8	C	1.8L	79-80
		I	J	O,B	4.4L 2BC	81-82	I	W	C	4.3L	94-96	I	8	C	DOHC	82-84
		I	J	P,B	1.8L MFI	84-86	I	W	O	4.3L	92-96	I	8	C	5.7L 4BC	85-87
		I	J	B	5.7L 4BC	77	I	W	B	4.9L 4BC	79-80	I	8	C	5.7L CFI	88-92
		I	K	C,P	3.8L 2BC	80-82	I	W	P	4.9L 4BC	78-81	I	8	P	5.7L TPI	87-92
		I	K	C,O,P,B	3.8L MFI	95-96	I	X	C,O,P,B	2.8L 2BC	81-86	I	8	O	5.7L FI	82
		I	K	O,P,B	6.6L 4BC	77-79	I	X	C	3.4L	91-96	I	9	C,O,P	5.7L EFI	79
		I	K	O,P	2.0L FI	87-88	I	X	O,P	3.4L DOHC	91-96	I	9	C	4.3L 2BC	80-81
		I	K	P	2.0L FI	87-91	I	X	O	4.3L EFI	96	I	9	C	2.5L 2BC	83-84
		I	L	C	5.7L 4BC	82	I	X	P,B	5.7L 4BC	78-80	I	9	C	1.6L 2BC	92
		I	L	C,O,B	3.8L	91-95	I	Y	C	5.0L 4BC	86-90	I	9	C	3.8L 2BC	79
		I	L	O,P,B	5.7L 4BC	78-79	I	Y	O,P,B	4.9L 2BC	77-79	I	9	O	1.5L	83-87
		I	L	O,P,B	3.0L MFI	85-88	I	Y	O,P,B	5.0L 4BC	80-90	I	9	P	1.3L	85-87
		I	L	O,B	3.0L FI	88	I	Z	C,P,B	2.8L 2BC	81-84	I	9	B	5.0L 4BC	84-85
		I	L	P	2.8L 2BC	83-84	I	Z	C,P	4.3L EFI	85-87	I			2.9L MFI	
		I	M	C	3.1L	94-96	I	Z	C	4.3L FI	88-93	I			3.8L SFI	