

The GR-RRREAT ONE!

GATEWAY CHAPTER ST. LOUIS, MO



RICH VIE PRES.
10835 lacklink
ST. LOUIS, MO. 63114
426-2709

CRAIG WEISS VICE PREAS.
15 BROADVIEW FARM RD.
ST. LOUIS, MO. 63141
878-4826

EARL CHAPMAN VICE PREAS.
5000 COUNTRY RIDGE DR.
IMPERIAL MO. 63052
282-2203

WILL BOWER VICE PREAS. ILL.
2646 CLEVELAND BLVD.
GRANITE CITY ILL. 62040
618-876-6586

TONY BEZZOLE TREAS.
1185 dawn valley
MARYLAND HGTHS. MO. 63043
878-6892

DEB SHABEL SECRETARY
1576 WOODEN BRIDGE TRAIL
BALLWIN MO. 63021
225-1100

NEW MEMBERS

STEVE THATCH
KEVIN FRIGERIO
RICK HOUSKA
BRET KLEIN
THOMAS EYSSRL
RON FIEBIGER
RAY MASERANG
RICK BROWN
PAUL MIDDENDORF

TREASURY REPORT

WE HAVE 453.23

Jackets

1. XL
1. L

SHIRTS

3. L. POLO SHIRTS

We have a lot of cool can
huggers.

PARTS FORSALE

DARRELL CARNAL
2. Rally 1 wheels
14 x 6 150.00
314--928-8030

STEVE THATCH

69-72 cornering lights
erson cam 460 lift 310 Dur.
73. GTO steering wheel
.30 over 400 pop ups full
floating on stock rods
314-933-0390

DAN SHABEL

Four Rally 1. rims and
centers \$495
Four Rally1 centers \$195
314-225-1100 10:00AM- 2:00PM

These are the minutes of the meeting held 1-29-89 at Pantera's pizza.

Election of Officers: Tony Bezzole nominated Rich Vie for president, Debbie Shabel volunteered for secretary, no other volunteers or nominations. Rich accepted president's job, Debbie is acknowledged as secretary. Rich will also continue as newsletter editor. All other present officers will remain in office.

Rich reviewed past events and opened the floor for suggestions for 1989 events. Daryl Carnal suggested a Chuck-A-Burger sponsored dance in March as well as a spring road run in April. Daryl will update us at the next meeting. Steve will get information on a road run to A&W in Desoto Mo. Tony Bezzole brought up having a bowling party and it was decided to mix this with our next meeting on 2-26-89. Daryl and Earl Chapman will set up the bowling party and members will be advised in the next newsletter. Rich talked about the "Real" Easter show held March 26 in Forest park, also the GTOAA Nationals in Columbus, Ohio on July 6,7&8. It was decided that both events would be attended as "club events". Another idea was brought forward by Craig Weiss about attending the "Muscle Car Shootout" held at St. Louis International dragstrip in May. Craig will get more information and bring it to next meeting.

We have a new jacket supplier and the cost of jackets is \$30.00 each. Twelve must be ordered at a time and members will be advised when our next order goes in. Our colors are a blue jacket with gold lettering and this must be followed for the first purchase by a member. An additional jacket may be ordered in another color. White polo style shirts are available for \$12.50 and blue T-shirts with gold lettering for \$7.00. Also, we have cool can huggers in blue and gold for \$2.50.

We have twelve rejected jackets that we purchased from our supplier, these will be used throughout the year as prizes at events. Tony will check on a minimum purchase of hats for the club and advise us of the cost.

Some additional events and possibilities were discussed; A Chuck-A-Burger cruise night in April or May, the Meramec swap meet on 30 and the April 30 and the Don Sperry Pontiac display in April.

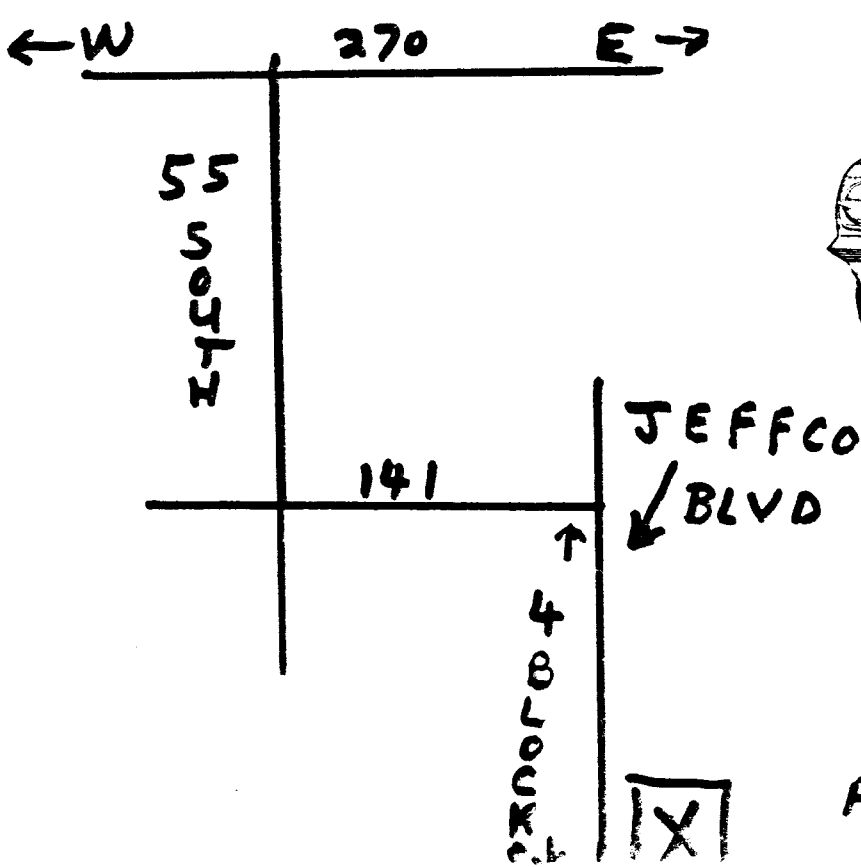
The meeting ended when the trays of hot pizza were delivered to the tables. A delicious time followed until everyone was stuffed.

Debbie__

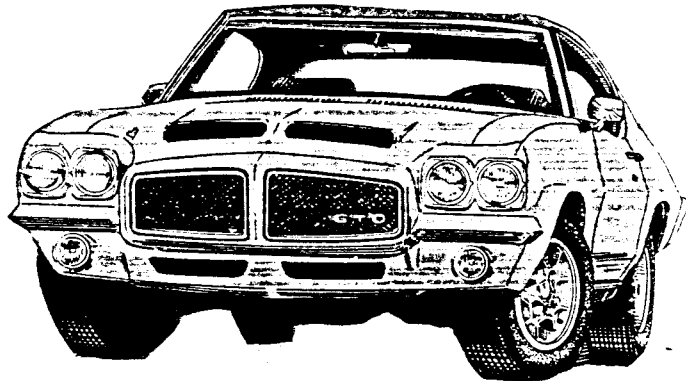
FROM THE PRESIDENT

As you can see from the minutes of our last meeting, the club is headed for another busy year. For those of you who were unable to attend the meeting last month I have to point out that our January meeting was the best attended meeting we have ever had. We had over thirty members(wives & girlfriends included) present and the participation in the discussion of events was terrific. As president of this organization I am very happy to see such active members and I hope the enthusiasm continues through the year.

Our next meeting has been scheduled for 1:30 P.M. Feb. 26 with a bowling party following the meeting from 2 to 5. There will be a "Crazy Bowl" and the bowling is strictly recreational, so come along and join the fun. Bring along some friends for this event, just call and tell us how many there will be, as we are reserving the lanes in advance. Call Earl Chapman (282-2203), Daryl Carnal (928-8030) or Rich Vie (426-2709). The meeting and bowling party will be held at the Arnold Bowl, 1140 Jeffco Blvd, Arnold, MO phone 287-3600. Bowling will cost \$1.35 per game with free shoe rental for anyone in the group. A map is shown below to help you get there, see you on Sunday!



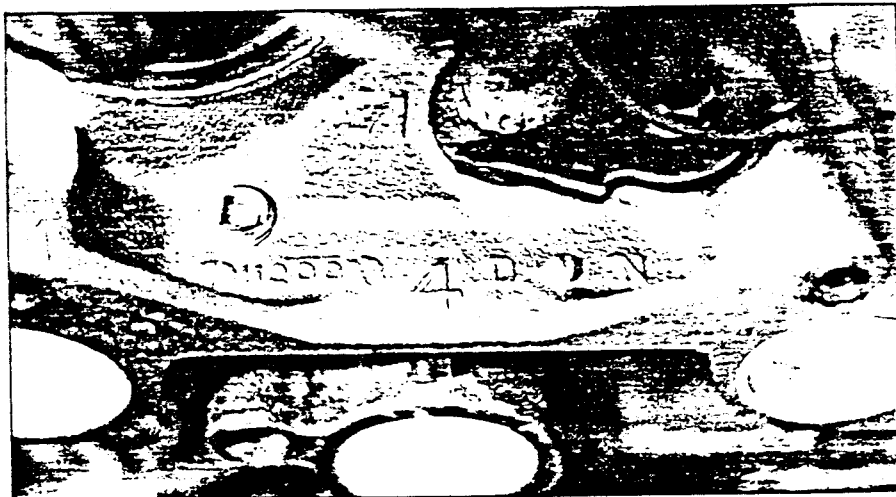
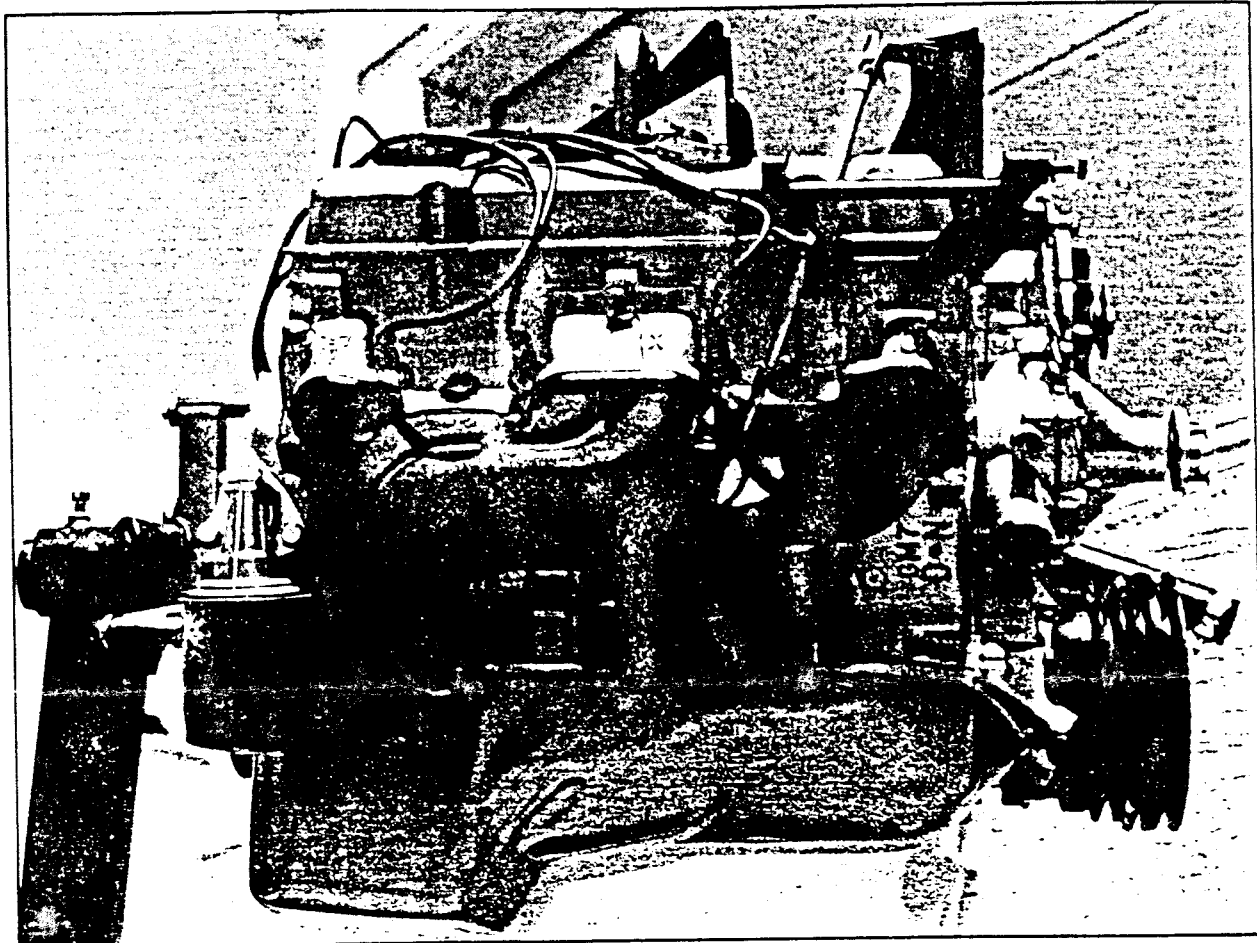
RICH



Engine Decoder Guide

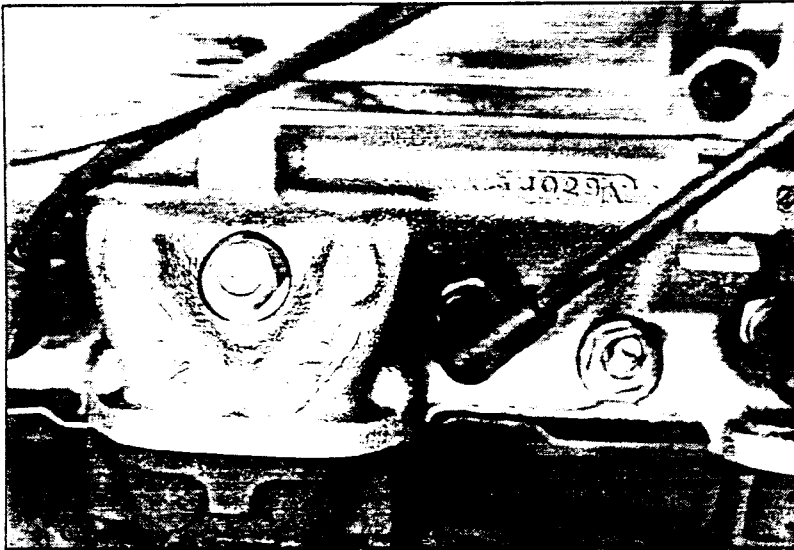
Say, is that really a 455 HO, or a 326 from granny's LeMans?

By Lars Grimsrud, GTO Association of America

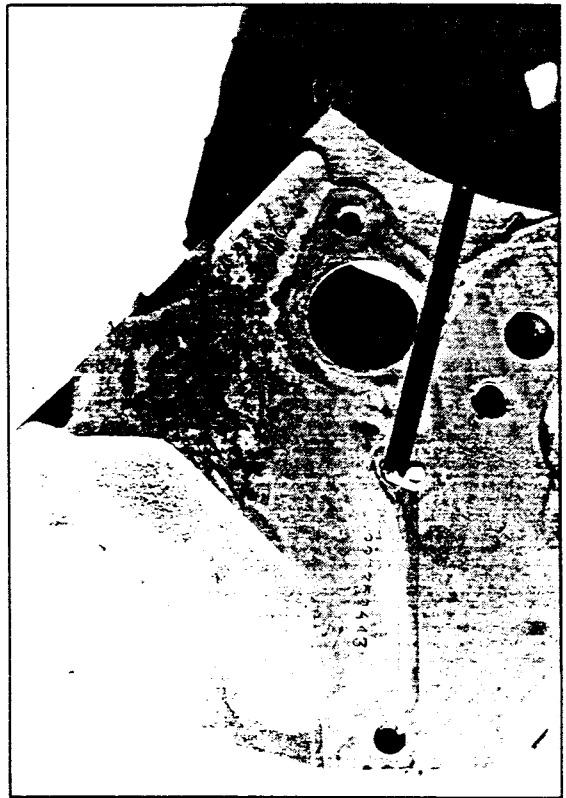


Block casting date code is located by the distributor hole. The first letter designates the month (A = January, B = February, etc.), the next two numbers designate day of the month, and the last number designates year. Additionally, the '70 and '71 blocks had the year plainly cast into them. This block was cast August 20, 1970, making it a 1971 engine (note "71" designator).

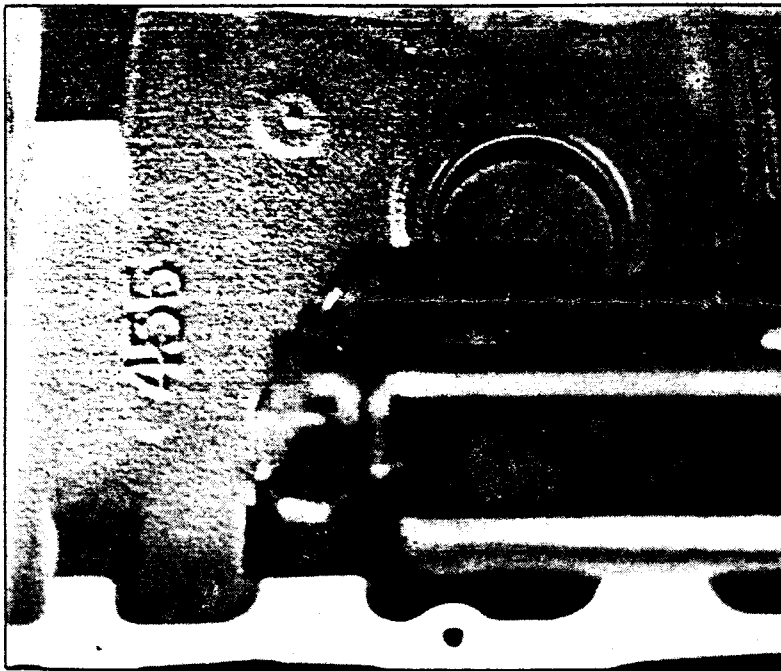
□ To say that the Pontiac V8 engine was a successful design would certainly be an understatement. First released in 1955, the Pontiac V8 remained virtually unchanged throughout its life. Unlike Chevy and Ford, for example, who produced engines that were visually very different from one another (it's easy to tell a 409 from 454, or a 352 from a 351), Pontiac kept the same basic block design for all of its V8 engines. Unless you really know what you're looking for, you cannot tell a Pontiac 326 from a 455. There is no such thing as a "big block" or a "small block" when it comes to Pontiacs. Rather, after 1959, Pontiac based their engines on two basic block series: the 326, 350, 389 and 400s with their 3,000" main journal sizes (small-journal blocks), and the 421, 428 and 455s with



Head codes are located on top of the exhaust ports. Codes can be on the center or the end ports. Notice casting date code, identifying this as a 1970 Ram Air III head.

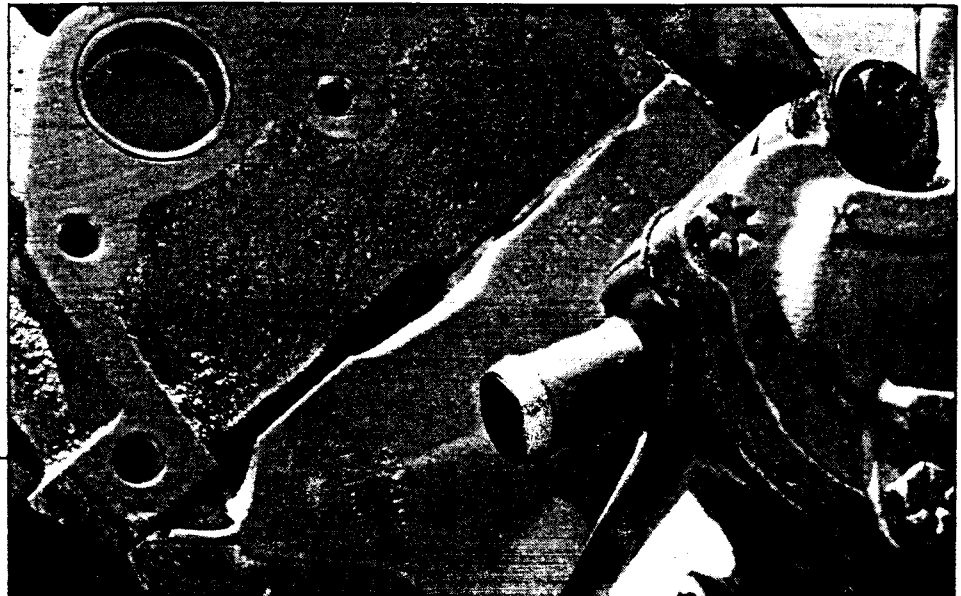


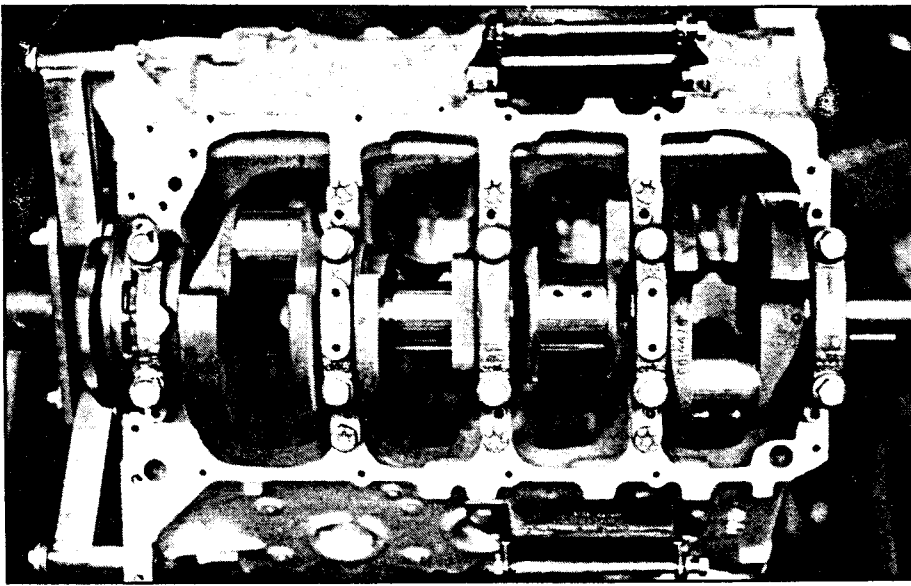
The engine code is located on the front face of the block. Above or alongside the engine code is the engine production number. This number has nothing to do with the vehicle serial number. Rather, on 1970 and later engines, the VIN is located further down, often difficult to see when the engine is installed in the car. See the engineering drawing below.



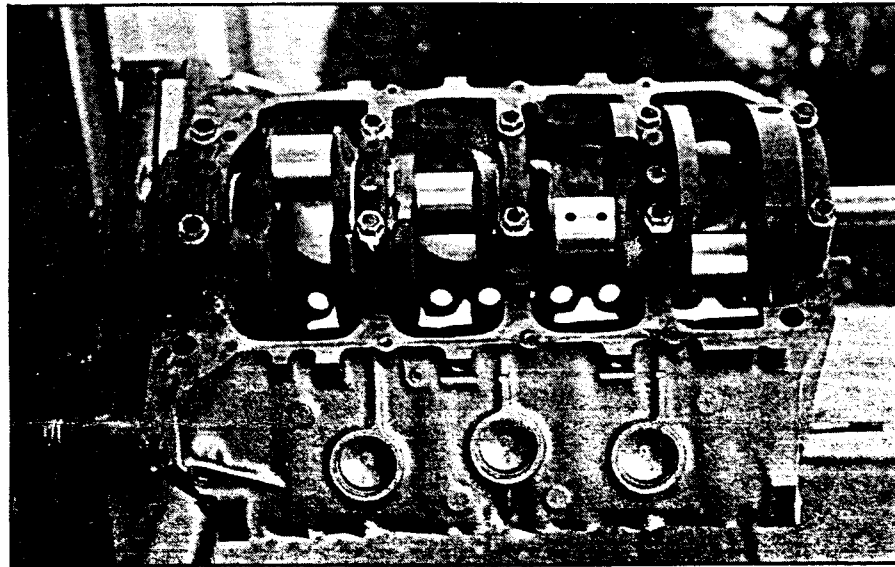
Many Pontiac V8s had the engine size cast into the side of the block close to the engine mounts. This can usually be found on the driver's side of the block, but was sometimes on both sides of the block.

Engineering drawings weren't always followed. The VIN on this 1971 455 H.O. was stamped close to the cylinder head gasket. Not only that, but the guy doing the stamping didn't get it right the first time, so he smacked it a second time. Such "double-strikes" and "overstrikes" are common. Keep in mind when restoring your car that these cars were far from perfect!

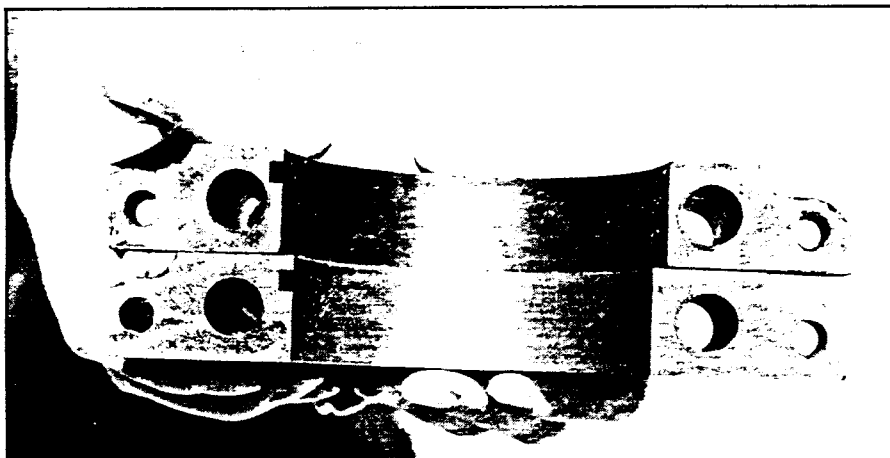




Bottom view of a typical 4-bolt main Pontiac. Only the center three caps have the four bolts. The blocks are always drilled and tapped for 4-bolt caps, even if it's an original 2-bolt block, making it possible to convert to 4-bolt caps if you want to do some re-doweling and align-boring.



Typical Pontiac 2-bolt block. There were no GTOs built with 4-bolt 389s (4-bolt 389s were Super Duty engines only). 4-bolt 400s became available in 1967. 4-bolt small-journal engines are nice but not necessary: The rods will break long before you suffer failure associated with the 2-bolt mains. Large-journal blocks intended for performance applications are safer with 4 bolts.



Here is the difference between the large-journal and the small-journal caps. Bolt pattern is the same, but the big-journal block has a lot less beef due to the bigger journal hole. For this reason, the 421/428/455 caps are more prone to distortion. This justifies the use of 4 bolts for the big engines.

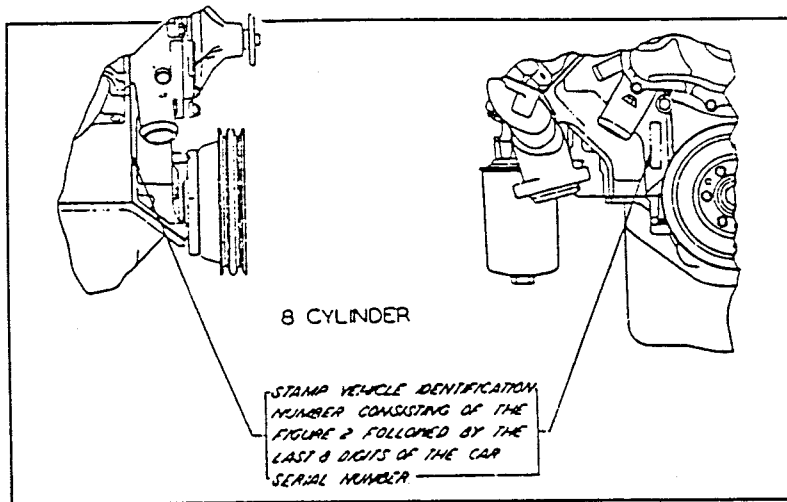
their 3.250" journal sizes (large-journal blocks). Yet you cannot tell the difference between the blocks from the outside, and virtually all parts are interchangeable between the engines. The advantage to this is obvious: the engine combinations and possibilities available to the Pontiac racer and performance enthusiast are virtually endless. The disadvantage is also obvious: there are people out there buying GTOs and Firebirds with incorrect engines, not knowing the difference. We've seen quite a few 326-powered GTOs advertised and sold as genuine 455-cars.

To correctly identify the powerplant in a Pontiac, you must go through three exercises. First, you must locate and identify the engine code stamped into the front of the block. Pontiac used the same codes to identify different engines over different years (a "YS" can be a 350, 389 or a 400 depending on year), so you must next identify the year of the block. Finally, since cylinder heads are fully interchangeable between blocks regardless of cubic inch displacement (with some restrictions), you must identify the cylinder heads by casting number and casting date to make sure the engine is equipped with the correct heads.

In 1970, Pontiac started stamping the VIN into the front of the blocks. Prior to this time, you *cannot* tell if the engine installed in your GTO is the engine installed by Pontiac. If it has the right casting dates and engine codes, it is probably the engine originally installed. There is absolutely no correlation between the vehicle data plate and the engine codes (you cannot tell if a '66 was originally a tripower car). The data

Continued on page 55

Table, right shows block codes for Pontiac V8 engines from 1964 to 1974. Engine codes for manual transmission cars are noted in bold *italic*. Automatic trans engine codes are in plain type. Note that the same codes were used many different years for different engines. You must, therefore, identify the year of the engine to correctly know what the engine is.



DO NOT SCALE DRAWING	
UNLESS OTHERWISE SPECIFIED THE FOLLOWING TOLERANCES APPLY:	
1. AS SHOWN ON THE PLACE BLOCKS	
2. 0.005 ALLOWED ON THREE PLACE DECIMALS	
3. 0.010 ON ANGULAR DIMENSIONS	
DIMENSIONAL TOLERANCES ON SHEET WITH CASTING	
TYPING, MILLING, DRILLING OR OTHERWISE SPECIFIED	
ALL CHANGES IN SPECIFICATIONS BY THIS DRAWING MUST HAVE APPROVAL OF ENGINEERING DEPARTMENT	
DATE: 3-3-69	WORK: V8 ENGINE
FIRST USED: 1970	BY: G. L. B.
LAST REVISED: 1971	BY: J. L. B.
EXP. NO.: D-1889	BY: J. L. B.
INSTRUCTION DRAWING - ENGINE	
KEY: 478527	

Drawing shows location of the vehicle identification number on Pontiac V8 blocks. Note date on the drawing (3-3-69) and the "first used" date. Courtesy Pontiac Motor Division

Year	CID	HP	Engine Codes
	400	333	WD, WE, WY, XT
	400	335	WT, WW, YS
	400	350	XZ, XY, XH, XJ
	400	360	WS, WV, WR, XS, YZ, XP
	428	360	WG, Y2, YY
	428	376	WJ, XK, Y3, YH, YK
1964	326	250	92X, 96-0
	326	280	94X, 97-0
	389	230	04L, 05L, 08R, 09R
	389	235	22B
	389	267	11H, 12H
	389	283	10A
	389	303	25K, 26K, 27P, 28P
	389	306	23B, 29N
	389	325	78X, 79J
	389	330	32B, 34N, 33-6
	389	348	76X, 77J
	421	320	35B, 38S, 43N
	421	350	44B, 47S, 49N
	421	370	45B, 46G, 50Q
1965	326	250	WR, ZN
	326	285	WR, YP
	389	256	WA, WB, YA, YB
	389	290	WC, YC, YD
	389	325	YE, YF
	389	333	WE
	389	335	WT, YS
	389	338	WF, YG
	389	360	WS, YR
	421	338	WG, YH
	421	356	WH, YJ
	421	376	WJ, YK
1966	326	250	WP, WX, YN, XF
	326	285	WR, YP, XG
	389	256	WA, WB, YA
	389	290	WC, YV, YU, YC, YD
	389	325	YX, YL, YW, YF, YE
	389	333	WE
	389	335	WW, WT, YS, XE
	389	360	WV, WS, XS, YR
1967	326	250	WP, WX, WC, WH, YO, YN, XF, YJ, XI
	326	285	WR, XR, WK, WD, YP, XG, YM, XO
	400	255	XL, XM
	400	260	XB
	400	265	WA, WB, YA, YB, YC, YD
	400	290	XV, XU
	400	293	XC
	400	325	WU, WZ, WQ, WI, YE, YF, YT, XE, XN, XW, XX
	400	333	WD, WE, WY, XT
	400	335	WT, WW, YS
	400	350	XZ, XY, XH, XJ
	400	360	WS, WV, WR, XS, YZ, XP
	428	360	WG, Y2, YY
	428	376	WJ, XK, Y3, YH, YK
1968	350	265	WD, WC, YN, YJ
	350	320	WR, WK, YP, YM
	400	265	XM, YA
	400	290	WA, WB, YC
	400	330	YT, YW
	400	335	WQ, WZ, WI, XN
	400	340	WU, XT
	400	350	XZ, XH, YS, YZ
	400	360	WT, WS, XS, XP
	400	366	WY, XW
	428	375	WG, YH
	428	390	WJ, YK
1969	350	265	WC, WP, WM, WU, XL, YJ, XR, YN, XB, YE, UY, XS
	350	325	WK, WN, XC, XD
	350	330	WR, WV, XT, XU, YP
	400	265	XM, YZ, XX, YB, YF
	400	290	WA, WB, WD, WE, YC, YD
	400	330	WZ, YT
	400	335	WQ, YW
	400	340	XZ
	400	345	WH, XN
	400	350	WT, WX, YS, XH
	400	366	WS, YZ
	400	370	WW, XP
	400	375	WI, WY, XY, XW
	428	360	WG, YL, YH, XE, XJ
	428	370	WF, XF
	428	390	WJ, WL, YK, XG
1970	350	255	W7, WU, X7, YU
	400	265	XX, YB
	400	290	WE, YD
	400	330	XZ, XV
	400	350	WX, WT, XH, YS
	400	366	WS, YZ
	400	370	WW, WH, XP, XN
	455	360	WA, YC, YH
	455	370	WG, XF
1971	350	250	WR, WU, WN, WP, XR, YU, YN, YP
	400	265	WS, WX, XX, YX
	400	300	WK, WT, YS
	455	280	WG, YG
	455	325	WJ, YC
	455	335	WL, WC, YE
1972	350	160	WR, YU, YV, YR
	400	200	YX, YZ, ZR, ZV, ZX
	400	250	WK, WS, YS, YT, ZS
	455	185	YH, YW
	455	200	ZH
	455	220	YA, YC, Y4
	455	250	YD, YK
	455	300	WD, WM, YB, YE
1973	350	150, 175	XR, WV, Y2, Y7, YR, YV, ZR, ZV
	350	150, 175	ZB, ZD, WA, WC, WD, WF, WL, WN, XZ
	400	170, 185	Y1, YP, YX, YZ, Y4, ZK, ZX
	400	170, 185	W5, XH, XI, X3, X4
	400	200, 230	WK, WS, WRYN, YX, YT, Y3, ZN, ZS
	400	200, 230	XK, XN, XX, XZ, X5, YF, YG, Y6
	455	215, 250	WT, WW, YA, YC, YD, YK, ZA, AC
	455	215, 250	ZZ, ZE, XA, XE, XJ, XL, XY, XT, X7, X0, YE
	455	290	ZJ, XD
	455	310	Z8, X8
1974	350	155, 170	WA, WB, AA, YA, YB, YC, YN, YP, YS, ZA, ZB
	350	170, 200	WN, WP, YN, YP, YS, ZP
	400	175, 190	AH, YH, YJ, ZH, ZJ
	400	175, 190	AD, YF, YK, ZD, ZK
	400	200, 225	WT, AT, YT, YZ, ZT
	400	200, 225	WR, Y3, AD, YL, YM, ZS
	455	215, 250	AU, YR, YU, YW, YX, YY, ZU, ZW, ZX
	455	215, 250	A4, Y4, Y6, Y9, Z4, Z6
	455	290	W8, Y8

Engine Decoder Guide

Continued from page 49

plate will only tell you if your car was originally a V8 or a 6-cylinder.

So check your codes carefully when high perf. Pontiac shopping, and don't

let anyone fool you with a 326 imposter for a Ram Air IV. □

Table below shows cylinder head casting numbers for 1964 to 1974 389, 400, 428 and 455's. Note that, like block codes, head codes were repeated

different years for different heads. To correctly identify a head, you must also locate and interpret the casting date code.

Head Casting Numbers

NOTE: The casting numbers that appear on the heads are the last two or three digits of these numbers.

Year	CID	Horsepower		Year	CID	Horsepower			
1964	389	230, 235	543796						
	389	267, 283, 303, 306	9773845, 9773345	428	390		9795048 (Manual Trans. Only)		
	389	325, 330, 348, 350, 370	9770716	428	390		9791216 (Auto Trans. Only)		
	421	320	9773845, 9773345	428	390		9795048 (GP Only)		
	421	350, 370	9770716						
1965	389	256	75	1970	400	265	9799611		
	389	290, 325, 333	76, 9778775		400	290		9799616	
	389	338	77, 9778775		400	330		9799612 (Firebird w/Manual Trans.)	
	389	335, 360	77, 9778775		400	330		9799613 (Firebird w/Auto Trans.)	
	421	338	76, 9778775		400	330		9799616 (All exc. above)	
	421	356, 376	77, 9778775		400	345, 366		9799612 (Ram Air III)	
1966	389	256	091	400	350		9799612 (GTO/Tempest w/Manual Trans.)		
	389	290, 325, 333	092	400	350		9799613 (All others w/Manual or Auto Trans.)		
	389	335, 360	093	400	370		9799614 (Ram Air IV)		
	421	338	092	455	360		9799615 (Big Pontiac w/Auto Trans.)		
	421	356, 376	093	455	360		9799364 (All)		
1967	400	255, 265	9778775	455	370		9799364 ("455 H.O.")		
	400	325	9787670 (Firebird w/o Ram Air)						
	400	325	9787670, 997 (Firebird w/Ram Air)	1971	400	265	481199		
	400	325, 335, 360	9787670, 997 (Tempest/GTO)		400	300		481196	
	400	290, 325, 333, 350	9786142, 061 (Exc. GP w/4-bbl.)		455	280		481198	
	400	290, 325, 333, 350	978670, 187 (GP w/4-bbl.)		455	325		481776, 66	
	428	360	9787670, 187	455	335		481197 (May appear as "191") (455 H.O.)		
	428	376	9787670						
1968	400	265	14						
	400	290, 340, 350	15, 16 (Pontiac Only)	NOTE: 1972 and later heads may have a letter between the two numbers of the casting number.	1972	400	200	486072	
	400	330, 335, 350, 360	62, 216 (Non-Ram Air)			400	250		486073 (Appears as "7K3")
	400	335, 360	31 (May appear as 37) (Ram Air I)			455	200		486074
	400	340, 366	9793596 (Ram Air II)			455	250		486075 (Appears as "7M5")
	428	375	216			455	300		486076 (Appears as "7F6") (455 H.O.)
	428	390	64, 9791216						
1969	400	265	9795045, 14			1973	400	170, 185	488544, 494344, 494348 (May appear as 4X)
	400	290	97, 95046, 15	400	200, 230			491347 (GP Only, Appears as 4X)	
	400	340	9795046, 15 (GP Only)	400	200, 230			488543 (All exc. GP, Appears as 4X)	
	400	350	62, 216, 048 (W/Manual Trans.)	455	215, 250			488541, 494341 (Appears as 4X)	
	400	366	9795048 (Ram Air III w/Manual Trans.)	455	290			485216 (455 Super Duty)	
	400	366	9791216 (Ram Air III w/Auto Trans.)	1974	350			494345, 494346	
	400	370	9796722 (Ram Air IV)		400		175, 190		494344, 494348 (May appear as 4X)
	400	375	44 (Ram Air V)		400		200		494347, 494348 (Appears as 4X)
	428	360	216 (Manual Trans. Only)		400		225		494347, 494348 (w/Auto Trans. Appears as 4X)
	428	360	46, 216 (Auto Trans. Only)		400		225		494343 (w/Manual Trans. Appears as 4X)
					455		215, 250		494341 (Appears as 4X)