1977-79 T/A 6.6 HISTORICAL INFORMATION

By John Witzke

Tech Advisor & Historian - W72 Performance Package

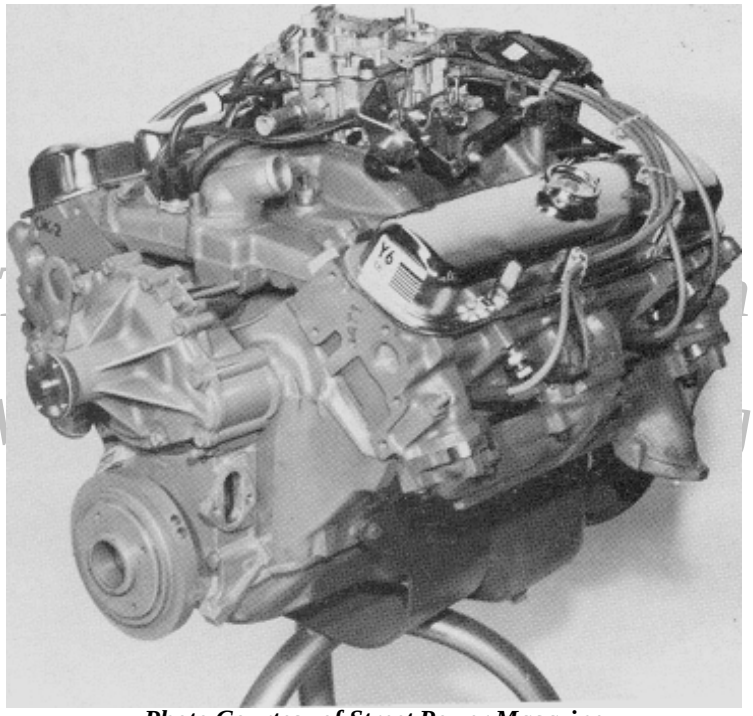

Photo Courtesy of Street Power Magazine

1977 T/A 6.6 Automatic Transmission Engine

Welcome to the T/A 6.6 Historic Information Guide. My intention in is to help establish a benchmark for accurate information about the T/A 6.6 engine as installed in the Pontiac Firebird. Over the past several years, my research of the T/A 6.6 engine has resulted in the collection of a significant amount of information about this engine package. My research is ongoing and this guide will only highlight some of more important facts about the T/A 6.6 engine package. Additional highly detailed information, including all part numbers is available and I encourage owners and enthusiasts to contact me with their specific questions. As for current Firebird T/A 6.6 owners, future owners and overall Pontiac enthusiast, I hope that somewhere in the following pages I will be able to share with you something you may not have known. This information guide was written by an enthusiast for the enthusiast and will focus on the last hi-performance 400-cid engine developed by Pontiac, the *"T/A 6.6"*.

- John Witzke – Historian for the 1977-79 W72 Performance Package

GOOD THINGS ALWAYS COME TO AN END

During twelve model years (1967-1978), Pontiac's 400-cid engines went through various stages of hi-performance development offering the enthusiasts a solid street performance engine. The likes of such hi-performance 400-cid engines developed by Pontiac during the mid-1960s until 1970 included, 400 HO, Ram Air's I, II, III, IV and V. Without question, these were some of the best hi-performance engines Pontiac ever produced.

Beginning with the 1977 model year, Pontiac offered a new high-performance engine option for the 400-cid engines called T/A 6.6. It was only available in the 49-state Trans Am and Formula Firebird models and standard in all 49-state Le Mans Can Am. During 1978 and 1979, the T/A 6.6 engine was again offered only in 49-state Trans Am and Formula Firebird models. By mid-1978, the automatic transmission was dropped from the option list, making the Borg-Warner Super T-10 4-speed the only transmission available with the W72 Performance Package. It appears that by the end of the 1978 model year, Pontiac had 8,690 T/A 6.6 engines left for use in the 1979 4-speed Trans Am and Formula Firebird models. Sadly, availability of the T/A 6.6 engines ran out sometime in March or April 1979, marking the end of the last hi-performance 400 Pontiac engine. The T/A 6.6 became the last factory-installed hi-performance 400-cid engine produced by Pontiac.

OPTION CODE

The T/A 6.6 engine carried UPC code W72 on the 1977-78 Firebird dealer order forms and was available only on Firebird Trans Am and Formula models, except for the 1977 Can Am. All Pontiac bulletins and memos for the 1979 model year list the T/A 6.6 engine in the dealer order guide under UPC code L78. All 1977-79 Firebirds produced with the T/A 6.6 engine option list UPC code ***W72 PERF PACKAGE (NORWOOD, OH) or W72 PERFORM PKG (VAN NUYS, CA)*** on the factory build sheet.

According to *Pontiac Car Distribution Bulletin 77- F-1, June 25, 1976*, the T/A 6.6 engine was originally to have UPC code LS7. Around August 5, 1976 just before the release, for reasons unknown, the LS7 code was eventually changed to W72. One of the earliest 1977 Pontiac model year memos to Dealers dated June 25, 1976, uses the UPC code LS7 to identify the T/A 6.6 engine option package, which was to be available on the Firebird Trans Am and Formula models at an extra cost. All of the original Pontiac build bulletins and memos that I have been able to collect identify the T/A 6.6 engine as W72 or T/A 400 in 1977-78 and L78 or T/A 400 in 1979.

PRICING

The 1977 W72 Performance Package cost $50.00 for the Trans Am and $205.00 for the Formula. It appears that early in the 1978 production, the W72 Performance Package included a new suspension that carried UPC code WS6 and was called *"Trans Am Special Performance Package"*. On the build sheet, this suspension was identified with UPC code WS6 - T/AM Mark 1V. During 1978, the WS6 suspension was available only on the Trans Am and left Firebird Formula buyers with the standard Trans Am suspension. The price of the WS6 package with the T/A 6.6 engine was $324.00 for the base Trans Am. The cost for the T/A 6.6 engine and WS6 package with the black and gold Y82/Y84 and gold Y88 special edition cars was $151.00. The reason for the difference in price is the Cast Aluminum Wheels are included with the Y82/Y84 and Y88 packages. According to *Pontiac Car Distribution Bulletin, February 22, 1978,* to Pontiac Dealers, the T/A 6.6 engine option would no longer require UPC code WS6. Continued research has documented as early as late-October 1977 the W72 Performance Package could be ordered in a Trans Am without the WS6 suspension. The cost for the T/A 6.6 engine alone during 1978 was $75.00 for the Trans Am and $280.00 for the Formula. Pricing for 1979 was a little different than in 1977 and 1978. The L78 T/A 6.6 option cost $90.00 for the Trans Am, but required the WS6 Handling Package at $434.00 for a total cost of $524.00. The WS6 name was revised for 1979 from *Trans Am Special Performance Package* to *Special Performance Package* since it was now optional on the Firebird Formula. On the 1979 Tenth Anniversary Trans Am, the WS6 Package was standard, so the W72 option was $90.00. There was a $103.00 credit for cruise control, which was standard with the Tenth Anniversary Trans Am Package but was not available with the 4-speed transmission. The Y84 Special Edition Trans Am with the T/A 6.6 engine included the J65 disc brake rear axle, so the WS6 Package was only $250.00. Add the $90.00 L78 option and the total cost for a T/A 6.6 Y84 Trans Am was $340.00. The 1979 Formula T/A 6.6 package price was $370.00 plus $434.00 for the mandatory WS6 Package and $63.00 for required limited slip differential, for a total of $867.00.

SERIAL NUMBER IDENTIFICATION

All original factory produced 1977-79 T/A 6.6 and 1977-78 base 6.6 Litre Pontiac 400-cid Firebirds will have the same vehicle identification number fifth digit engine letter code Z. Since both 1977 and 1978 Pontiac 400-cid engines used the same serial number letter code, more research will be needed to identify an original T/A 6.6 car than just looking at the serial number. Since only one Pontiac 400-cid engine was available during the 1979 model year, original T/A 6.6 cars can be verified by simply looking at the vehicle identification number. To help verify an original numbers matching car with its original block, the car's VIN number is stamped on the passenger-side lower front-machined surface of the block next to the water pump.

BASIC ENGINE INFORMATION

All blocks used for the T/A 6.6 engines were cast at Pontiac Engine Plant 6 with final machining assembly at Pontiac Engine Plant 9. Both plants were located in Pontiac MI. During that period in time, this manufacturing plant featured completely modernized and automated measuring and assembly equipment using supercomputers. While Pontiac engineers indicated the T/A 6.6 engine was not a special *"hand-built"* or *"select-fit"* engine, it did receive a great deal of super detailing and reliability training from the Pontiac engineering department.

The T/A 6.6 engine differed from the base 6.6 Litre engine in several ways. Unique to the T/A 6.6 was a set of smaller chambered 350-cid 6X4 heads that measured between 91 and 93cc. Officially, Pontiac released the 6X4 head combustion chamber measurements at 93.78 cc. The base 6.6 Litre engine used the larger combustion chamber 6X8 heads that measured between 98 and 101 ccs. These smaller chambered heads helped boost the compression ratio from 7.6:1 to an advertised 8:1. In addition to the smaller chambered heads, a specific camshaft was installed which produced a longer intake and exhaust duration than the camshaft used in the base 6.6 Litre. The T/A 6.6 also used a specific Rochester 800-CFM carburetor and had a higher capacity 60-psi oil pump that allowed plenty of oil pressure to vital engine parts during higher RPM conditions. A harmonic balancer was used to help prevent the engine from shaking it self-apart during higher RPM use.

The bottom end received slotted spring pin (also called roll pin) main bearing cap dowels instead of the solid dowel caps used on the base 6.6 Litre engine. These unique caps have been reported to help reduce crankshaft thrust stress on the bottom end during higher RPM conditions. All T/A 6.6 Firebirds used a specific automatic transmission with a somewhat higher stall torque converter and higher shift points, or a Borg Warner Super T-10 4-speed transmission. A set of 3.23:1 or 3.42:1 rear gears was used depending on transmission choice.

HORSEPOWER & TORQUE

Like all engines of the same period, the T/A 6.6 engines horsepower and torque ratings were calculated using net ratings. The net (brake horsepower) ratings reflected the engine horsepower and torque with accessories and corrected to 85 degrees F and 29.36 in. Hg atmospheric pressure.

1977
Horsepower –200 SAE net @ 3,600 RPM
Torque –325 net lbs. ft @ 2,200 RPM (2,400 RPM with 4-speed)

1978
Horsepower –220 SAE net @ 4,000 RPM
Torque –320 net lbs. ft @ 2,800 RPM

1979
Horsepower –220 SAE net @ 4,000 RPM
Torque –320 net lbs. ft @ 2,800 RPM

BLOCK CASTING NUMBERS & CODES

The 1977 T/A 6.6 engine used a 2-bolt main bearing cap block with casting number 500557. For 1978-79, the 2-bolt main bearing cap block remained; however, the casting number was now XX481988. The block casting numbers are located at the passenger side area pad of the block, next to the distributor hole just behind the number 8 cylinder. To the rear of the distributor hole are the letters "D" and "N", which signify either day shift or night shift production. On the driver side area pad next to the distributor hole will be the cast date code, (example B037. Decoded means B = February 03 = 3rd day 7 =1977). The 1978 and 1979 block will also have the letters XX cast in large letters just above the block casting number on the pad behind the number 8 cylinder.

To date, no original T/A 6.6 Firebirds have been documented with block cast dates later than November 1977. My research continues with the casting dates, but if this trend remains consistent, then it appears that all 400-cid blocks (both 500557 and XX481988) used for the W72 Performance Package were only produced through November 1977. The stamped engine block identification code for the T/A 6.6 engine is located on the machined surface on the front of the block below the right (passenger side) cylinder head. All T/A 6.6 engines used the same intake manifold as the base 6.6 Litre engine

1977

Transmission	**Code**
Automatic	Y6
4-speed manual	WA

1978

Transmission	**Code**
Automatic	X7
4-speed manual	WC

1979

Transmission	**Code**
4-speed manual	PWH

MAIN BEARING CAPS

A little know fact was the use of slotted spring pin main bearing cap dowels on some T/A 6.6 engines in place of the solid dowel type used on the base 6.6 Litre engine block. According to some knowledgeable sources, the use of these spring pin dowels actually helped induce less stress into the main bearing webs during the higher RPM operating limits of the T/A 6.6 engines. These same sources say, while the spring pin dowels work well for street performance applications, these pins should not be used on hi-performance racing engines.

OIL PUMP AND PAN

In place of the 35-40 psi oil pump used on the standard 6.6 Litre engines, higher capacity 60-psi oil @ 2,600 RPM pump was specified for the T/A 6.6 engine. The original factory color code for the oil pump used in T/A 6.6 engines was green. The T/A 6.6 engines also received a baffled oil pan. These internal baffles help reduce oil starvation during hard acceleration, braking and cornering.

CARBURETOR

A Rochester 800-CFM Quadra-Jet carburetor, model M4MC was used on all 1977-79 T/A 6.6 engines. The barrel sizes are 1.218 primary and 2.25 secondary. All T/A 6.6 carburetors use specific primary jets and metering rods that differ from the base 6.6 Litre engines and are specific to year and transmission. However, all carburetors used the same lean secondary metering rod stamped DB. The secondary hanger varies for each carburetor. The T/A 6.6 engines used the shortest hanger per each carburetor to ensure the quickest operation of the secondary. The hanger letter code was originally marked with a black marker and is located on the backside of the carburetor. In addition, all 1977-79 T/A 6.6 engines used a foam-insulated fuel line from the carburetor to the fuel pump to help prevent fuel vapor lock.

1977 Block Code Y6 Automatic

Carburetor – part # 17057266
Primary Jets - #71 part # 7031971
Primary Metering Rods – part # 17053342 stamped 42K
Secondary metering rods – part # 7047806 stamped DB (.0697 tip)

1977 Block Code WA 4-speed

Carburetor – part # 17057263
Primary Jets – # 70 part # 7031970
Primary Metering Rods – part # 17053342 stamped 42K
Secondary metering rods – part # 7047806 stamped DB (.0697 tip)

1978 Block Code X7 Automatic

Carburetor – part # 17058266
Primary Jets - #72 part # 7031972
Primary Metering Rods – part # 17051345 stamped 45K
Secondary metering rods – part # 7047806 stamped DB (.0697 tip)

1978 Block Code WC 4-speed

Carburetor – part # 17058263
Primary Jets - #70 part # 7031970
Primary Metering Rods – part # 17051340 stamped 40K
Secondary metering rods – part # 7047806 stamped DB (.0697 tip)

1979 Block Code PWH 4-speed

Carburetor – part # 17059263
Primary Jets - #70 part # 7031970
Primary Metering Rods – part # 17051340 stamped 40K
Secondary metering rods – part # 7047806 stamped DB (.0697 tip)

AIR CLEANER

Not only did the air cleaners used on the T/A 6.6 engines differ between the Trans Am and Formula, the style also differed between 1977 and 1978-79. The air cleaner used on the 1977 T/A 6.6 engines was the same "trumpet style" used on the base 1977-78 400 engines. The 1978-79 version air inlet was flatter and slightly wider than the thinner, more oval 1977 version.

The 1978-79 T/A 6.6 air cleaners used a specific air cleaner duct snorkel adapter, however, the air intake flexible duct, was the same used on all 400 engines. All 1977-79 T/A 6.6 engines used air cleaner filter A542C with an outer black foam covering. The air cleaner two-digit letter code is located in box number 53 on the factory build sheet. These two-digit letter codes are as follows; 1977 Trans Am (**RE**), 1977 Formula (**RF**), 1978-79 Trans Am (**PJ**), and 1978-79 Formula (**PH**). In addition, these codes are located on the air cleaner decal "Keep your GM car all GM".

CYLINDER HEADS

The T/A 6.6 engine used the smaller combustion chambered cast iron alloy 6X4 cylinder heads from the Pontiac 350-cid 4bbl engine. Officially, Pontiac advertised the cylinder head volume measurements for the 6X4 heads at 93.74ccs. It is important to note, that slight variances in actual cylinder head volume will and can vary from the advertised ratings. The advertised maximum combustion chamber volume for the 6X4 heads measured 113.9 ccs. These cylinder heads helped increase the static compression ratio on the 400-cid engines from 7.6:1 to 8:1.

The 6X4 cylinder heads used intake valves measured at 2.107-2.113 with a seat angle of 30 degrees and face angle of 29 degrees. The exhaust valves measured 1.657-1.663 with a seat angle of 45 degrees and a face angle of 44 degrees. In addition, these cylinder heads used dual valve springs with 230-lbs. pressure at full lift, screw-in studs and 1.50 rocker arms. Head gasket thickness measured .0512 while the deck clearance measured .0038 (above).

The 6X4 cylinder heads can be identified externally by the number 4 stamped on the topside of a flat machine pad located towards the top front of the driver side head and the top rear of the passenger side head. This pad is just below the rocker cover and between the end and center exhaust ports just above the brass temperature gauge fitting. By placing a small mirror under this pad you should be able to see the stamped number 4.

ENGINE ROCKER COVERS

All 1977-79 T/A 6.6 engines came from the factory with dull or unfinished chrome valve covers. These valve covers have internal oil defectors and carried part numbers – RH 547294 and LH 547293. A bar code scanner label with the engine block code and initial timing was originally located on the driver side left front end of the valve cover. It appears that some engines may have a small label on the right front valve cover with the engine serial number printed on it.

CAMSHAFT SPECIFICATIONS

For 1977, Pontiac developed two slightly different camshafts for the T/A 6.6 engines, one for use with the automatic transmission and one for 4-speed manual transmission. Both T/A 6.6 camshafts had the same intake and exhaust durations, but differed slightly in valve timing events. The first was for the automatic transmission, engine block code **Y6** and carried factory part number 549112. Based on Pontiac Engineering documents, the 549112 camshafts were identified by a green color code between the third and fourth lodes and the stamped code was a symbol of a circle on the distributor end. Early engineering documents show the stamped code to be the in the shape of the Pontiac crest. The second was for the 4-speed manual transmission, engine block

code **WA** and carried factory part number 549431. Based on Pontiac Engineering documents, the 549431 camshafts were identified by an orange color code between the third and fourth lobes and stamped code was symbol of a square on the distributor end. Pontiac advertised the lift of these two camshafts as having an intake and exhaust lift of .364 inch @ zero lash. The T/A 6.6 were the only Pontiac engines to use the number 112 and 431 camshafts.

It is unclear as to the exact specifications, color codes and stamped codes for the camshaft used in the 1978-79 T/A 6.6 engines. Recently, an original camshaft from a 1979 PWH code T/A 6.6 engine indicated an orange color code with a stamped circled letter **A**. In addition, an original 1978 WC code T/A 6.6 camshaft has been found with a stamped circled **A**. Research is continuing with the camshafts codes used in 1978 and 1979 T/A 6.6 engines. Pontiac changed the part number in 1978 for the camshaft used in T/A 6.6 engines, so it has been rumored for many years that a change in duration and timing characteristics was made as well. The *Pontiac Master Parts Catalog* lists the camshaft part number 10003402 for both T/A 6.6 engine codes **X7** (automatic) and **WC** (4-speed manual). The question remains, did Pontiac in fact change the camshaft profile for the 1978 T/A 6.6 engine? Based on the information provided by Pontiac Motor Division to the MVMA and the part numbers listed in the master parts catalog, it looks as if camshaft part numbers 549112 and 10003402 may have the same specifications. It is very possible that a change may never have been recorded and or reported to the MVMA. My research on the camshaft issue is an on going process as I am recording all stamped markings as well as paint codes from each of the original camshafts.

What we do know is that all T/A 6.6 camshafts are unique in Pontiac performance applications, in that they are ground and installed retarded which moved the power band up into higher rpm ranges. It would appear that Pontiac redesigned the camshafts used in the T/A 6.6 engines not only to help with emissions, but for higher rpm use without sacrificing idle quality or low rpm stability. Even with this change, good horsepower was achieved from relatively low compression ratios.

1977 Automatic Transmission W72 Camshaft Specifications
Part # 549112

Intake Duration	274 Degrees
Open	16 Degrees B.T.D.C
Close	78 Degrees A.B.D.C.
Lift	.364
Intake Centerline	121 Degrees
Exhaust Duration	298 Degrees
Open	79 Degrees B.B.D.C.
Close	39 Degrees A.T.D.C.
Lift	.364
Exhaust Centerline	110 Degrees
LSA	115.5 Degrees
Overlap	55 Degrees

1977 Manual Transmission W72 Camshaft Specifications
Part # 549431

Intake Duration	274 Degrees
Open	21 Degrees B.T.D.C
Close	73 Degrees A.B.D.C.
Lift	.364
Intake Centerline	116 Degrees
Exhaust Duration	298 Degrees
Open	77 Degrees B.B.D.C.
Close	41 Degrees A.T.D.C.
Lift	.364
Exhaust Centerline	108 Degrees
LSA	112 Degrees
Overlap	62 Degrees

TIMING SPECIFICATIONS

1977 Code WA 4-speed Manual
Timing - 18 degrees @ 775 rpm (Neutral)
Slow idle - 775 rpm (Neutral)
Fast idle - 1800 rpm (Neutral)
Choke - 1NR (one-notch rich)

1977 Code Y6 Automatic
Timing - 18 degrees @ 600 rpm, idle solenoid active 700 rpm (Drive with A/C)
Slow idle - 600 rpm (Drive)
Fast idle - 1800 rpm (Neutral)
Choke - 1NR (one-notch rich)

1978 Code WC 4-speed Manual
Timing - 18 degrees @775 rpm (Neutral)
Slow idle - 775 rpm (Neutral)
Fast idle - 1800 rpm (Neutral)
Choke - Index

1978 Code X7 Automatic
Timing - 18 degrees @ 600 rpm, idle solenoid active 700 rpm (Drive)
Slow idle - 600 rpm (Drive)
Fast idle - 1800 rpm (Neutral)
Choke - Index

1979 Code PWH 4-speed Manual
Timing – 18 degrees @ 775 rpm (Neutral)
Slow idle – 775 rpm (Neutral)
Fast idle – 1800 rpm (Neutral)
Choke – Index

VACUUM AND MECHANICAL ADVANCE SPECFICATIONS

1977-78 - All
Spark Plugs - R45TSX @ .060
Vacuum advance @ crank start @ 5" hg, full @11" hg with 25 degrees maximum advance.
Mechanical advance @ crank 0 degrees @1000 rpm, 8 degrees @1400 rpm, 20 degrees @ 4400 rpm.

1979
Spark Plugs – R45TSX @ .060
Vacuum Advance @ crank – start @ 6" hg, full @12" hg with 25 degrees maximum advance.
Mechanical Advance @ crank – 0 degrees @ 1000 rpm, 7 degrees @ 2000 rpm,
17degrees @ 4600rpm.

TRANSMISSIONS

TURBO-HYDRAMATIC 350

Originally, a special version of the THM 350 automatic transmission was offered with Trans Am and Formula Firebird models optioned with the T/A 6.6 engine. According to *Pontiac Car Distribution Bulletin 78-F-15 dated February 22, 1978*, all Trans Am and Formula Firebird dealer stock orders specifying the T/A 6.6 engine with automatic transmission were cancelled and the engine application would be changed to the base L78 400. Less than a month later, Pontiac issued *bulletin 78-F-17 dated March 16, 1978* to its dealers stating that customer orders received on and after March 20, 1978, customers could no longer order the T/A 6.6 engine with an automatic transmission. Orders received after March 20, 1978 for the automatic transmission / T/A 6.6 combination would be sent back to the dealer for re-ordering instructions. This meant that dealers had to change the engine UPC code from W72 to L78 on the ordering form. On customer orders, the dealers had to notify the buyers that orders for this engine / transmission combination were no longer being accepted and that their car would have to be produced with the base UPC code L78 400 engine.

For 1977, this transmission carried UPC code M38 and can be externally identified by a three-character code MK7 stamped in black ink on both sides of the transmission towards the upper front. However, for 1978, this transmission carried UPC code M33 and can be externally identified by a three-character code 5MK stamped in black on both sides of the transmission towards the upper front. The production day and shift built number, transmission model and model year is stamped on the governor cover and the vehicle identification number is stamped on the lower left side of the case next to the manual shift.

Both of these automatic transmissions featured a unique rally shifter which allowed for manual up-shifting between gears without the fear of skipping gears or accidentally shifting into neutral. These transmissions were also equipped from the factory with a smaller 11.75-inch torque converter producing a stall speed ratio of 2.5:1. Pontiac never advertised actual stall speed rpm. In addition, the shift speeds of this special transmission were increased to approximately 4800 to 4900 RPM.

BORG-WARNER SUPER T-10 4-SPEED MANUAL TRANSMISSION

All 1977-79 T/A 6.6 engine Trans Am and Formula Firebirds with a manual transmission used the 82mm heavy-duty 4-speed transmission called Super T-10, which was produced by Borg-Warner. This transmission used an 11.0 X 6.5-inch clutch with a 2600 lbs. pressure-plate. The forward gear ratios for this transmission were 2.43:1/1.61:1/1.23:1/1.00:1 with a reverse gear of

2.35:1. Contrary to popular belief, there were no base L78 400 engine 1977 or 1978 Trans Am and Formula Firebirds produced with this or any other 4-speed manual transmission. When a customer specified a 4-speed manual transmission in either the Trans Am or Formula with a 400 engine during 1977 thru 1979, UPC code W72 Performance Package was mandatory.

AXLE RATIOS

Part of the W72 Performance Package was a set of 3.23:1 rear gears for all 1977, 1978 automatic and 1979 4-speed cars. These gears were identified on the factory build sheet as UPC code GU5. For 1978, all 4-speed T/A 6.6 Firebirds came from the factory with 3.42:1 rear gears. The 3.42:1 gears were identified on the build sheet as GU6. Generally the UPC codes for the axle ratio will appear on all factory build sheets; however, I have seen Norwood, Ohio built 1978 T/A 6.6 Firebird build sheets without the axle ratio listed. The 10 bolt 8.5-inch Safe-T-Track differential was standard in all Trans Ams and optional on the Formula. It is quite possible that there were a small amount of 1977-78 T/A 6.6 Firebird Formulas built without a Safe-T-Track rear differential. The Safe-T-Track rear differential was a mandatory option on 1979 W72 Formulas.

EXHAUST SYSTEM

All 1977 T/A 6.6 Firebirds used a single 2.5-inch exhaust pipe from the exhaust manifolds to the 260 cubic inch Catalytic Converter system with a single 2.25-inch exhaust pipe into a single cross flow muffler with dual 2.25-inch tail pipes with chrome splitters. Some 1977 Special Edition Trans Ams may have come from the factory with black chrome exhaust splitters. All 1978-79 T/A 6.6 Firebirds used a single 2.5-inch exhaust pipe from the exhaust manifolds to the 260 cubic inch Catalytic Converter system, and then split into 2.25-inch dual pipes with dual resonators and 2.25-inch tail pipes with chrome splitters.

PRODUCTION FIGURES

Between 1977 and 1979, there were 350,793 Firebird Trans Am and Formulas produced (279,796 Trans Ams and 70,997 Formulas). During the same period, 72,244 Firebirds were produced with the UPC code W72 Performance Package. While that may seem like quite a few, it equates to only 20.6 % of the total production.

1977 W72 Production

	Auto	**4-speed**	**Total**
Trans Am	14,775	11,402	26,177
Formula	756	1,735	2,491
	15,531	13,137	28,668

During 1977, Pontiac produced a total of 69,609 Firebird Trans Am and Formulas with the L78 400-cid engine. This number includes the W72 Performance Package since it was an option that could be added to the L78 400-cid engines. According to production records provided by *Pontiac Historic Services*, in 1977, Pontiac produced 28,668 Firebirds (Trans Am & Formula) with the W72 Performance Package and 40,941 Firebirds (Trans Am and Formulas) with the base L78 400-cid engine. Pontiac production records show a total of 13,137 Firebirds were produced with UPC Code M21 4-speed manual. The M21 4-speed manual was in reality a heavy-duty Borg Warner Super T-10 and was only available with the W72 engine. Early Pontiac production records show 11,402 Trans Ams produced with the 4-speed manual transmission. Based on that number, 1,735 Formulas would have been produced with the W72 engine and 4-speed transmission. Early production records indicate 14,775 Trans Ams were produced with the W72 engine and automatic transmission. Based on that number, 756 Formulas would have been produced with the W72 engine and automatic transmission. Base L78 400-cid engine production included 36,092 Trans Ams and 4,849 Formulas.

Finally, of the 1,377 1977 Can Ams produced, T/A 6.6 production figures are unknown since some Can Ams were produced with the L80 Oldsmobile 403-cid engine. To add to the Cam Am mystery according to *Pontiac Historic Service* records, only 1,754 L78 400-cid LeMans were produced during the 1977model year. Like the Firebird production figures, the W72 Performance Package used with the WW3 Can Am is included in the total L78 400-cid LeMans production numbers. Unfortunately, the T/A 6.6 Can Am production figure is unknown.

1978 W72 Production

	Auto	**4-speed**	**Total**
Trans Am	N/A	12,692	N/A
Formula	N/A	810	N/A
	21,384	13,502	34,886

According to production records provided by *Pontiac Historic Services*, during 1978 Pontiac produced 88,741 Firebird Trans Am and Formulas with the L78 400-cid engine. Like 1977, the W72 Performance Package was an option on the L78 400-cid engine. Fortunately Pontiac production records list 34,886 Firebirds (Trans Am & Formula) produced with the W72 Performance Package. Early Pontiac production records list 12,692 Trans Am produced with UPC code M21 4-speed manual transmission. Current Pontiac production records list 13,502 Firebirds produced with UPC code M21 4-speed manual transmission. Based on these numbers,

we can conclude that 810 Firebird Formulas were produced in 1978 with the W72 engine and 4-speed manual transmission. All 1978 Firebirds produced with UPC code M21 4-speed manual transmission were W72 cars. Unfortunately, 1978 Trans Am and Formulas produced with the W72 Performance Package and automatic transmission is impossible to separate at this time. Pontiac production records show 75,239 Firebird Trans Am and Formulas were produced with the L78 400-cid and W72 400-cid engines and automatic transmissions. According to the early production records, 70,590 Trans Ams were produced in 1978 with automatic transmissions. Based on this number we can conclude 4,649 L78 400-cid and W72 400-cid Formulas were produced with automatic transmissions. By carefully analyzing production records, we can establish that 21,384 W72 Firebirds (Trans Am and Formula) were produced with an automatic transmission.

New for 1978 was the WS6 Trans Am Performance Package. At the start of the 1978 production, the WS6 Trans Am Performance Package was part of the W72 Performance Package, but by October 1977 a W72 Trans Am could be ordered minus the WS6 Package. During 1978, Pontiac produced 28,239 Trans Ams with WS6. The WS6 production accounted for roughly 30% of total 1978 Trans Am production. It is unclear how many 1978 Trans Ams were produced with W72 and WS6.

1979 W72 Production

	Auto	**4-speed**	**Total**
Trans Am	None	8,326	8,326
Formula	None	364	364
		8,690	8,690

Pontiac production records provided by *Pontiac Historic Services* list the W72 engine production numbers under the L78 code. Total 1979 L78/W72 Firebird production was 8,690 cars. All 1979 Firebirds produced with the W72 Performance Package came with UPC code M21 4-speed transmission, WS6 Special Performance Package and J65 4-wheel disc brakes. Early Pontiac production records show 8,326 Trans Ams produced with the W72 Performance Package. Based on these numbers, we can establish that 364 Formulas were produced in 1979 with the W72 Performance Package. Since the supplies of T/A 6.6 engines were limited, they were being "Zone Allocated" by Pontiac with preference being given to the 10th Anniversary Trans Am models. During 1979, Pontiac produced 141,958 Firebird Trans Ams and Formulas. Of that number, only 33,810 came with the WS6 Special Performance Package or roughly 24% of the total 1979 Trans Am and Formula production.

I would like to thank Jim Mattison with *Pontiac Historic Services* for providing some very basic key production figures. These key figures have helped reveal most of the W72 Formula production numbers which were previously unknown and helped verify those W72 production numbers already known.

Year/Model	Transmission	Production
1978 Y82 Trans Am	Automatic	N/A
1978 Y84 Trans Am	Automatic	N/A
1978 Y88 Trans Am	Automatic	N/A
1978 Base Trans Am	Automatic	N/A
1978 Firebird Formula	Automatic	N/A
1978 Y84 Trans Am	4-Speed Manual	20
1979 Firebird Formula	4-Speed Manual	364
1977 Y81 Trans Am	4-Speed Manual	384
1978 Y82 Trans Am	4-Speed Manual	489
1977 Y81 Trans Am	Automatic	549
1977 Firebird Formula	Automatic	756
1978 Firebird Formula	4-Speed Manual	810
1979 Y84 Trans Am	4-Speed Manual	1,107
1978 Y88 Trans Am	4-Speed Manual	1,267
1977 Firebird Formula	4-Speed Manual	1,735
1979 Y89 Trans Am	4-Speed Manual	1,817
1979 Base Trans Am HT	4-Speed Manual	2,485
1977 Y82 Trans Am	4-Speed Manual	2,699
1979 Base Trans Am T-Top	4-Speed Manual	2,917
1977 Y82 Trans Am	Automatic	3,760
1977 Base Trans Am	4-Speed Manual	8,319
1977 Base Trans Am	Automatic	10,466
1978 Base Trans Am	4-Speed Manual	10,889

PERFORMANCE

Many road test articles have been written about Firebirds with the W72 Performance Package. Unfortunately many are very inaccurate as to the performance of these cars, especially the 1977. Overall, the 1977-79 T/A 6.6 Firebirds, were good for 15.30's - 15.50's seconds @ 90-94 mph quarter-mile times straight off the showroom floor. The 1978 cars with 4-speed manual transmissions may be slightly quicker due to the use of 3.42 rear gears. It has been shown with minor tuning; high 14-sec quarter mile times are within reach. The following list of magazines appeared to have tested legitimate T/A 6.6 optioned Firebirds.

Magazine	Issue
Super Stock & Drag Illustrated	*May 1977*
Street Power	*Jun 1977*
Street Racer	*Oct 1977*
Car Craft	*Feb 1978*
Road Test	*Spring 1978*

Hi-Performance Cars	*April 1978*
Road & Track	*Sept 1978*
Hi-Performance Cars	*Sept 1978*
Popular Hot Rodding	*Dec 1978*
Car & Driver	*Jan 1979*
Hot Rod	*Feb 1979*

A FINAL THOUGHT

Research in many ways is an ongoing project especially when new information is still yet to be discovered. This is especially true when researching a particular automobile. There are many variables that must be deciphered and in some cases, they may never be fully resolved. In the case of Pontiac's T/A 6.6 engine, my research continues as I try to uncover new facts.

The T/A 6.6 were the last hi-performance 400-cid engines Pontiac produced. Due to tightening emission standards, the W72's future was doomed from the beginning, but the dedication of a few at Pontiac was to give enthusiasts one last chance at a hi-performance big cubic-inch engine. For many years, speculation of unknown and in many cases incorrect facts have been published over an over again clouding the history of the T/A 6.6 engine. The information provided in this historic information guide is result of accurate information that is slowly being uncovered about Pontiac's infamous T/A 6.6 engine.

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