

the HIGH OUTPUT

Dedicated to increased Pontiac Performance through better information.

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FEATURE CAR



1973 Grand Prix: John & Judy Clegg's 455 NHRA SS/NA

Probably the only eleven second Grand Prix in the world hails from Victoria, Texas. John and Judy Clegg decided to set the Super Stock drag racing people on their collective ear with an outrageous combination that was also super competitive. The Grand Prix premiered at the U.S. Nationals, but was hindered by new car problems that limited performance to e.t.'s around 12.1. The next major race the Grand Prix will be seen at will be the Winter Nationals in 1978 where performance should be in the mid-elevens.

The Grand Prix can use a 400, 455, or 455 Super Duty engine. At Indy it was equipped with the SD engine, but this engine will be refactored and another engine may be a more attractive combination for 1978. Some of the important parameters of the 'Prix are: minimum weight is 4233, rear end is a 5.57:1 equipped Dana 60 spinning 14x32 'Stones, and ladder bars getting the power to the ground. Judy Clegg will probably drive the Grand Prix during 1978, leaving the wrenching to John and crew.

Technical Topic: Performance per dollar

This month's Tech Topic has a bit of philosophy mixed with it. Many people who are interested in improving the performance of their Pontiac have limited budgets and some budgets are more limited than others. Therefore if one wants to achieve the maximum performance gain rather than just some performance improvement, the correct selection of parts and equipment in the right order is extremely important. It is the purpose of this month's Tech Topic to express H-O's view on what type of bolt on part should be installed and in what sequence it should be done for the most performance gain.

1. Advertised Performance Parts versus Reality. Aftermarket performance equipment for Pontiacs and other brands are basically available because everybody involved can make a profit from doing so. Ideally the consumer is included in this because his "profit" should be improved performance. Profits are not made unless products are sold. Products are not sold unless the consumer knows about the product and is persuaded to buy it. Marketing that consists of advertising, magazine exposure in articles, race car support, or speed shop sales pitches, helps assure that the consumer is persuaded to buy the product. This is where the problem arises with Pontiac performance parts. Purchasing performance parts for your Pontiac based on what advertising you read or what the Speed Shop salesman tells you usually results in an uncoordinated set of parts with little or no net performance gain. In some cases, the engine actually runs worse than stock.

At H-O, we hear this story a lot from customers who have purchased parts elsewhere. It is usually upsetting to the customer when we recommend taking off most of those parts and starting over, but in many cases this is exactly our recommendation. At H-O we are more interested in your Pontiac running good than selling you one more part.

2. Using the parts you already have. The most performance per dollar is gained by "tweaking" the parts you already have to make the car run better. Aside from your labor, there is little or no expense involved. Some of the things you can do are as follows.

a. Reset the timing. Although the distributor centrifugal and vacuum advance curves must be reprogrammed for best performance, some improvement on a dead stock engine can be felt by twisting the distributor setting around. Try advancing the timing a little bit at a time.

b. Open the back of the hood scoop on late model Trans Am. The cooler inlet air will result in more power. To take full advantage of this change and prevent drivability problems, the carburetor must be rejetted.

c. Drop the exhaust head pipes at the drag strip. One of the biggest restrictions is the muffler system. Opening the exhaust manifolds eliminates the back pressure and will result in a noticeable gain. Again, the carb must be rejetted for best results.

d. Inflate the tires to 35 psi. Unless you are using wrinkle wall slicks, best traction will result with more not less air pressure.

3. Starting to add aftermarket parts. Without question, the most performance per dollar part for your Pontiac is the H-O Special Performance Package. We are blowing our own horn here, but this kit WORKS! It would certainly be possible to duplicate this performance with a sophisticated dyno tune coupled with extensive tuning, but it is less expensive to get the complete kit from H-O.

The next area to be improved is the exhaust. On most street driven cars, the major restriction in the exhaust system is the mufflers, not the manifolds. You can prove this to yourself by dropping the head pipes at the manifolds and running the car. Pontiac achieved most of the horsepower gain in the 1978 T/A 6.6 engine by improving the exhaust system, not tweaking on the engine. Of course H-O recommends the CrossFire system, but even the average muffler shop can hang dual exhausts

on your car for some improvement. It is usually not necessary to put headers on at this point, but you can if you want to get it out of the way. Headers give good performance per dollar, but are a pain to install, are noisy, and wear out sooner than stock manifolds.

The next major change should be the rear gear ratio. Most late model Pontiacs have rear gear ratios somewhere in the two's (2.41, 2.56, etc.). Changing to a ratio in the three's (3.23, 3.42, etc.), will result in a tremendous increase in off-the-line acceleration that will convert your dog into a rabbit. Do not go overboard in your ratio choice since gas mileage really drops off with the steeper ratios. This is a relatively expensive change in terms of absolute dollars (about \$150 for the ring & pinion, \$50 for installation and \$40 for an H-O #GS-89 adapter if necessary), but considering that it will increase torque multiplication by around 50%, it is definitely worth it.

4. Getting into the engine. The late model engines have two major shortcomings. The camshaft is much too mild and the exhaust breathing in the head is restricted. Changing cams to a healthier stick will really wake up one of these smoggers, even with stock heads. As an example, one of H-O's customer's in Chicago, Lindsay Beard, has a 1975 Trans Am 455 that will run low 13's and is street driven every day. All he has done is change the cam to #HC-03 with Rhoads lifters and performed the other modifications described above. He is still using stock heads.

Depending on the camshaft you select, you may have to upgrade the other valve train parts, but in most cases it is not necessary to replace everything so expenses do not get out of hand. The easiest way to make a cam change is also to change heads at the same time. Buy a set of earlier used high performance heads from the wrecking yard and have them prepared with a valve job and the correct H-O valve train parts. After these changes, you will have the equivalent of an early muscle car engine in terms of performance. Notice that we have not changed anything in the induction system (except opened the hood scoop and rejetted the Quadrajet) or the short block.

5. Parts to avoid. Without stepping on a lot of toes in this area, H-O has the following philosophy about some types of aftermarket equipment.

a. Ignition. Avoid optical or magnetic trigger conversions in stock distributors. You can use a bolt on CD type ignition such as MSD, but at least if you retain the points you can fix it in a jam. If you have an HEI, all you need is an H-O Accuracy Kit and maybe an MSD-6A.

b. Intake Manifolds. Avoid single plane aftermarket intake manifolds unless you are racing NHRA Super Stock or equivalent. The basic design kills off too much low speed torque. If you want an aluminum manifold for weight savings, use the Pontiac Ram Air IV or 455 HO versions, otherwise use the stock one.

c. Carburetors. Use the stock Quadrajet! Its basic excellent design and compatibility with Pontiac engines is shown by many NHRA Stock and Super Stock racers who are required by the rules to use the original carburetor. Many national records are and have been held by GM cars using the Quadrajet carburetor and it will work even better in a street application. If your QJet is screwed up and an H-O Power Kit will not "fix" it, then get it repaired or buy a new QJet; do not buy a Holley.

d. Camshafts. There is only one reason why H-O carries our own line of specially designed camshafts and valve train pieces for Pontiacs: The Speed Shop available parts are misapplied, not available in the right combinations, or fraught with installation problems. While it is possible to get a correct cam from one manufacturer, the valve springs from another, the pushrods from another, etc. and make up an acceptable cam and kit for your Pontiac, all the right parts are available from H-O. Don't let yourself get caught in the horror story of "the cam won't idle", "I've got no low end power", "it bent all the pushrods", or "my new valve springs won't fit".

WHAT'S HAPPENING

Sonny Ray of Piedmont, Alabama qualified in one of the nine open spots for Super Stock Eliminator at the NHRA World Finals at Ontario Motor Speedway. Sonny's SS/KA 1972 GTO 455 H.O. went 11.36 on a 11.43 index to capture the last open spot against all seven NHRA division's top runners, while many many familiar Super Stock drivers such as Judy Lilly and Jimmy Bridges did not make the field. During the eliminator, Sonny broke out against Bill Hoefer's Camaro by .03 in one of the closest races of the day. Congratulations to Sonny for a fine year (second in Division Two points and winner of the SportsNationals) and good luck next year!



Richard McFarland drove his 1963 Tempest with 421 SD power to the Division 7 Pro E.T. championship at Famoso Drag Strip in Bakersfield, California. Richard was chopping down the tree all day by running near his 11.85 dial-in every run. Richard also helped his Team Irwindale to the overall victory by getting to the semi's in his Pontiac 'wagon in the Heavy Eliminator category.



Glen Tinsley of Houston, Texas has been taking home a lot of bacon recently in the Southeast, Texas area. His 1973 Trans Am is set up for NHRA-legal SS/KA and has run low 11.1's in the heavy gulf air. His most recent win was over Jake Fojt's Chevy SS/U. Look for Glen's T/A to capture some NHRA headlines during 1978.

H-O will exhibit at the Specialty Equipment Manufacturer's Association (SEMA) trade show at the Las Vegas Convention Center on Nov 30- Dec 2. This show is closed to the public and is the showcase for the entire speed, off road, and van aftermarket equipment industries. H-O will premier TurboFORCE, the turbocharger installation package for 1970-78 Firebirds. Other special Pontiac and Chevy parts that are manufactured by H-O will also be displayed.



Fred Moore and Phil Szupka made it an all Trans Am SS/KA final in the Fall Sportsman Championship Super Stock Eliminator at Maple Grove Dragway in Reading, Pennsylvania. Phil got the win via Fred's red light. Performances were outstanding with Phil hitting 11.03 (four tenths under the index) in the former Herslow & Morlock car, while Fred cruised to an 11.33.

The November 1977 Car & Driver has an article called "Flat Out In Ohio!". The idea was to determine the fastest American production car. The 1978 Trans Am with T/A 6.6 scared the heck out of Chevrolet's Corvette by turning over 131 mph to the Vette's 133. Although it was not mentioned in the article, H-O has heard rumors that the Vette's engine was not 100% stock (Oh, Chevy wouldn't do anything like that, would they?), but we are certain that the T/A's engine WAS stock.

Car Craft has selected H-O's Craig Hendrickson as one of their "High Risers" for the December 1977 issue.

CUSTOMER ADS

'67 FIREBIRD 'SPRINT' CONVERTIBLE

Full restoration: New top, paint, tires, carpets, rebuilt on C 6 cyl. "Sprint" engine. Factory disc brakes, Rallye wheels, Rallye cluster, 4 spd. Flip down rear seat and console. Sacrifice. \$2700. Santa Barbara, CA. 805/966-9540.

WANTED: Formula steering wheel including horn assembly. '70-71 GTO tailpipe extension outlets, must be perfect. Doug Klein, 42-06 Broadway, Long Island City, NY. 11103. Days, (212) 932-9020 evenings, (516) 483-3428.

WANTED: Pontiac Ram Air V parts, especially interested in any type intake manifold. Contact Jerry Steinbrick, 7173 W. 130th St. Parma Heights, OH. 44130. 216/845/4611.

CUSTOMER ADS CONT'D.

FOR SALE: '70 RA IV intake. Ported and polished, excellent condition. \$100.00. 850 Holley, dual line, double pumper, mechanical secondary's, like new, \$40.00. Stephen Cook, 1208 North 2nd St., De Soto, MO. 63020. 586-2452, before 2 p.m.

FOR SALE: 1971 GTO Judge hardtop. Very rare! Only 357 ever produced. Excellent original body was Ziebarted when new. Has been stored since 1974 and has low mileage. Has original 455 HO engine and your choice of Turbo 400 or 4 speed. Engine is out of car and disassembled for easy inspection. Could deliver if necessary. Jim Luikens, 1842 Gentian Dr., Kentwood, MI. 49508. 616/455/2291, evenings and weekends.

FOR SALE: '74 Trans Am Super Duty 455. Dark blue with light blue interior. Automatic. Custom interior. Hood decal. 36,853 miles. Completely stock and original. Never driven in winter. \$4475. Ph. 1/518/883/3247. Glenn Auspelmyer, 1 Maple St., Broadalbin, NY. 12025.

FOR SALE: 1970 Ram Air III. Short block, heads, intake. Block-Bal & BP. Complete less cam. Heads complete less rockers. All NHRA stock legal, \$800.00. Ray Stover, 614/392-4466. After 6 pm.

FOR SALE: 1971 Pontiac Lemans T-37 "Super Sleeper" 335h.p. 455 h.o. E/SA Former NHRA Sports Nationals, #6 at Spring Nationals. Runs on or under index-Ran 11.86 113 at Summer Nationals. Best of everything--Turn key operation. 50 runs on fresh engine. \$4500.00. Call any time, Rock Running-(313) 664-9390. Lapeer, Michigan.

FOR SALE: New round port headers, 68-72 GTO Hooker adj. \$150, '67-'69 Firebird JR's \$90.00, '64-'67 GTO Hookers, \$100., '69 GTO Ram Air Hood and front bumper \$60.00., 1970 RA III heads completely rebuilt, \$125.00., 1-bare '69 RA IV head \$75.00. Vance Heck, 2022 Victory Rd, Marion, OH. 43302. 1/614/382/4872. 6-9 pm.

FOR SALE: One set RA V heads, springs and valves. One set Ram Air IV heads, bare (still in the box). One of a kind blower intake manifold for Ram Air V Pontiac Weind. Call Glen Tinsley, 713/944/9515.

FOR SALE: 1969 400 shortblock, +.030, OEM TRW'S, #820 wall finish, total seal, rings, aligned honed, .010/.010 crank, rods, mag, resized, new bolts, heavy duty chain and gears, Ram V pump, cam, Dyn. (068) 7000 stocker cam. Still very fresh after 60 runs. \$550. Call Bob Penman, evenings, (519) 351274. Eatham Ont.

FOR SALE: Ram Air V pistons 1 set (8) BRC pistons 12.5-1 Dome 4.150 bore floating pins with locks \$175.00. 1-set (6) Aires pistons 12.5 1 Dome 4.165 bore floating pins with locks, \$100.00. Both sets in excellent conditions. Call Joe after 6 pm. EST 301/292-9512.

FOR SALE: Tri-Power CLEARANCE: Three sets of tri-power available. 1965, 1966, and a rare early set believed to be 1959. I have all the casting and carb numbers from the early set for identification. Please call or write for details on the set you are interested in. Very rare set of new, never used clear valve covers for any Pontiac V-8, \$25.00. Also 1 left and 1 right quarter panel extension and taillight housing for a '65 GTO or LeMans in mint condition. \$25.00 for the pair. And finally, two 14x6 Rallye I (six hole) wheels as used on a '65 to '67 GTO, \$25.00 each. I will be gone from November 24 to December 5 for the SEMA show. Jim Luikens, 1842 Gentian Dr., Kentwood, MI. 49508. (616) 455-2291, evenings and weekends.

New H-O Products

The 1978 H-O catalog is bigger and better than ever! 56 pages and over 125 pictures describe the best Pontiac performance parts available. The new catalog is organized along the following lines for easy reference.



GUIDELINES-- High Performance Street Guidelines point the right direction for ignition, carburetor, rocker arm ratio, intake manifold, compression ratio, headers, gear ratio, camshaft, valve train, and oil system. New detailed Recommendations for Specific Applications cover all 400, 455, 350, and other popular Pontiac engines. Exact part numbers and modifications are listed under each year and model type to help maximize performance!

LITERATURE-- The familiar and highly praised H-O literature has been augmented by a new H-Ow To series and H-O/Firebird T-shirts.

BOLT ON POWER--"Bolt it on and go faster" is the purpose of the H-O engineered kits and parts in this section. Some items are familiar but updated for 1978. The new parts are: new model MSD, hood tach, timing tapes, Mallory ignition tune-up parts, Rhoads lifters, valve spring installation tools, 455 Super Duty Quadrajet and fuel pump installation kits.

PERFORMANCE OVERHAUL--The finest parts and materials for getting into the heart of the engine are cataloged in this section. Some parts were included in last year's "ENGINE" section, but many new parts include: special tools such as tapered ring installers, oil pump primer and valve seat cutter, additional engine assembly hardware, windage tray, water pump, valves, and bearings.

TurboFORCE: Turbocharging by H-O--An introduction to the hows and whys of turbocharging in general and the H-O approach in particular. The H-O TurboFORCE components and a complete installation is shown. Part numbers for both the installation packages and turbochargers are listed for ordering your own.

DYNAMIC CHASSIS--All chassis parts in the 1977 catalog are updated for 1978 and many of the intriguing "Fire-Am" components by Herb Adams' Very Special Equipment are premiered for even better handling.

PROFESSIONAL RACER--The components in this section are meant for the serious Sportsman class racer. All parts are specifically designed or selected for competition and are not for street use. New parts for 1978 include off-the-shelf mechanical cams for budget and bracket racers, the latest Competition Cams, Crane, and Norris racing profiles, Bill Miller Engineering aluminum rods, special tools, head stud kits, and H-O/Crane rocker arms.

The 1978 H-O catalog will be available in December 1977. All old customers may purchase #TD-78 catalog for \$3.00 instead of the new cover price of \$4.00. All catalogs ordered on this special offer will be sent by bulk mail. For fastest possible delivery, send an additional \$1.00 for first class mail.

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