

A Pontiac High Performance Company
H-O Racing Specialties, Inc.
1974 – 1981
By W. Craig Hendrickson
The Beginning, 1966-1970

I've always been interested in cars, particularly high performance ones. For instance, my first car that I owned was at USAFA and was a 1965 Pontiac GTO 4-speed 4-barrel 389. I didn't do much to it other than drive and maintain it during USAFA and later at NASA Apollo in Houston, TX. Later at NASA, I discovered that there was a local drag strip just south of Mission Control in Dickinson, TX owned and operated by Gay Pontiac right off I-45 to Galveston, TX. I spent many a Wednesday and Saturday night there drag racing my GTO. But, I didn't modify my GTO much at that time because I needed it for daily transportation. Even drag racing it, the GTO stood up well and never broke anything. Here's a picture of what mine looked like, even though this one is not mine



Early H-O Racing Specialties, 1970 – 1973

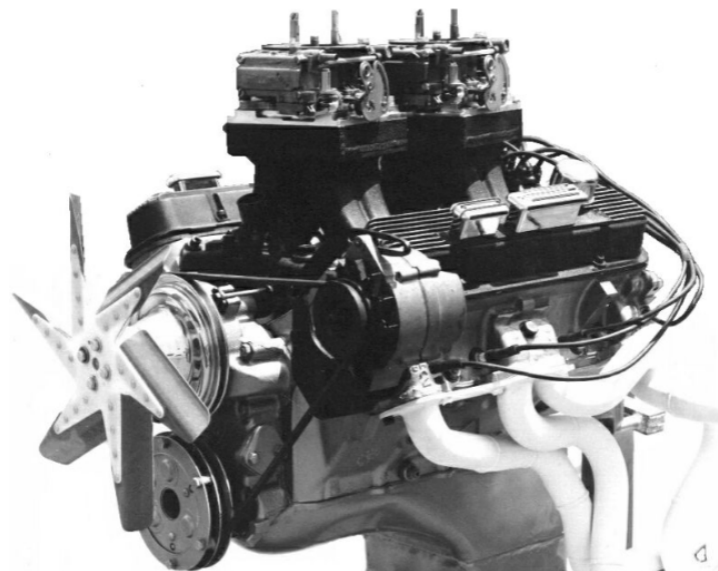
In September, 1970 I was reassigned by the USAF to Los Angeles Air Force Station Defense Support Program. As most know, LA in SoCal is one of the meccas of car culture and high performance is a big part of it. By that time I was married to my 1st wife, Sandra (“Sam”). We were pretty well off financially for a young couple as both of us had good jobs. This meant we could buy a house (actually two) and had several cars. This allowed me to more seriously drag race my GTO at such places as Lion's Drag Strip in Long Beach which was just down I-405 from where we lived. I essentially “took it off the street” with 4.33:1 rear gears, a bigger cam, better intake manifold and headers. It would run 12s in the ¼ mile, which was pretty good for those days. One day I was perusing the local South Bay newspaper “auto parts for sale section”, as I usually did, and I saw an ad by a guy who had some Pontiac parts for sale. So, I called him on the phone (people put their number in newspaper ads in those days). His name was Kern Osterstock, lived in Palos Verdes, owned a precision Tool & Die company and had a 1968 GTO Ram Air II. We became instant friends. Eventually in 1973, we formed a partnership to defray (write off our taxes) our racing and car expenses. This partnership was “H-O Racing Specialties”. The “H” was me and the “O” was him.

Conveniently, "H.O." was a moniker used Pontiac in the day to designate their "High Output" engines, so it worked well with our enthusiasm for Pontiacs. Later, we mutually decided to build a serious NHRA-legal spec drag race car, using my 1965 GTO as the basis. We selected NHRA E/MP class for a variety of reasons and this was the result:



H-O's 1965 "Tempest" E/MP at the old Irwindale Raceway, CA

This car had several unique features as you would expect from a partnership of a "Rocket Scientist" and a graduate, professional machinist. I designed and Kern built the rear suspension. We substituted the Tempest grille for the GTO because it was lighter. Kern had the front fenders "acid dipped" to remove weight and designed and paid for the paint job. The most unique feature was its engine. NHRA E/MP required 11.0lb/CID and the "Tempest" in the above configuration weighed about 3,600 lb, so we built an engine of 326CID, which was the same CID as a common Pontiac V-8 at the time. But ours was different. It was based on a 1956 Pontiac 316CID V-8 block and was bored 0.060", resulting in the 326CID we needed. It had "ported" 1970 Pontiac Ram Air IV cylinder heads, custom headers and roller camshaft. The whole combination was vastly superior to the 327CID Chevy small blocks of the time. Here's a picture of the 326CID E/MP engine:

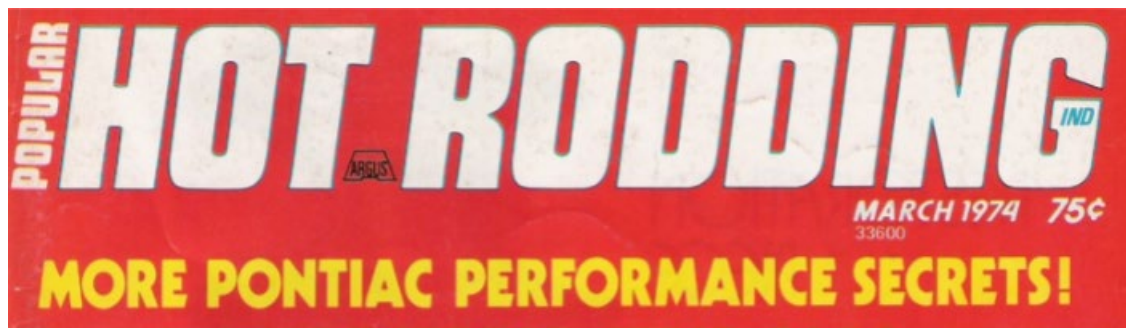


One day at Kern's shop we had the 326CID engine out of the Tempest to do routine maintenance. An employee of Edelbrock (a well known high performance company both then and now) came by to see Kern and saw the "dual quad tunnel ram" intake manifold off the 326CID and on a bench. He was stunned because Kern had built it from scratch using Edelbrock runners for a small block Chevy. He asked if he could take it to show Vic Edelbrock, the owner of Edelbrock. We said, "Sure, just bring it back!" Vic, after looking at and admiring the intake, called a friend of his, Jim McFarland, who was at that time the Editor-in-Chief of Popular Hot Rodding magazine, a Los Angeles-based car magazine. Vic told Jim, "You need to send a tech editor over to those guy's shop and do a story on them and their Pontiac and the engine." Jim did just that and sent an editor over to do a story. Kern and I knew about this beforehand and decided it would be of more general interest to expand the content to include Pontiac high performance parts too. So, we laid out those parts in an organized manner to make it easy for the editor since he was also the photographer. After the story interview and picture taking, the editor said, "Would you guys write up some 'notes' and I'll write up a story for the magazine." OK, we said. It just so happened that within a few days, I was going on TDY to San Jose for a launch of one of the DSP birds because I was Orbital Operations Officer for the SPO and still in the USAF at the time. During the evening, I didn't have much else to do, so I wrote up a "story" about the parts, etc. After my wife "Sam" edited (she had been a Technical Editor for NASA Apollo Mission Planning & Analysis Division where I met her) and Kern reviewed the "story". We sent it to the editor. He called Kern back and said, "This is perfect! I'm going to run it just the way you guys wrote it up." It was published in a 6-page spread in the October 1973 issue of Popular Hot Rodding. That magazine article put Kern & I and H-O Racing Specialties instantly on the world map of car enthusiasts. Here's the top of the cover:



Kern Osterstock (L) & Craig Hendrickson, August 1973

The response by Pontiac owners and enthusiasts to the above magazine article was tremendous, as evidenced by a follow-up article in the March 1974 issue of Popular Hot Rodding magazine.



This lead-in explains it:

Editor's note: Due to the fantastic response to the "Top Tuning Secrets for Pontiac's 389-400-455" article in the October 1973 issue of POP ROD, we asked Craig Hendrickson and Kern Osterstock of H-O Racing Specialties to tell our readers how to build a high-performance low-compression Pontiac engine for street/strip use. They built it in accordance with their *Pontiac High Performance Engine Design and Blueprint Assembly* manual, and they used factory available parts listed in their *Heavy-Duty Parts and Specifications for Pontiac* book. The results were impressive, as the following article illustrates.

Fortunately, Kern and I had the foresight to get a P.O. Box in Hawthorne, CA in the name of the partnership for the purposes of income tax filing. After the October 1973 issue and the avalanche of letters we received, I wrote and Sam & Kern edited the two books cited above, which we sold for about \$5.00 per copy. This provided enough income that Kern and I could buy most anything we needed for any of our Pontiacs (several each by that time) and even funded a vacation to Las Vegas for us and our wives.

H-O Racing Specialties, Inc. - The company, 1974-1981

In early 1974, Kern's father Tom who was mostly retired from the Tool & Die Company, but still owned half of it, came by one day and noted a big pile of letters on the desk of the front office receptionist, Barbara. Tom asked her, "What is this?" She said, "These are requests from Pontiac guys to buy H-O's books and they contain checks or cash to purchase them. I take the money, put one or both books in a manila envelope and mail them every day. Then I go to the bank and deposit the money in their H-O account. Tom was stunned. He immediately talked to Kern and said something like, "One or the other of you guys need to run this H-O thing as a legitimate business somewhere else or shut it down because I don't want it here taking up Barbara's time doing it!"

Kern immediately called me and explained what happened with Tom. Kern told me he couldn't do it because he had to run the Tool & Die Company full time as he had many employees and continuing obligations to big clients like Hughes Aerospace and TRW. At that time, I was nearing the end of my assignment with USAF DSP in Los Angeles and was going to get reassigned somewhere, probably New Mexico to another Systems Command secret space operation. My wife, Sam, and I liked Los Angeles and owned two houses there and she had a good job at a major company. For my part, I felt that I had 3 of the best USAF assignments possible for me up to that time (Purdue for M.S. Astro, NASA Apollo Program and USAF DSP secret satellite system). I talked to Sam about the opportunity and possible problems if I resigned my regular commission from the USAF (my service obligation from USAFA and Purdue was over as I had 7 years in service). After long discussion and weighing our options, she agreed that I should "follow my dream" and that she would support me 100%. At that time, the income from the rental house covered our mortgage for both houses, we owned all our cars

outright, had no debt, no children with no immediate plans for same and she had a good job with adequate income for me to go into business for myself and see what I could make of the opportunity. I resigned from the USAF effective May, 1974, leaving that phase of my life behind, but never regretting a moment of it. Upon Kern's advice, I transformed our partnership into a corporation with myself as sole stockholder. I started by continuing what we were doing selling H-O books, but operating out of my garage rather than at Kern's front office. I took every cent of net income and reinvested it in H-O, inventing some new products to sell in the process. Shortly thereafter, the tenants of the rental house moved out and since the rental house was on the same lot as ours, but on the street front, I moved the H-O "warehouse" and operations into it. I had hired a couple of local housewives that I knew to do the order processing, product fulfillment and shipping while I concentrated on learning how a business worked and running it. A business is not "rocket science", but it is its own animal, so to speak and has its own challenges, particularly if you want to make money at it. Later, as H-O became more successful, I moved down the street to a small storefront in a strip mall. One day, a professor-looking man walked in my storefront/office and introduced himself. He was Harvey Crane, the owner of Crane Cams, Inc. in Florida, probably the most successful aftermarket high performance automotive camshaft manufacturer in the USA at that time. Harvey had heard from his local Southern California distributor about this "rocket scientist" who was starting a high-performance Pontiac business. Harvey was also the designer of his camshaft profiles using early computer software that he had made. I knew a lot about computers at that time too because of my Astronautical Engineering major at USAFA and some work at NASA Apollo. Harvey was intrigued with what I was doing and offered me something unprecedented at that time: a Warehouse-Distributor (super deep cost discount) deal with Crane Cams and a private label on a series of camshafts that he and I would design. His company would manufacture them and sell them to H-O for resale to Pontiac enthusiasts. I would in turn resell them at a really good profit. A few months later, a much larger space (6,000 sq ft) opened up on the other end of the strip mall. As I configured it from street front to back of building, there was a storefront, phone reception desk, office space with 4 private offices, a break room, a shipping area, a good sized warehouse with 2nd floor storage & loading door and a shop/garage with room for 2 cars, equipment and garage door. There was also plenty of parking behind the strip mall for customers or employees. Most of H-O's business was conducted by mail or phone although we'd get some storefront activity. Of course H-O had small "I" ads in the important car enthusiast magazines (Hot Rod, Car Craft, Popular Hot Rodding, Super Stock & Drag Illustrated to name a few), but most of the "advertisement" came free via a continuous series of magazine articles featuring something H-O did many times featuring our products and always with our P.O. Box address. Most of the car magazines were Los Angeles-based, so H-O was well known to the editors there and they called us whenever something Pontiac came up or they wanted to run a Pontiac-based performance article.

Some notable H-O Accomplishments

Setting a NHRA National Record and "showing the flag"

In 1973, I purchased a rare 1974 model Trans Am Firebird with 455 Super Duty engine and 4-speed transmission. There were only 943 SD-455 Trans Am's and Formulas built in 1974 (out of 73,729 Firebirds) and about 200 of those were 4-speeds. Initially I drove it on the street, then the next year (1975) I drag raced it locally in NHRA Stock Class. In 1976, I converted it to NHRA Super Stock SS/KA Class, but with an automatic transmission (TH-400) because the stick shift/clutch was too hard on the driveline with that heavy of a car and that much torque. See picture of the car below:



H-O Racing's 1974 Trans Am SD-455 at NHRA Winternationals Drag Race (Craig driving)

In 1977, I set a NHRA National E.T. And Speed record with it:

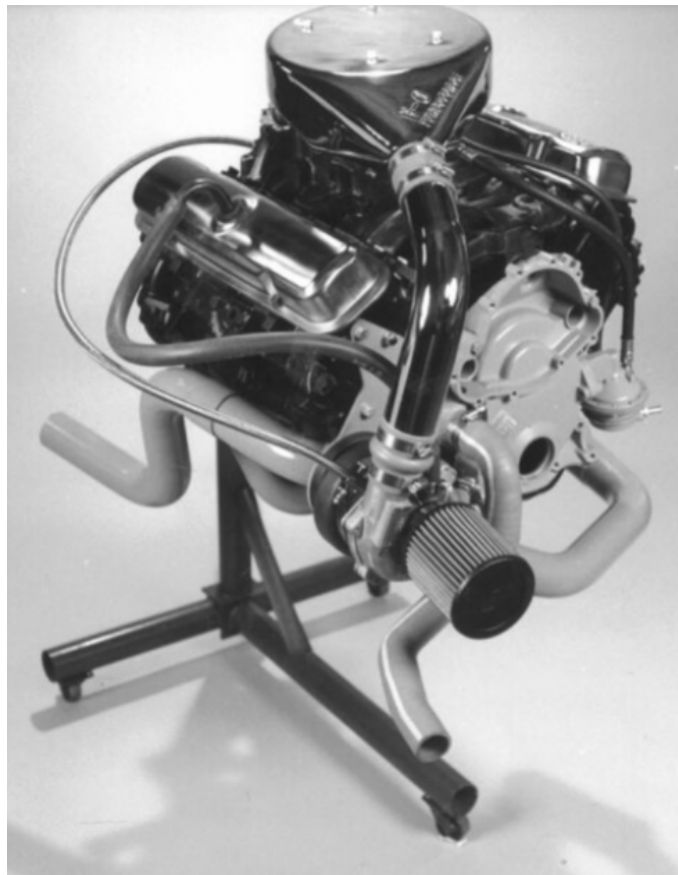


This resulted in yet another article in Popular Hot Rodding and more free advertising for H-O



H-O “TurboForce”

Another notable accomplishment by H-O was the creation of a bolt-on turbocharger system for Pontiac “Gen-2” (1970-79) Trans Am and Formula Firebirds. Here's the H-O catalog picture of the kit mounted to a Pontiac V-8 on an engine stand:



This resulted in yet another car magazine article, this time in the April 1978

The biggest problems confronting the Pontiac Trans Am owner who wants to turbocharge his car involve matching the turbo to the engine, fabricating the necessary intake and exhaust plumbing, and last but certainly not least, making it all fit within the crowded Trans Am engine compartment and still stay beneath the stock hood. At least those used to be the big problems, but no more. Now the folks at H-O Racing Specialties (P.O. Box 429, Hawthorne, California 90250) have solved all the problems and assembled a complete prefabricated "TurboFORCE" kit.

Basically a "blow-through" system that pressurizes the carburetor, the kit utilizes a Rajay 301E turbocharger. The A/R ratio of the turbo is dependent upon the displacement of the engine to which it will be matched. The stock Quadrajet carburetor is retained, but special carb parts are included to modify it for the proper fuel curve, as described in the complete, illustrated instructions. Virtually everything needed to properly hook up the turbocharger is in-

cluded in the installation kit; i.e., all of the exhaust plumbing, special cast-aluminum carburetor pressure bonnet, raised right-side engine mount for exhaust pipe clearance, sectioned left valve cover to clear power brake units, turbo oil supply and drain lines, specially modified engine front cover, a high-output pressure-balanced mechanical fuel pump to maintain seven psi fuel pressure above carburetor bowl pressure, a preformed steel fuel line to the carburetor, a supplemental Carter electric fuel pump and Holley in-line filter, distributor advance curve parts, a vacuum advance pressure retard can and all of the necessary brackets and hardware. The installation package sells for \$595, and the Rajay turbocharger, which is sold separately, goes for \$379, thus making the entire system less than \$1000. Installation takes the best part of a weekend for the novice, and of course, the entire system can be removed from the car prior to sale or trade, if so desired.

Maximum boost pressure is self-restricting to approximately seven

pounds with the stock catalytic converter and muffler in place. Performance tests on a '78 Trans Am with a 400 engine, 4-speed transmission and a 3.42:1 rear axle ratio showed 1/4-mile times of 13.90 seconds at 105 mph, as compared to 15.40 seconds at 93 mph for the same car prior to the turbo installation. H-O feels that the TurboFORCE system on a Trans Am with an automatic transmission



With the exception of the turbo boost pressure tube and the pressure bonnet beneath the bogus shaker hood scoop, the engine compartment appears nearly stock at first glance.

By C.J. Baker

TOTALLY CONCEALED BENEATH THE STOCK HOOD. THIS TURBOCHARGER KIT PUTS REAL MUSCLE IN A TRANS AM

TRANSFORMATION

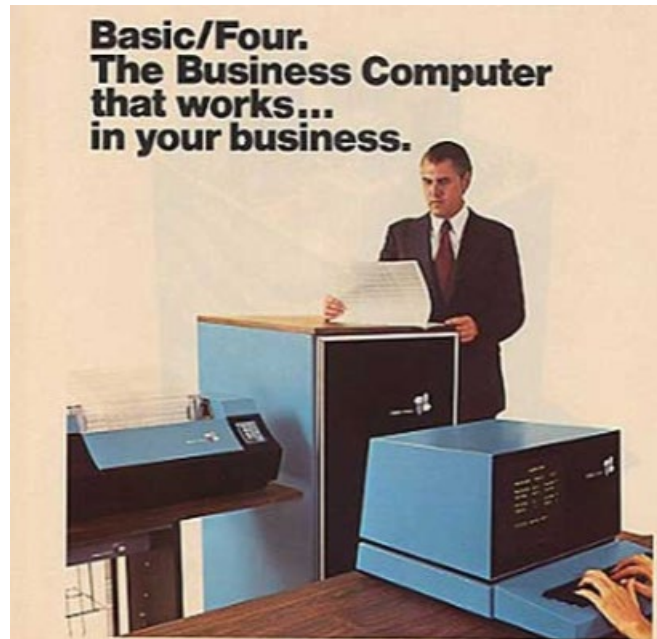
HOT ROD APRIL 1978

Computerizing H-O

Another notable accomplishment by H-O was the computerization of the business. Starting in 1975, I bought an HP programmable scientific calculator and used it to determine exact jetting requirements for customer's Quadrajet carburetor based on their altitude and engine modifications starting with a Sea-Level and stock engine baseline. Here's a marketing picture of the HP-19c:



This calculator was fine for that particular task, but fellow USAFA classmate Bill Geoghegan had contacted me some years before and would come by and visit whenever he was in the Los Angeles area on business. One day late in 1977, he saw how much H-O had grown and that we were still on a manual paperwork process. Bill suggested that I computerize H-O as affordable (for a small business) used Mini-Computers were available through a salesman he knew in Los Angeles. I followed up and bought an MAI Basic 4 Mini-Computer for \$15,000, a sizable cost for me personally and H-O as a small business. Here's a marketing picture of what it looked like



The hardware consisted of 128KB of RAM, 8.4MB of hard disc storage in 4 drives (2 removable), two refrigerator size cabinets, a noisy printer, 3 terminals with keyboards and Business BASIC programming language. This is laughably small by today's standards

At that time, there was no affordable software “package” for running a small business. So, Bill and I sat down at two of the terminals one weekend after purchase and setup and designed and started writing custom software for H-O. Bill wasn't in town all that often, so I wrote most of the remainder of custom software. It consisted of:

Sales order taking, both mail and phone, inventory control and order fulfillment, multi-level Bill of Materials and reverse BOM for H-O's custom kits, purchasing System (early MRP), fully integrated accounting system (AP, PO, P&L, etc.), customer database and mailing lists and subscription list with label printing.

This system proved to be very successful and reliable. It helped accelerate the success of H-O as a business. There were many other notable accomplishments by H-O, but these three illustrate the point.

The 2nd oil crisis of the 1970s and its effect on H-O

World events in 1979

December 25, 1978: Iranian oil exports out of that country have ceased because of the Iranian Revolution against the Shah of Iran. Exports finally begin flowing in fall of 1979. Iran only exported about four to five percent of the total world production. But the loss of the oil helped result in a 150 percent increase in the price of a barrel of oil because of "panic" in the marketplace. On January 16, 1979 Shah of Iran abdicates the throne and leaves Iran quietly. This follows months of revolt by Shiite Muslims over the Shah's rule. On February 1, 1979 the

Ayatollah Ruhollah Khomeini arrives back in Iran following exile to lead the final over-throw of the monarchy. June 28, 1979 OPEC raises prices on crude oil again. The price of a barrel has increase 50% since a year earlier. July 15, 1979 President Jimmy Carter announces a massive six-point effort to reduce American dependence on foreign oil. Effort includes alternative energy development and oil from shale. November 4 1979 Iranian militants seize U.S. embassy in Tehran, holding staff hostage for 444 days. President Jimmy Carter places an embargo on importing Iranian oil into the United States and freezes Iranian assets in U.S. banks. Touches off second oil "crisis" in the United States. The world price of oil peaked in 1979 at more than \$80 a barrel (\$503 in 2004 dollars!). Like the 1973 oil crisis, there were lines of cars around the block at gas stations waiting for a chance to gas up. While the 1973 crisis killed the "muscle car" of the mid-60's to early 1970's, the 1979 crisis certainly killed the Trans Am Firebird as that was the very last year for a real Pontiac V-8 engine. As a result, most high performance auto parts companies fell on very hard financial times and H-O Racing Specialties, Inc. was no exception. By 1981, H-O was struggling to stay alive despite downsizing and other drastic financial impositions. In October 1981, I sold almost my entire interest in H-O Racing Specialties, Inc. to Ken Crocie who had been H-O's General Manager for many years. As mentioned above, I retained my rights to the software that had been developed which had computerized H-O's business starting in 1977. I then embarked on a very successful computer software development and entrepreneurial career that spanned the next two decades. Ken managed to "keep the light on" at H-O Racing Specialties, Inc. with some success, but finally had to shut down the corporation and resurrect his efforts as H-O Enterprises.

Thus ended my involvement in high-performance Pontiacs

At least for 20+ years, but that's another story