PANTERA MANGUSTA VALLELUNGA DEAUVILLE LONGCHAMP

The Pantera Owners Club of America

JANUARY 2009 36th YEAR NEWSLETTER

A NICE PHOTO OF A TASTEFULLY AERO-ALTERED PANTERA. SEEN ARE SMALL AIR DAM/SPOILERS INTEGRATED WITH SPLIT FRONT BUMPERS, BALANCED BY A LOW-MOUNTED WING IN BACK. POLISHED WHEELS SET OFF THE MONOCHROME PAINT. THE SHOT WAS TAKEN IN SCENIC N. CALIFORNIA'S BODEGA BAY AREA.

Trevor Fougere photo

PANTERA OWNERS CLUB OF AMERICA
BOARD OF DIRECTORS & STAFF-2009

OUR CLUB

In 1973 a group of enthusiastic DeTomaso Pantera and Mangusta owners began to hold regular meetings at Peyton Lincoln-Mercury in Long Beach, Califomia. From this group of automobile owners thirsting after ways to get the greatest pleasure out of their automobiles, emerged the Pantera Owners Club of America. Over the years, POCA solidified and its membership began its steady expansion. POCA's Chapter program combines all the benefits of a large national organization with the visibility and local flavor of a small club. The Pantera Owners Club of America is officially recognized by DeTomaso Automobili, S.p.A, Modena, Italy.

POCA is built on the foundation of DeTomaso automobiles, but derives its success from its membership; they are brought together by the common DeTomaso bond- interest in the history, maintenance, restoration, and preservation of all DeTomaso automobiles. POCA members thrive on activity, and the Club with its many local chapters, makes a special effort to provide a wide range of activities that will satisfy every member; regular meetings, social events, speed events, rallies, stunning Concours d'Elegance shows and the Annual International Convention in Las Vegas. On top of this, POCA disseminates technical information about DeTomaso automobiles and publishes this monthly newsletter that keeps all members apprised of Club/Chapter activities. The Club also publishes an information-packed, pictorial quarterly magazine that no DeTomaso automobile owner should be without.

Regular monthly meetings for the general membership are held by the POCA Chapters. Meeting dates vary from Chapter to Chapter to meet the convenience of that particular group. All regularly scheduled meetings are published in this monthly newsletter. Meetings offer a chance for members to get together for a bit of socializing, to find out more about POCA/Chapter events, both past and future, for participating in general Club business, to listen to guest speakers on a wide variety of topics, and to acquire additional technical information about their fine DeTomaso automobiles.

Ownership of a DeTomaso automobile is not a prerequisite for becoming a POCA member, and POCA will attempt to assist any potential DeTomaso automobile owner in their efforts to locate a suitable car. Membership in POCA automatically includes Chapter membership where appropriate and one Associate membership for an individual of the member's choosing.
POCA is a non-profit corporation registered in the State of Califomia. Current annual dues are seventy-five (75) dollars U.S, (ninety [90] U.S dollars foreign).

POCA MEMBERSHIP APPLICATION

MEMBER'S MAILING ADDRESS - PLEASE PRINT CLEARLY
Name_____
Street Address_____
City _____State_____
Occupation_____Birthdate_____
State_____Zip _____
Home Phone _____Work Phone_____
E-mail Address_____
Pantera_____Mangusta_____Longchamp____Deauville____Vallelunga_____

Serial Number_____ Date Acquired _____
License Number and State_____
Color of DeTomaso_____
INTERESTS (Check all applicable)
Concours___Time Trials___Rallying___Social___Technical ___Trips ___

ENTER ASSOCIATE MEMBER INFORMATION (if applicable):
Name_____
Street Address_____
City _____State_____
Occupation _____
Home Phone _____Work Phone_____
E-mail Address_____

DeTomaso(s) Used For: Show _____Race_____ Pleasure_____

If you wish to be affiliated with a Chapter, please list Chapter name
_____
Please remit dues ($75/$90 Foreign):___ Check Enclosed ☐ or VISA -M/C ☐
CARD#_____ EXP. DATE _____

Send completed application to:Judy McCartney, 6092 Trinette Ave. Garden Grove, CA 92845, or e-mail <**JPOCA2@hotmail.com**>

CHAPTER MEETING DATES & CONTACTS

TEAM PANTERA OF ORANGE COUNTY (TPOC)
Prez- Dave Rudderow (714) 969-1301(H)
Regular Meeting: 2nd Wed. of ea. month, 7:00PM
@ Mel's Drive-In, 12241 Seal Beach Blvd, Seal Beach.
e-mail **<drudderow@socal.RR.com>** for info.

F**OOTHILL PANTERAS (So-Cal)**
Prez- Rob d'Orazio- (626) 795-0915 (H),
Meeting Day: varies. Call Rob or e-mail
<robpantera@sbcglobal.net>

SAN DIEGO PANTERAS (SO-CAL) (SDP)
Prez- Mike Becker - (619) 476-8233
Regular Meeting Day -3rd Tuesday ea month @ 6:30 PM
Location rotates so call or check website. Call or e-mail Mike for latest update at **<mikebecker@cox.net>**

CALIFORNIA HIGHWAY PANTERAS, INLAND EMPIRE (CHPIE) (SO- CAL)
Prez - Kent Snyder- (626) 966-0890(H)
Reular. Meeting - 3rd Tuesday of ea. month, 6:30 PM.
@ The Sizzler, 275 E.Foothill Blvd Upland; e-mail
<POCA1@aol.com>

SOUTH BAY PANTERA (SO- CAL)
Prez- Richard Barkley (310 373-6695)
Regular Meeting -3rd Tues every other month
@ Coco's Restaurant in Rancho Palos Verdes
or e-mail **<grant@stockwelldesigns.com>**,

PANTERA CLUB of N. CALIFORNIA (Nor-Cal)
Prez - Peter Kovacs (209) 522-4008 (H)
Reg. Meeting - Last Thursday of ea. month, 8 PM
@ "COCO'S RESTAURANT", 1209 Oakmead P'kway,
@ Lawrence & U.S 101 South,Santa Clara, or e-mail Peter
<peter-kovacs@sbcglobal.net>

CAPITOL PANTERAS (SACRAMENTO, CA)
Prez- Jim & Emilia Seiferling- (707) 374-5963
Regular Meeting- 2nd Tuesday of ea. month, 7 PM
@ Mimi's Cafe, 2029 Alta Arden expressway between Arden & Howe, Sacramento. e-mail **<jes@riverdeltawireless.com>**

RENO-TAHOE PANTERAS (CA/NV)
Prez- Jim Nowlin (775) 831-1730 (H)
Regular Meeting Day - dates vary monthly
Next Meeting - Call Jim for location and times
email—**<flyersnest@yahoo.com>**

SOUTHEAST PANTERAS (FLORIDA)
Prez- Dan Lewis -(863)967-7738 (H)
Regular Meeting Day - dates vary monthly
Next Meeting - Call Dan for location and times or
e-mail **<dan.lewis@yahoo.comcom>**

TEAM PANTERA RACING
<www.tampanteraracing.com>

GREAT LAKES PANTERAS (MID-WEST)
Prez- Dave Doddek- (217) 422-3722 (H)
Meeting dates s vary- call Dave for updates,
or e-mail **<pantera@pobox.com**

EASTERN PANTERA ASSOCIATION (EPA)
Prez- Rick Carroll- (610) 791-4599 (H)
Regular Meeting Day - dates vary monthly
Next Meeting - Call Rick for location and times

PANTERA OWNERS of NEW ENGLAND(PONE)
Prez- Jim Wallace -(360) 326-3901 (H)
Regular Meeting - varies. Call or e-mail for location and times **<pantera_4220@yahoo.com>**

JERSEY PANTERAS
Prez- Tony DiGiovanna (973)493-1440
Regular Meeting Day- dates vary monthly. Call Tony or e-mail **<tonydigi@optonline.net>**

CHESAPEAKE PANTERAS (MID ATLANTIC)
Prez- Mike Sowers - (540) 872-9443 (H)
Meetings are combined w/events- Call for location & dates, or e-mail **Mike at <vapcar2@hotmail.com>** for updates.

TEAM PANTERA of LONG ISLAND (New York)
Prez- Cliff Zsevic- (516) 338-0249 (H)
Call for location & dates, or e-mail Cliff
<panteratime@aol.com> for updates

PANTERA OWNERS CLUB OF ARIZONA
Prez- Gil Mares- (480) 988-2393 (H)
Regular Meeting- 2nd Wed. of each month, 7 PM
@ "Boston's Gourmet Pizza" in Glbert, AZ Call for info or e-mail <**lgaato@yahoo.com**>

SPACE CITY PANTERAS (HOUSTON, TX)
Prez- Orville Burg (713) 410-1510(cell)
Regular Meeting- 1st Sat. ea. month. Call for location or check website. e-mail <**orville@rubyglass.com>**

DFW Panteras (Dallas-Ft Worth, TX area)
Prez- Wand How- (972) 370-9409
Regular Meeting- 2nd Tuesday of each month.
Call or E-mail Wanda for times & location.
E-mail **<wandahow@Tv.RR.com>** for info

PARADISE PANTERAS (Hawaii)
Prez- Scott Mead (808) 572-9039
Meetings are combined w/events- Call or E-mail
<scottmeadphoto@earthlink.net>

PANTERAS NORTHWEST (WA, OR, Br. Columbia)
Pres- Mike Thomas (253) 638-1249
Meetings on 3rd Thursady ea. month; location varies.
Contact- <mbefthomas@earthlink.net> for info.

SCHEDULE OF EVENTS- Start of 2009

Jan

Feb

Mar 7-8 ***Willow Springs Open Track*** by West Coast Racing — Jim Saxton — 626 285-2024
Spring Event features both Pantera and Ferrari clubs

POCA WRITTEN ARTICLE CONTEST- 2009

Chapter (totals)	Profiles #3 08	Profiles #4 08	Profiles #1 09			NEWSLETTER
TPOC (1)						R Kunishige-Jan
NWst Pantera(1)						AJ Laughton-Jan

POCA President's Message- January 2009

It has been a fun year. We got a lot done. I got to meet new people at the Fun Rally including Guy Trigaux, went to the TPOC parts swap meet, and scouted out the new Fun Rally venue. I got to work with the POCA board members and see all that they do behind the scenes that make it look so smooth. I got to attend many events with my local chapter in Northern California.

At the beginning of the year I had laid out five areas where I believe that POCA could benefit most. The first two on the list were to launch the new POCA web site and to update the POCA by-laws. I wanted to complete both by the end of the year. Well, we are batting .500.

I wanted to get the web site deployed to provide information and services to support POCA members and the De Tomaso community as a whole. That effort went well. We were able to continue the web development project started earlier. We made some changes, implemented, tested, and launched the new site this fall. The album feature is a big hit on the new site. It allows POCA members to post and manage their own pictures, video, and other files without limitations or costs.

This summer we launched the POCA by-laws rewrite project by soliciting suggestions for the changes. With the web site and the Fun Rally work, the by-law rewrite effort languished. By-laws are not all that exciting, so nobody seemed to mind much that it slid. Hopefully this spring, we can find some time to get moving on those by-laws. If you are interested, you can see the by-laws in the Club section on the POCA website. If you have any suggestions, let us know. There is a suggestion box on the web site.

This year we did take some steps to broaden our focus beyond the traditional Pantera region of Southern California to get more attention to the Pantera owners east of the Mississippi. We have a lot more to do, so that will be my focus in 2009 in addition to the continuing web site and by-law work.

2009 Fun Rally

After the extensive member survey, venue review, fretting, planning, and budgeting, we decided to hold the 2009 Fun Rally in Reno, NV for the first time. Since that decision, we have been working out the contract details with the hotel and caterer.

We have the contract signed now for which we owe a big thanks to Bob Reid who wrestled that one to the canvas. At the same time, Larry Finch has been working with the various folks at the Reno Fernley track to nail down the countless details necessary to run a track event.

There is a section on the POCA web site with information about the Fun Rally, the track event and other upcoming events. By the end of January, we should have a lot of the information posted there.

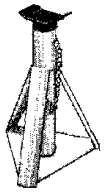
Last year gas cost over $4.00 per gallon. I paid $4.99 at one station on the way to the Fun Rally. Now, with gas well under $2.00, the drive to Reno should very affordable and a lot of fun for those people taking routes through the twisty roads in the mountains.

For the New Year

As with each passing year, we lose some good people along the way, like George Peloquin, Joe Perrucci, and others who have contributed so much to our community. In their memory, let's remember to help our brothers and sisters to be healthy, happy and safe in the new year.

Until we meet again, enjoy the drive!

Mark McWhinney
POCA President



JACK'S STAND
Illustrated L Front Bumper Repair

by Bill Taylor aka 'SO Bill', So Bay Panteras

My 1974 L Pantera acquired a tree induced, fairly small, difficult to see, dent near the center of the front bumper. This dent, though small, prevented the front hood from fully opening. In addition, the bumper had the typical "waves" in the trailing edge. The OEM Pantera bumper is formed by molding a rubbery type of plastic over a bent-up sheet metal form.

I removed the bumper, restrained it with two pieces of threaded rod to my sturdy workbench and used a floor jack to remove the dent. Note curve in 2x4 used to apply pressure.

To strengthen the bumper against future tree-encounters and remove the "waves" in the trailing edge, I decided to insert a piece of 3/16 X 2 inch steel reinforcing bar in the underside of the bumper.

I cut the plastic coating on the back of the bumper in a channel to accept the steel bar. The plastic coating does not have a strong bond to the sheet metal form. The surface rust found (below) was removed.

The ripples (seen below) in the stock sheet metal form were caused by stretching during the the dent and subsequent dent removal. There is no way to shrink this metal as in normal metalworking because the front of the bumper is still imbedded in rubber.

After thinking about it overnight, a section was cut from the center of the stretched area. The sheet metal form could now be made flat. I cut the section with a saber saw, but a better method, and one which would not cut the surface of the front of the bumper, would be to use a cut-off grinder to just cut through the sheet metal form from the rear. Next time.....

The reinforcing steel bar was drilled in a typical riveting pattern and countersunk for # 8 brass, bevel head, self-tapping screws. The steel bar needs to have a very, very slight end-to-end curvature to match the line of the front hood.

The steel bar was then laid in the channel and small pilot holes for the screws were carefully drilled to just pierce the sheet metal form. The screws were shortened with a grinder to accommodate the 3/16 steel bar and the 1/16 sheet metal. The screws were then inserted working outward from the middle to pull the bumper into the slight curvature required.

3M Plastic Repair #5895 (A and B) is a two-part material which is mixed on a piece of cardboard and applied to fill any gaps using a putty knife. The material dries by chemical action in 10 minutes, can be sanded in 20 minutes, and is completely cured in 4 hours.

This material was used to cover the steel bar, fill the channel, and fill the cuts on the front side. As this material cures chemically, it can be applied in any required thickness. The only constraint is that you not mix more material than you can apply in 10 minutes. The filler is very easy to sand and the edges of the repair can be easily feathered to produce a smooth surface. The photo below is before sanding.

After sanding the 3M filler, a SEM #39133 Light Gray Flexible Primer/Surfacer was sprayed over the filled areas. This heavy material is used to quickly fill surface and sanding imperfections. The sufacer will dry in about 5 minutes. Multiple light coats are recommended. This material is somewhat rubbery. The sufacer can be sanded, but it will quickly clog the paper.

When the surface is completely free of imperfections, SEM #39103 Black Bumper Surfacer was applied to the entire bumper. This material is also rubbery, dries in 5 minutes, and quickly clogs sand paper. This material was applied in many coats, over two days, and resulted in an excellent finish (below).

I want to thank Curt Toumanian, a former Pantera owner and fine fellow, for providing me with the methods I used to repair my bumper (Curt's original article was in POCA Newsletter Dec 1997-Ed).

Addendum:

I made (at least two) mistakes when I repaired my bumper:

1) I didn't bend the added reinforcing bar to the same contour as the front edge of the hood. The difference is slight, but it is visible. And when you have done the job yourself, you can see every imperfection. But there are no waves.

2) When cutting through the OEM rubber-embedded sheet metal, I used a sabersaw and cut all the way through sheet metal and the "rubber" of the bumper. DUH! If I had cut the existing sheet metal with a small abrasive cut-off wheel from the back side, I wouldn't have had to patch the front (visible) side of the bumper at all.

Patching the front side and getting it to look correct easily took 85% of the total man-hours. Oh well.... next time....

Bill

WEB PAGES & E-MAIL ADDRESSES OF DETOMASO BUSINESSES

Don & Bob Byars' Precision Pro-formance	**www.precisionproformance.com**
Jerry Sackett's P.I. Motorsport	**www.pim.net**
Steve Wilkinson Panteras & Parts	**www.panterasbywilkinson.com**
Gary Hall Panteras & parts	**www.hallpantera.com**
Lloyd Butfoy's ZF Transmissions & Parts	**www.rbttrans.com**
Marino Perna's Pantera East & parts	**www.mapenterprises.net/**
Larry Stock's Pantera Parts Connection	**www.panteraparts.com**
Ted Mitchell's Vader Racing	**www.tmitch.com**
Lance Nist Pantera Specialists	**www.lola332.com**
Pat Mical's Future Auto	**www.detomasopantera.net**
George Pence's Pantera International	**www.panteracars.com**
BJ Filarski's Hi-Po engines & chassis	**www.menandtheretoys.com**
Dennis Quella's Pantera Performance	**www.panteraperformance.com**
Roland Jaeckel, DeTomaso Parts Center Europe	**www.detomaso.de**
Jim Cozzolino's sportscar repairs in AZ	**www.coz-motorsports.com**
Ron Wade's Postwar Auto Parts	**www.chevsofthe40s. com**
Jon Hass' Pantera electrical assessories	**www.pantera-electronics.com**

POCA CHAPTER (& other) WEB PAGES

		On-Line newsletter
POCA Web Page	**www.panteraclub.com**	✓
Great Lakes Panteras	**www.greatlakespantera.com**	
South Bay Pantera	**www.southbaypantera.org**	
Eastern Panteras	**www.easternpantera.com**	✓
Team Pantera-Orange County (TPOC)	**www.ocpanteras.com**	✓
Capitol Panteras of Sacramento	**www.capitolpanteras.org**	✓
Northern California Panteras	**www.panteraclubnorcal.com**	✓
Arizona Pantera Racing	**www.azpoca.com**	
Panteras of North Texas	**www.dfwpanteras.com**	
Space City Panteras (Texas)	**www.spacecitypanteras.com**	
Jersey Panteras	**www.jerseypanteras.com**	
Foothill Panteras	**www.foothillpanteras.com**	
San Diego Panteras	**www.sandiegopanteras.com**	
Southeast Panteras (FL)	**www.sepanteras.com**	✓
Paradise Panteras of Hawaii	**www.paradisepanteras.com**	✓
POCA Parts Interchange List	**www.tmitch.com/parts.htm**	
Panteras Northwest	**www.panterasnorthwest.com**	
Mangusta International	**www.mangustainternational.com**	✓

INDIVIDUAL WEB PAGES & ADDRESSES

Jim Demick, Model Car Ed	**detomasocat@aol.com**
Mike Dailey's Monster Webpage	**www.panteraplace.com**
Fred Terry's webpage	**www.bcpl.net/~gt5s**
Chuck Adkinson's webpage	**www.pantera.ws**
Chuck Melton's webpage	**http://www.provamo.com**
Garth Roderick's webpage	**www.banzairunnerpantera.com**
Jim Schultz' webpage	**http://panterajim.com**
Rob Shewchuck's Web page	**http://www.pantera.go.com**
Pushbutton Pantera webpage	**www.smartstorepos.com/pushbuttons**
Team Pantera Racing	**www.teampanteraracing. com**
Dennis Yogi's Web Page	**http://home. hawaii.rr.com/dyogi**

INTERNATIONAL ADDRESSES & WEB PAGES

British DeTomaso Drivers Club U.K	**www.detomasodc.co.uk**
Roger Brotten, DTDC Editor, U.K	**detomasodriversclubuk@yahoo.co.uk**
Roland Jaeckel, Germany	**detomaso@gmx.com**
Kjetil Finne, Norway	**kfinne@mtkas.no**
Goran Malmberg, Sweden	**http://hem.passagen.se/hemipanter/**
Thomas Moser, Switzerland	**www.pantera.ch (in Swiss)**
Swedish DeTomaso Klubben	**http://detomaso.nu**

ELECTION RESULTS FOR POCA BOARD 2009-2010

As noted in the current POCA Bylaws, seats for the second half of your Board of Directors through 2010 will be as follows:

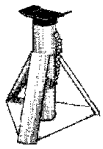
Vice-President- Mike Thomas, Panteras Northwest

Treasurer- Bob Reid, PONE, unopposed

Advertising/Publicity Chair- Lee Farrell- Nor-CAl, unopposed

Quarterly Editor- Mike Drew, Nor-Cal- unopposed

Congratulations to all; your compatriots appreciate your dedication to the Club!



JACK'S STAND

More High-Tech Fasteners For an Old Warrior

As most members know, way back in 1990, I built up a replacement engine for our Pantera. And as part of the build-up, I acquired a pair of SVO A-3 aluminum cylinder heads. I decided to use Milodon studs to hold these heads onto the block. Before I torqued them on, I tried removing a head with the new engine in the car, having heard that it was difficult-to-impossible to pull a Cleveland head from a studded block while it was in position.

It wasn't; the 28-lb alloy heads came up and off the studs easier than the struggle I had in single-handedly pulling a stock 60-lb iron head without studs! Now almost 20 years later, as part of yet another project on that long-suffering engine, I changed the stud-nuts. The 'stock' nuts that came with my studs were black-oxide grade 8, threaded 1/2-20 SAE and were 11/16" across the flats.

I substituted 'jet-nuts' which are also grade-8 and t the same thread, but are two sizes smaller across the flats at 9/16". These reduced-size aircraft nuts are popular for headers when the pipes are over-sized or make a too-close turn from the flange and a standard socket cannot be fitted on. Note that these are *not* hardware store half-height jam-nuts, which are usually gr-5... or gr-zero. Speedway Motors <www.speedwaymotors.com> can supply jet- nuts, titanium fasteners etc, quite reasonably.

With my powertrain shiftings back & down, the rear of the left cylinder head is now very close to the inner fender panel. To make enough clearance to remove standard stud-nuts, I would need to do some sheet-metal massaging if I ever wanted to pull the head while the engine was still in place. So already having a handful of surplus jet-nuts, I removed the old hex-nuts one at a time and re-torqued the jet nuts in their place. Amazingly, the original torque had held all these years!

Now there's plenty of room for a 2-sizes-smaller 9/16 socket to go on, and being gr-8, the little nuts will hold as well as the original full-size nuts. As a secondary benefit, 20 jet-nuts collectively drop 1/4 lb of weight from the engine; agreed, not much but since I needed them primarily for clearance, it would be foolish to ignore that they're half the weight! If you get yourself into a position where you need a non-standard nut for clearance purposes, such as for headers, consider the jet-nut.

They are made in both 6-point hex plus showier 12-point- which are a little heavier. I had enough of the 6-points on hand for both cylinder heads, so that was my choice. Jet-nuts are made in SAE fine-thread sizes from 10-32 to 5/8-18; I didn't immediately find any in metric sizes, though. They're also made as reduced-hex head bolts, too.

J DeRyke

STOCK CALIPER BRAKE REBUILD

by Asa Jay Laughton

The summer of 2008 found me out of school and desperately trying to prepare my 1973 Pantera-L for the Silver State Classic Challenge. One of the stops(!) along that way was a complete rebuild of the stock brake system. Why the stock system? The stock brake system on a Pantera is quite adequate for everyday driving and the occasional spirited romp through the countryside. In addition, the cost of rebuild kits for all four corners was way-less expensive that buying a whole new brake system. Since I wasn't planning on breaking any Team Pantera Racing records, the stock system should do nicely for my first time on track with it.

I began by picking up a full set of rebuild parts from 'Panteras by Wilkinson'. There was a deal running for Fathers Day so I took advantage of it and obtained all necessary parts, which included the piston's square-cut o-ring seals, the piston's boot seals and the necessary spring-rings to hold them in place. While I was at it, I picked up some new braided stainless hoses to replace the 30+ year old stock rubber lines. Once last item I procured was a full set of Speed Bleeders, which my local NAPA store now carries.

Removing the front calipers is relatively simple by disconnecting the brake fluid feed line, the low-pad warning light wire (if so equipped) and loosening two bolts that hold the caliper to the spindle upright. The rear is a bit more complicated as there is additionally the emergency or parking brake mechanism that must be dealt with. Once all four calipers were off the car, I was ready to work on them individually.

For reference, I opened my electronic copy of the Shop Manual and printed the relevant pages for caliper rebuilds. I also asked some pertinent questions on the DeTomaso Email Forum. Based on forum feedback and my inquisitive mind, I decided to start with the rear calipers because of the interesting way in which the rear pistons are collapsed.

In most automotive applications, a disk brake caliper has a piston that floats in a bore and seals the fluid behind the piston by use of a square-cut o-ring. As the brake pad wears, the piston sticks out of the bore more. When new pads are installed, the piston must be collapsed back into the bore of the caliper in order to provide room for the new pads. This is usually done with either a special tool, or by using a c-clamp and an old pad to squeeze the piston back into the caliper. But the rear caliper on a Pantera is quite different and you should NEVER attempt pressing the piston back into the bore without knowing the 'trick' to do so correctly.

The rear brake caliper on a Pantera is fixed to the upright with two bolts. Attached to the caliper is a sliding yoke that presses the outboard pad against the disk. The caliper itself is made with two sliding pistons. One acts directly against the inboard pad (the direct piston), the other against the inboard side of the yoke (the indirect piston), as illustrated in Figure 2, Chapter 12-11-01 of the shop manual.

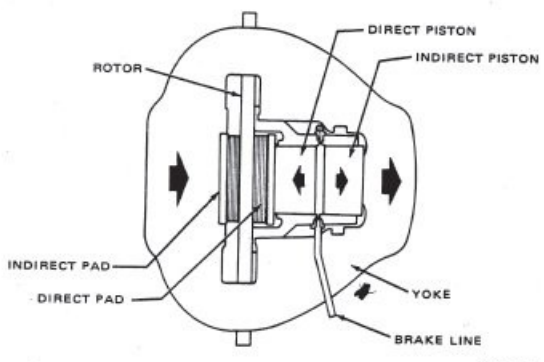


FIG. 2 Rear Brake-Cutaway View

The parking brake is actuated by leveraging the indirect piston against the direct piston. From what we understand of typical calipers and pistons at this point, you would think that means the indirect piston would collapse the area between the two before it would begin pressing on the direct piston. This of course would mean that as your pads wear, there is more slack that has to be taken up in the parking brake cable, and in fact your foot would have to go farther to the floor before getting rear brake action. Well, that's not quite the case here, due to a special mechanical assembly inside the two pistons.

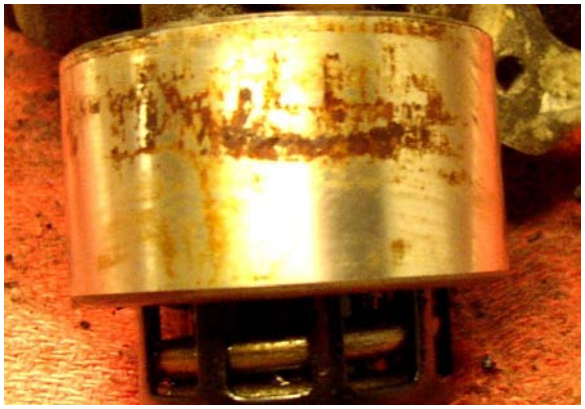
As the rear brake pads wear, the two pistons will be forced away from each other as in the illustration. As they are forced apart, a device inside the piston ratchets in a one-way direction. Much like how a ratcheting wrench works in a one way direction, so does the device inside the rear brake caliper. When pressing the pistons back into the rear caliper on a Pantera, it is necessary to defeat this ratchet mechanism first. Those who are experienced with this procedure know there is a slot in the direct piston face that must be turned 45°, as illustrated in photos 1 and 2 below:

Once unlocked, the pistons may be collapsed towards each other without resistance, then the direct piston must be rotated back to engage the ratcheting mechanism again. Just how this magic worked was the objective of doing the rear caliper first. What I found was an ingenious serrated pin and socket arrangement. The pin side resides in the direct piston. The pin is not round, but more of a plus shape with each of the sides being serrated. So at 0°, 90°, 180°, and 270°, there are serrations that act as one part of the ratchet. See photo 3 (below).

The indirect piston holds the socket arrangement in a similar fashion, along with an assembly that controls the whole thing. It has serrations at similar opposing four points, and empty spaces at 45°. The ratchet part of the assembly partially floats loose and is able to expand slightly as the pistons ratchet away from each other. See photo 4 below.

From these photos it should be easy to see why the piston must be rotated in order to unlock the assembly and press the pistons back together. With that objective out of the way, it was time to move on to the actual rebuild of the calipers. What follows is more a tale of encouragement rather than a step-by-step guide.

After disassembling the rear caliper into it's component pieces, leaving the magic bits inside the indirect piston, I found what appeared to be large amounts of rust and pitting. What I was looking at were years of accumulated glaze built up on the both the piston and the caliper bore, as seen here in photos 5 and 6.



Undeterred, I collected what I believed to be the necessary tools. I started with welder's 80 grit “Sand Screen,” a kind of 1½” wide screen embedded with grit material. I found it at a local farm supplier in their welding section. Next, I was going to use an 80 grit Emery Cloth in a 1” x 25 yard roll obtained from Napa. After that I would finish up with purple “scrubber pad” material also purchased from Napa. I use both the gray (ultra fine) and purple (very fine) for many automotive project. For this one, I used the purple as my last polishing stage.

It only took a few passes with the sand screen by hand on the piston to remove all the glaze that had become stuck and hardened. A quick burnish with the purple pad and the entire piston appeared to be like new, with no pits, no rust, no blemishes. I was very pleased. The piston bore, however was a little harder to do.

Starting with the sand screen, I removed all major blemishes in the bore of the caliper. Then I moved on to using the emery cloth as it was more flexible and I could get it into the seal groove easier. Once that was accomplished, I worked on a nice all-silver finish using the purple pad. Although it took a bit more work, the results were well worth it. Again I found no pits or rust that would deter me from using the caliper again. I seem to have missed taking a photo of the caliper after cleaning, but here is a shot of the piston, photo 7.

Lastly, I removed the bleeder and found the bore the bleeder screwed into was just as ugly. It's hard to get something in that small a hole to clean out gunk and rust, but I did find a solution. A Dremel tool given to me for Christmas one year was now coming in very handy.

In the kit was a small screw-like attachment. I took a small piece of my purple pad, screwed it on and chucked up the pit. At a medium speed I was able to slowly insert the pad and clean the bore. Again it came out nice and shiny. This step would be repeated on the other rear caliper and twice on each front caliper.

Now the rear caliper was ready for assembly. At this point I had obtained ATE Type 210 (Amber) and Super Blue brake fluids. Using the 210, I began reassembling the parts. I coated all the parts in brake fluid first, then inserted the o-rings, the pistons, the rubber boots and the clips to hold the boots on. A note about installing the pistons: you must be very careful not to damage the o-ring by twisting or tearing. Careful while turning the piston; if it starts to bind, back it out, reset the o-ring and try again.

The front calipers are a similar affair except they are much more difficult to disassemble after what may be nearly 30+ years. In my case, I was facing a few stuck pistons that wouldn't budge by hand at all. So how does one extract pistons stuck by years of glaze build-up?

The front caliper assembly is made of two halves. If one were to separate the halves you could access the pistons easier, but I was advised not to do that as nobody had the o-rings necessary to re-mate them. So I was left with air-pressure, generously applied to the fluid inlet. Before applying such measures however, I found a suitable piece of soft wood to place between the opposing pistons. This was so that a piston coming out under the force of air pressure would not damage it's mate on the opposite side of the caliper.

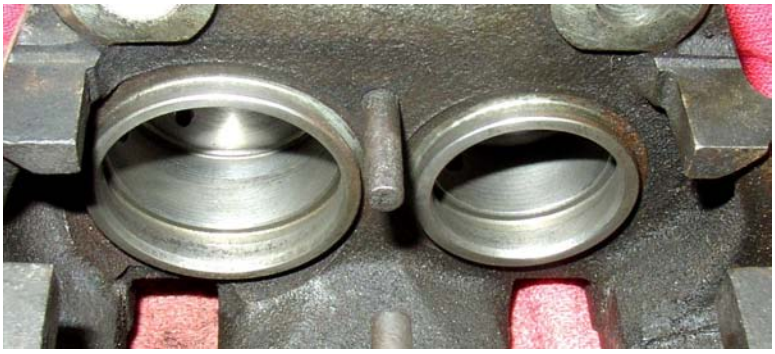
This worked exceptionally well for one set of pistons, but required additional ingenuity to get the others out. Once I had one set loose, I would re-insert them, and using a clamp affair, hold them in place using the wood. This would force the air to work against the other pistons, eventually forcing them from their bores as well. This by far was the second most time-consuming, and messy, part of the entire job.

Once all parts were out in the open, cleaning the pistons was no problem, but the bores were another story, having virtually no access to them. Again my Dremel came in handy, this time because it had come with a 90° attachment. Instead of the bare screw-ended thingy, I used the anvil normally used to attach sanding or grinding disks to the chuck. This allowed me to insert the spinning part of the tool into each bore.

Starting with the sand screen, I would work as much of the roughness by hand out of each bore as I could. I would then chuck up some Emery cloth and use the Dremel on each bore in turn until I got all the colorful bits off the bore. This was the most time- consuming part of the entire job as I had to be careful not to nick the bore with the tool, while at the same time apply enough pressure against the cloth to do it's job.

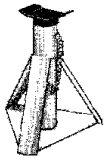
I would typically start with a 1 inch square piece attached to the Dremel, and ended up using one piece for every two bores. After this, I would chuck a piece of purple pad and repeat the process. Eventually, I ended up with very clean, very new looking bores. See Photo 8 next page.

Using air pressure, I would make sure all the passages were clear, clean and working. After cleaning the bleeder ports, it was time to reassemble using the new rubber parts and brake fluid as before. Again be careful when inserting the pistons not to tear or twist the o-rings.



Overall, the job was messy but well worth it. Years of neglect had caused the brake system to become marginal, though it still stopped the car. So much glaze build up simply prevented some pistons from moving and certainly had to contribute to poor braking. As part of the job, the master cylinder was refreshed, all lines cleared, blown out and new stainless braided hoses installed.

Unfortunately, I didn't get all the other things done on the Pantera necessary to get it to the Silver State event in September of 2008. However, the brakes are definitely ready and I can't wait to open-track the car this coming summer. For more photos on the task, see: http://www.teampanteraracing.com/gallery2/v/asajay/pantera/brakes/



JACK'S STAND

WEIGHTS OF ANCIENT PERFORMANCE CARS

A while back, I wrote an Andy-Rooney-style article complaining about the recent crop of performance cars and their porky weights. It seemed like 3100 lbs was as light as one could be constructed ready to drive, given my personal needs of a torquey V-8 engine, manual tranny and decent handling. I've since found that 1-1/2 tons of curb weight seems to be a manufacturer's tradition going *way* back.

Following are some 'older' 2-seat machines and their weights with a modern V-8 swapped in, along with a 4 or 5-speed tranny to hold the power. I suspect their poundage will surprise many of you:

From the Speedway Motors catalogue, with a swapped-in Chev smallblock V8:

1940 Ford coupe-	3400 lbs
1940 Chevy 5-window coupe-	3200 lbs
1928-'31 Ford 'A' 3-window coupe-	2700 lbs
1949-50 Plymouth 3-window coupe-	2950 lbs

(Add 125 lbs to each for A/C; add 100lbs for a big-block V-8 from any mfgr. Add 100lbs for auto trans. Reduce wt by 50lbs for a Ford 289/302 smallblock.)

So it seems as if it's more of a challenge than I'd thought for OEMs to build a stylish steel top 2-seater with decent torque, weighing 2700 lbs while still making a buck off the results. In my original article, I discarded the McLaren F-1 sportscar at $1 million and the Ferrari F-50 at $650,000+ as being ridiculously overpriced, but otherwise meeting my criteria. Nothing I've read since then has changed my mind as far as the overpriced bit.

Jay Leno mentioned that his McLaren F-1 (bought *used at $850,000*) needs its fuel-cell foam changed yearly and the cell itself changed at 2-year intervals, as gasoline additives attack both the foam & the cell's ballistic fabric seams. The bill for this is around $5000. The single wiper blade, good for a clear windscreen at 180 mph, lasts one year and costs $1500.

And seeing photos of two different F-50 Ferraris broken in half during road accidents has not increased their value at all in my mind. True, it's really easy to get out of the remains afterwards, as is true with plastic Corvettes, but....

J DeRyke

THE SHADE-TREE MECHANIC

POSSIBLE NEW PRODUCTS FOR PANTERAS

* I noticed recently that Howe Racing now advertises a lightweight version of Chrysler-type threaded balljoints that I'd used in our Pantera conversion (POCA News April '08). The Howe units, intended for pro dirt-track sprint car racing, advertises 2 lbs lighter per side (upper & lower assemblies, in front only), and I wondered where the weight savings came from, as I'd managed only 1 lb per side, from shortening the Chrysler-length studs & turning off the steel case threads for Pantera use.

Howe's units have a heat-treated 6061-aluminum case in place of the stock mild-steel case, with a counterbored ball stud in their rebuildable assemblies. Since the Howe's are 4X as expensive as the Speedway units that I'd modified, instead of buying one to check it out, I took a standard Pantera ball stud from a junked upper assembly and bored an 'suitable' hole in the forged-steel stud, to see what a reasonable amount of weight loss might be.

Boring a 5/8" hole 5/8" deep in the 1.25"-dia ball (about halfway- the maximum I was comfortable with, not having done a stress analysis), I achieved only a 30-gm weight loss. Howe must have a larger, deeper bore, or a sculptured hole in a stronger heat-treated stud, with a lot of the weight loss coming from their aluminum case, to get their advertised weight loss per assembly.

Since their aluminum lightweights are internally threaded for disassembly, they maight be heavier than my modified steel units anyway. I may yet have to buy one for examination, just from curiosity.

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* In one of my recent trips to Pick 'n Pull's local junk yard, I found a rubber rain-boot on a Ford V-8 distributor that covers the entire top, reminiscent of those used in ski-boats. It wraps completely around a big (or small) cap distributor with integral fasteners so the boot removes in seconds with no tools. The plug wires come out the sides in two bundles.

If you've ever been stuck in a car wash or a flash rainstorm 'cause water got into the Pantera's semi-exposed distributor, this stock part is made just for you! But now the bad part: the local Ford dealer says these distributor boots were discontinued in the late '80s, so the only source is junkyards or E-Bay. My boot is marked 'E5TE-12252-AA', denoting a 1985 Ford part.

Note how entire cap & conical adapter are tightly enveloped by the boot.

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* Did you ever have one sparkplug wire move sideways, touch a header, and melt? This of course leaves you with 7 perfectly good wires and one bad one, causing you to spend another $60-$100 for a second set, right? Well, maybe not; NAPA now sells single wires of their NAPA/Belden 8mm sparkplug sets, with Ford 45^0 plug insulators, for only $8. And Jegs sells single wires from Accel 8mm sets for $14.99 with only 90^0 plug insulators, and you must cut the too-long wire to length & crimp both ends with supplied anvils.

Jegs and Summit also sell a single wire's worth of plug and distributor boots and terminals, straight or angled, for $2.95, in case only a boot is shot but the plug wire is still good. A 2-pak of boots 'n terminals is $4.95. Gotta save where you can.....

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* Did you know that when attaching a coil, either a cannister type or an e-coil, with the wrong polarity to your ignition, it can act as a rev-limiter? The wire from the distributor should always attach to the NEGATIVE terminal, and the hot wire should always attach to the POSITIVE terminal. Most e-coilshave marked terminals, but some don't so it can be a problem to tell which is which.

It's taken care by OEMs with their use of molded terminal connector plugs, but if a coil is being adapted- as we do to older engines such as the 351-C, you won't have the molded plug to guide you, and often the polarity marks are tiny and indistinct. But it's worth the trouble to do it right.

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* You redrilled the long central motormount bolt holes so the powertrain could be slid back a bit, or were lucky enough that your Pantera was originally built so there's enough room for a big-cap distributor. But due to misinformation, you bought a small-cap billet MSD distributor for an outrageous price and can't afford to buy a big-cap model, too. MSD sells a 'cap-adapt' that resembles a stock Ford big-cap adapter. For $19.95, the 'cap-adapt' fastens to small cap distributor bodies with GM style twist-fasteners, then a standard or MSD big distributor cap clips on with stock Ford spring-clips. Note that all big caps must use a taller rotor as well as different plug wire boots on the cap end.

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* For recovering ex-Corvette owners that want a new ignition for their Pantera 351-Cs and are comfortable with GM HEIs (high energy ignition), several makers now sell adapted HEI ignitions for Fords. But in spite of the advantages (millions sold, parts available anywhere, just like Ford TFEs but with no brain-box necessary), there are a few unique problems with backyard-adaptions of these early electronic ignitions. First, the in-distributor HEI control modules seem to have a hard-wired automatic advance value built into them.

In the '80s when I adapted one to my Corvair flat- 6 and set it up on a distributor machine for auto-cross, I found that around 2200 rpms, the advance unaccountably jumped about 10 degrees in only a few rpms. Entirely removing the advance weights didn't change this. I also found that different GM modules had different amounts of built-in advance, but all interchanged easily. I used a Buick module in my Corvair 6 adaption. So if you try adapting your own wrecking-yard-special to a Ford, watch for this.

Second, stock HEIs are designed for no more than about 5000 rpms of use; the amperage to the coil drops off drastically in stock units after about 4500 rpms. So buying a professionally-converted assembly is worthwhile if you're planning on using an HEI in the upper rpm ranges.
Finally, some HEIs do not use the familiar e-coil-in-the-cap but are configured to use a more convenient and replaceable remote-mounted coil.

The remote coil HEI that I adapted came from a GMC straight-6 pickup. Finally, the die-cast zinc HEI bodies come in different heights; some are noticeable shorter and may not physically fit in front of some Ford intakes. Being zinc castings, they cannot be easily modified or rewelded.

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* Not all 'modern' ideas are fodder for us hot-rodders, like the 'clean, continuous' hose clamps that Gates Mfg came up with in the '90s, called "Power-Grip" clamps. These are a continuous strip of thick black plastic that completely encircle a hose, leaving no gaps to leak and no tightening screw to loosen. The drawback? They are a *one-time-use* piece of very thick shrink-tubing.

When installed properly with a big heat gun, they don't leak, but if *not* done right the first time, you throw the thing in the trash and start over with a new one. To remove, you carefully use a hack-saw. They sell for $2.75 to $5 each depending on size. Obviously, volume manufacturer love them and I found them on stock '90s Fords in the wrecking yards, along with unuseable plastic hose adapters that replace those expensive metal fittings of yesterday.

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* So you're a go-faster and have had polyurethane bushings in your Pantera's a-arms and anti-swaybar mounts for decades. But lately, the handling doesn't seem as precise as it used to..... One thing to check is the bushings: polyurethane comes in a whole variety of compounds, and some are as soft as the hardest of rubber bushings. Soft = ride comfort while harder= better handling but a harsher ride.

The Pantera (and for that matter, a Corvette or a Ferrari) is considered a 'heavy sports car' at 3200+lbs without a driver. In such cars, many

poly-bushings will, over time, develop elongated holes where the pivot bolt goes through the plastic, resulting in a gradual deterioration of its formerly 'sparkling' handling.

The fix? Due to the variables involved in car weights, suspension mods, tires and a host of other things, I can't tell you exactly what hardness or durometer of bushing to use in your machine, but different *brands* of poly-bushings will likely have different hardnesses. Or you could buy a few types of poly barstock with known durometers and make sets of each on a small lathe. This will allow you to 'calibrate' the bushings to your car & driving style. Polyurethane machines very easily.

CHAPTER NEWS JAN

The Nov. Willow Springs event was marred by rain showers that called several red flag sessions. It also offered an opportunity to learn exactly how our Panteras handled at the extreme without the speed normally demanded. Instead, the reactions to input at 45 mph are those used at twice the speed, thus reducing the risk of crashe$. Dallas Raines called a radio station and found a prediction for clearing skies, but, alas, it was not to be.

The track's safety truck led many a session for a more controlled event and to check the seriousness of hydroplaning. The strangest sight was that of two SUVs on track, chasing each other at very fast paces, signaling the advantage of 4- 5,000 pounds on a wet day.

My only tour of the track was with Jeff & Dallas in his Porsche Cayenne going over a 100mph into turn 9 leading to the front straight. Dan Courtney exercised a new Z-06 since both his Panteras are down. Ask him about Chevy designs (Dan's SBC-powered Pantera racer ate its new motor at the last ORR event).

R Kunishige

OPINION PIECE

HOT-RODDERS?

I just read a magazine editorial where one man seemed to think that buying a crate engine and paying someone to assemble it along with a box of parts into a functioning car somehow disqualified that person from 'hot-rod' status. Said another way, if you don't cheapskate your ride, haunt E-Bay or the swap-meets and beg, borrow or steal (OK, maybe not that last....) parts, you're only an enthusiast.

I have a problem with this, just as I have a similar problem with those 'experts' that presume to define a sportscar. Hot-rodder in the beginning was not a laudatory term. The 'hot rod' was a connecting rod that had been thrown out of its poorly maintained block.... It was also a derogatory description for poor-boys whom you saw at the side of the road, hood up and only a pair of legs showing, trying to tease more speed (or power, or maybe mileage) out of their uncompleted, hand-me-down machines.

Now, 60+ years later, it's become a compliment reserved for those same greasy-handed 'amateur engineers' who did it the hard, uncomfortable way- or occasionally, *their* way even if they could afford to have something built by professionals. I suggest that there is not a single category of hot-rodder, just as there's no single category of sportscar. Instead, there are *multiple grades* of both.

I co-own a DeTomaso Pantera because it was the prettiest, fastest, most powerful car I could (barely) afford, that could be fixed easily and went around corners smartly. Years before, I'd been associated with a semi-pro drag team, and I gradually became aware of the simple fact that, if a car is built for a single purpose, it's really only a full-sized toy or model.

I not only wanted to go fast, I wanted to share with a passenger and have the experience continue past the turn at the end of the straight... so, the first entry-level supercar, the DeTomaso Pantera. A hot-rod? Sure is.... and a muscle-car plus sportscar, too. We all 'work' on our rides in our own ways, and ***that*** is the essence of hot-rodding.

J DeRyke

Pantera Club of Northern California presents

The RENO Speed Trials

Thursday and Friday, June 11–12, 2009

NEW MONTH, NEW TRACK, NEW EXCITEMENT!

RENO-FERNLEY RACEWAY –

Located about 30 miles East of Reno, Reno-Fernley Raceway opened in 1998 as a motor cross track that has now evolved into a 3/8 mile dirt oval. A 1.2 mile paved road course opened in 2003, expanding to 2.3 miles the following year. By mid 2005, another 2 miles was added, making it one of the longest road courses in the United States.

At this time, the final course selection has not been finalized. The full course, with dotted lines showing some common options, runs counter-clockwise. The upper multi curve portion, due to hills and elevation changes, is not visible from the paddock, which is at the bottom of the map.

RENO PRICING –

A longer course, and a HUGE increase in EMT/ambulance pricing forces PCNC to increase registration fees for the first time in recent memory, but we are holding it to just a $50 per day increase. And we will continue to have our budget-priced Newbie pricing.

EVENT DETAILS –

While location and pricing will change, the Speed Trials will continue to offer the same De Tomaso Family-friendly event everyone has come to expect. Race classes, technical inspection, Friday's exhibition race, open paddock, newbie instruction, track-side food, safety requirements and $20 noon-time tours remain just as you remember from Las Vegas.

COURSE & REGISTRATION INFORMATION COMING SOON!!

THE SHADE-TREE MECHANIC

THE FACTORY MAINTENENCE SCHEDULE(S)

When's the last time you looked in your Factory Owners Manual? If the answer is never except to adjust the shifter, then you undoubtably have either been winging-it as far as preventive maintenence, of the sort carefully spelled out in the Manual, or else your Pantera has been woefully neglected in its real needs. Random maintenence is fine as long as you really know what your car needs, but most owners just don't.

So for those ready to repent the error of their ways and actually do the maintenence that Fordthought was important, together with a few of the omissions the factory should have included but didn't, here's the schedule. To list these points, I referenced the Red Owners Manual printed in 6/'73 which appears to have been edited by Ford. The much briefer Blue Manual of 5/'71 from DeTomaso lists basic stuff like oil changes and ZF lube checking. Service intervals are given in thousands of miles in both, not just in months, so a low-mileage Pantera still has time to get onboard, preventive-maintenence-wise.

Starting from a reasonable 16,000 miles on-the-clock with seldom-driven cars, scheduled operations were as follows:

* Check alternator & waterpump belt tension. If any cracks are visible, now's the time to go get a replacement, before it snaps and leaves you with no lights after dark or no cooling with a smoking-hot motor. The A/C belt also needs checking; it's right in the same area but the tension adjusts by means of the idler pulley sliding up and down.

A/C belt adjustment can be made immeasurably easier by removing the difficult-to-access locknut hidden on the backside of the mounting bracket, replacing the nut with a rectangular piece of drilled and tapped steel that fits in the same area but won't rotate when the bolt is turned. Thereafter the adjustment can be done by sitting comfortably in the passenger seat instead of laying under the engine with two box-end wrenches and a diminishing supply of curses at Italian engineers.

* Check electrolyte levels in the battery *every* 4000 miles. 'Nahhh', you say- 'No need, I got me a maintenence-free battery'. Au contraire, Bunky. Unless you truely have a *sealed* battery- which are expensive and uncommon, your 'maintenence-free' battery cell covers still lift off so distilled water can be added when needed. Which it does from time to time.

Such batteries need water added less often than in Grandpa's day, but it does still happen. 'Maintenence-free' is simply advertising hype. Also note- *any* lead/acid battery has an operating life of around 7 years, more-or-less. Be prepared to replace it on a realistic schedule or risk finding out exactly what the life-span really is.... 50 miles out in the boonies after dark.

* Check brake and clutch hydraulic fluids (and replace it all yearly- my add). The covers of your master cylinders are vented, and every single time you step on the pedals, fluid moves into the system and air is drawn in thru the caps. Brake fluid will suck moisture out of the air drawn in and accumulate it. This causes rust in the system- including on the plated steel pistons which tears the seals, as well as causing a drastic lowering of braking efficiency.

* Check for clutch free-play and adjust as required to maintain at least 0.020" as measured through the opening at the top of the bell housing with a flat feeler gauge. As your clutch disc wears, the free play changes, and loss of free play bottoms the slave cylinder piston. This in turn lessems the holding power of the clutch, which may start to slip. But the biggest problem is often a leak in the clutch master or slave cylinder.

If you see fluid stains below the clutch master- either in the front trunk or under the dash, or on the right side of the bellhousing below the slave cylinder, be prepared to replace BOTH the clutch master and slave cylinders.

Why both? ‘Cause they wear out as a set, so replacing only one often quickly fails the other from the sudden change back to ‘normal’ travel & line pressures. Both are cast iron as-stock but replacements are available in non-corrosive stainless or hard-anodized aluminum, and this not only allows a little sloppiness in your fluid changes, but can also be had in a ’long-throw’ slave.

The long-throw slave is important to compensate for wear in your entire clutch linkage system, since it increases the disengagement distance available to your clutch, which in turn lengthens the lifespan of those very expensive ZF shift-synchronizers. It will also smooth out your shifts if some synchro wear has already occurred.

* Check the cooling system for leaks. Those rusty OEM radiator hose clamps are inferior to good U.S-made stainless steel worm-clamps, but even good aircraft-grade clamps tend to loosen up as the hoses shrink and expand with temperature changes. Look for liquid under the car while its idling in your driveway; its far easier to address a problem therev than in the middle of a 6-lane freeway...

Also check the fuel system for leaks. A water leak is inconvenient and annoying; a fuel leak is life-threatening! For originalty-aficianados’ cars, be aware that OEM hoses made before about 1990 were formulated differently than those sold now. Old fuel hoses are not proof against modern fuel additives and will rapidly dry out and crack (if they already haven’t!), which has caused major fires!

This includes those OEM ‘braided steel’ hoses on ‘72-up cars which have plain old rubber inside, not the high-tech fuel-proof liners used in aftermarket aircraft-type braided stainless hoses. Scrap all such hoses and purchase new- OEM if you must, or aftermarket.

One final fuel hose often overlooked in such replacement sweeps is that large, short hose used to couple the outside fuel-spigot to the fuel tank adapter on ‘73-up Panteras. Misguided maintenence sometimes substitutes radiator hose for real fuel-proof hose, and rad-hose used here will crack in a year, so you’ll begin to smell gas fumes in the cockpit. Fuel-proof hose is readily available and cheap; do the job once and be confident it will last.

* Check electrical system: fuses and especially the radiator fans for proper rotation. On cars with working fan thermostats, this may require idling the car until you see that both fans turn on. A single working fan will not prevent overheating in traffic! Note that the single most effective cooling-system modification one can do to a Pantera is to change the stock radiator to a larger aftermarket assembly, and change the stock pusher-fans to fully shrouded sucker-fans. Be aware that it’s quite possible to use all-high-quality aftermarket components to ‘up-grade’ a cooling system, and have worse heating problems than before!

One common way to screw up here is to install big fans on the motor shafts with blades canted the wrong way. In this case, reversing the motor’s direction by swapping wires does nothing to improve air flow. The time-honored and simple way to check air flow from Pantera fans is to take a piece of newspaper and hold it up to the grille outside the car, while at least one fan is running. If the blades are installed correctly ***and*** the motors are running in the right directions, the paper will be instantly sucked against the grill and held there.

* Check for tire wear- ordinarily self-explanatory. If the remaining tread is less than 1/32” (0.016”), the wear bars joining sections of the tread will touch the pavement and a Highway Patrolmen will soon write you a fix-it ticket while throwing you off the ‘high-speed’ road-ways for ‘unsafe’ rubber. He will not care if you tell him the tires were purposely shaved for competition, either; worn is worn.

Asymmetric wear- one side of the tire tread is visually more worn than the other- is due to misalignment of the wheels. In the front, it can come from the upper ball-joint retaining bolts having slipped in the a-arm, thus increasing camber. This is fixed by installing a camber lock device- and not hitting potholes or curbs!

In the rear, camber wear patterns are usually from a slowly collapsing rear suspension. Replacing the largly useless stock rear camber bar for a better-designed adjustable one that jams into the inner fender pockets will cure this, once the suspension is slowly 'persuaded' back to its OEM position. Trying to correct this sag all-ast-once often cracks paint or fender panels. Do it a little at a time!

Under-inflation of tires can wear the centers of the tread more than the edges. For high performance driving, up to 45 psi in the rear on radial tires is about right, with around 40 psi in the fronts. But I admit this will give a jarring ride; around town, one can drop the pressures by 5-7 psi since the distance travelled is normally much less, wear on properly aligned tires should not be a factor.

Cupping of tires- small scoops of rubber missing- often results from tire imbalence, sometimes from thrown balancing weights which make the wheel & tire bounce up & down. Balence weights on magnesium wheels should always be of the glue-on type, never the clamp-on style. These last will chip the protective paint on the wheels while holding water against the now-unprotected alloy. The result will be corrosion damage under the weights.

If it's allowed to persist, the wheel rim will be weakened as metal dissolves, and a weight will go flying off. Weight-slinging of glue-on balancing weights also happens now and then, but can be prevented. Since for proper balance, the weights are normally added to the center of the rim on the back, simply cover the glued-on weights with a layer or two of duct-tape, just like real-racers do.

* Inspect the steering for holes in the steering rod boots that will allow lube to leak out. Perforated steering boots results in loss of rack lubricant and resulting wear of the bushing and gears and higher-than-normal steering effort. Seeping- leaks at the point where the steering rods emerge from the boots can be cured by adding a piece of shim-stock around the small end of the boots, under the small clamps which are slightly too large to clamp tightly. A workable shim can be trimmed from an aluminum beverage can with regular scissors, and will not rust.

* Inspect distributor cap, wires and points. Since I'm likely the last owner to change over to a Ford (or aftermarket) electronic distributor, so this may no longer be pertinate. But checking plug wires for problems- done at night with the engine running and the lights off- is. During dyno day checks, a bad plug wire is the most common defect a Pantera has, and it always amazes owners who had no idea they were running on seven, or sometimes, six- cylinders, the 351-C having so much power. Revving the engine with bad plug wires in the dark normally looks like a Christmas display from the shorts and fireworks that appear with the extra load!

* Wheel alignment should be at least checked. I mentioned camber changes from impacts to the front tires, but toe-in and caster changes can be made to improve the driving experience of your Pantera. Generally, the wider the tire and the lower it's aspect ratio, the less toe-in is needed on either end. With 50 or 45-profile tires, 1/16" toe-in will work fine, will wear tires less and will improve the handling response.

Doubling stock caster (tilt-back towards the cockpit) improves high speed stability on street cars, and is cheaply and easily done with offset a-arm bushings. Adding a GTS (7/8" diameter) rear swaybar removes some of the excess under-steer Ford added to your finely tuned Dallars suspension geometry for warranty purposes, plus you can remove the spacers installed above the four suspension springs to return the car to its original design height.

Ok, now we get into the maintenence thats only listed in the early Owners manual and was the Factory's first recommendation. Apparently when Ford took over, r*egular* maintenence was to be done only by your friendly dealer....

* Greasing the stock Pantera is easy since on most cars, there's only zerk-fittings for grease at the u-joints and the half-shaft sliding splines. The factory recommended moly-grease in both. I recommend adding extra grease fillings to all the ball joints, the two steering rod joints and the lower rear suspension cross-shaft.

For economic reasons, none of these places were fitted with zerks, but if not greased now'n then, expensive damage will result. Oddly enough, DeTomaso scheduled 'lubing the front steering knuckles once a year' even though no grease fittings were included....

* Repack the front wheel bearings with grease every 24,000 miles; I recommend at least taking them out of the hubs and checking them yearly. The car is capable of rather high speeds and under those conditions the bearings will sieze if lube is skimpy, dried up or filthy with trapped dirt.

* Lube distributor cam with a few drops of light oil. Only applicable if you still have contact points ignition. There is (or was) a felt wick touching the distributor cam that received the oil. Most replacement points in recent decades got a piece of foam instead, and foam disintegrates over time.

*Chech transaxle oil every 6,000 miles, and change the lube every 12,000 miles. Use 80W90 gear lube, *with* limited-slip additive (normally included in most high-quality diff-lubes nowadays). There are thinner lubes for those that live in Siberia, and thicker ones for places like Saudi Arabia, but in the U.S, 80W90 works best.

Thick lube makes shifting difficult, and thin lube may not adequately protect the gears from shock-loads. Finally, full-synthetic gear lube msy leak rapidly; the ZF was designed and built before full-synthetic was available. Given the cost of rebuilding a ZF (around $6000), experimentation is risky for little payoff.

3-1/2 pints fills a bone-dry ZF, but due to the baffles inside, you won't be able to drain that much out. The fill and drain plugs are 17mm allen so you will need a VW drain-plug wrench to remove these. The fill port is under the rectangular shift shaft assembly on the left rear of the trans, and a funnel with a flexible spout is needed.

Set the funnel up with a drip pan below, and fill until lube drools back out of the fill port. Then go have a cup of coffee or an 'adult beverage'. In ten minutes, the thick, slow-flowing lube will have spread throughout the several joined cases and the level will be low again. Again add more lube, wait ten minutes as before. Eventually, the level will stay at the bottom of the fill port so no more can be added, but it won't happen on the first fill. Be patient- it will accept about 3 pints of lube. More is better than less, for those worried about the 'correct' amount inside.

* Lube the clutch withdrawl shaft. This is the long cross-shaft that goes through the upper bell-housing. On both ends of this shaft, there are needle bearings that, on most Panteras, have *never* seen oil since leaving the Factory. While this is not the easiest place to get to, and normally one spills more oil than gets into the bearings, its still worth doing.

* Put a few drops of engine oil on the door hinges, the decklid and the hood hinges. Add a few drops to the accelerator cable where it enters its sheath near the console and where the ca]ble exits the sheath near the carburetor, and add a few drops to each of the e-brake cable jackets. These hard-working parts experience all the weather , water, dust and road-mung, and a little lube now 'n then will prevent siezures.

* Finally, change the engine oil and it's filter every 6000 miles. Even if you use synthetic oil. As most know, not only does oil break down through repeated heat and wear-cycles through the engine, it collects impurities. While full synthetics resist breakdown better than conventional oil, they still collects junk that not good for the bearings, so it needs changing.

Nowadays, servicing a car is not done much, since the factories now build 'industrial appliances' rather than the 'sportscars' of the past. Modern cars will run for much longer times than the old ones, while needing alnmost nothing but fuel and maybe a quart of oil. But when they go bad, they are virtually unrepairable. Your DeTomaso Pantera is an old-school machine built by Italian craftsmen, and requires regular care 'n feeding. Nerglect it at your peril; maintain it and you'll enjoy it for the rest of your life.

J DeRyke

PANTERA MAGAZINE COLLECTION FOR SALE

Once again, I've received a donated Pantera magazine collection to be raffled off, with *all the proceeds* going to POCA, since there was no beneficiary Chapter listed by the donor. The issus span 1990 to 2007, with a few newsletters and/or Quarterlies missing. There are also some Pantera International magazines, as follows:

POCA publications

2007- complete
2006- complete
2005- complete
2004- complete
2003- missing August newsletter
2002- complete
2001- complete
2000- missing July newsletter
1999- missing Sept & Dec newsletters
1998- missing #3 Profiles
1997- complete
1996- complete
1995- missing May, June & Sept newsletter, Spring & Winter Profiles
1994- complete
1993- complete
1992- missing Spring & Summer Profiles
1991- complete
1990- missing Jan newsletter & Spring Quarterly

Sell these as a group of 200 issues, 50 lbs, about $50 shipping Fed-Ex.

Pantera International magazines

Fall 2006	#128
Winter 2002	# 113
Spring 2002	# 110
Winter 2001	# 109
Spring 2001	# 106
Fall 1998	# 96
Winter 97	# 93 (2 copies)
Summer 96	# 87
Spring 95	# 82
Winter 94	# 81
Fall 94	# 80
Summer 94	# 79
Winter 93	# 77
Fall 93	# 76
Summer 95	# 75
Spring 93	# 74
Fall 92	# 72
Winter 91	# 69
Fall 91	# 68
1991	Vol 16 #3 (transition to new numbering system in late '91)

Others

1998 P.I Motorsport Catalogue
1998 Ford/SVO Catalogue

Sell individually or as a group of 22 issue. Mailing about $1 per issue (as a guess)

Send your best offer to *J DeRyke 1520 Brandi Rose Way, Minden NV 89423*, or e-mail **<jderyke@aol.com>** Highest bid gets the group. I will take offers on the P.Is individually since there aren't very many, or they can go as a group, too. All profits go to POCA's general fund. Thanks!

MEMBERSHIP MEMO

Lots of DeTomaso friends old and new, have applied for and/or renewed their memberships within the last month. For that, we the Pantera Owners Club of America thank the following individuals:

January 2009 NEW MEMBERS

DOUGLAS EHMANN, PHOENIX, AZ
JON HAAS, HARLEYSVILLE, PA
JOSEPH RUKAVINA, WILLOWBROOK, IL
MICHAEL SIMON, CARSON CITY, NV

BOB WELTER, PALM HARBOR, FL

Past Members Renewing

NONE THIS MONTH

And just a quick noteto those who will be receiving a renewal notice in the future, please take the time to sign up for a CHAPTER if there is one in your area. (Chapters will be listed on your Renewal Notice). Most Chapters have monthly meetings, many social affairs, Technical information etc. So, please take the time to select a Chapter with which you would like to be affiliated.

However, those friends we haven't heard from and whose memberships have now lapsed; we will miss them. Circumstances arise that prevent some renewals, and others are lost due to misplacing the renewal forms. As we get older, this may happen with greater frequency.

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ADDRESS CHANGES:

If you have recently changed your mailing address, please cut out & send in the form below ONLY to the Membership Chair, Judith McCartney. Do not send it to other Board Members, as that will only delay your receiving your publications. Remember, BULK MAIL (i.e- your publications) WILL NOT BE FORWARDED BY THE U.S. MAIL!

CUT OUT THE FOLLOWING FORM, FILL IT OUT WITH CURRENT INFORMATION & SEND IT TO:

POCA Membership Chair
Judith McCartney
6092 Trinette Ave
Garden Grove, CA 92845

To the Membership Chair: Please change my mailing address to the following:
Name_____
Date:_____
POCA MEMBERSHIP NUMBER_____
Old address_____
New address_____
City, State & Zip Code_____

POCAMART CARS for SALE

Sell- Vince Monteleone's award winning 1972 Pantera L. 54,168 miles. Red w/black interior; driven only 50 mi. since winning 'Best of Show for DeTomaso' & 'Best Pre-'74 Pantera of Show' at Le Belle Macchine d'Italia '05; new Wilwood brakes, A/C upgrade, new Coddington 'Campagnola' wheels, new Dunlop SP Sport 8000 tires, many spare parts, excellent detailed condition—the best, asking $66,000. 412-731-2878. (08/08-PA)

Sell- 2000 Qvale Mangusta ll. Yellow, 18,000 miles, 320 hp 4.6-L Ford Cobra DOHC, was factory demo; many extras. Asking $32k OBO. Questions or offers- (410) 977-1575 or <powerbtr@aol.com> (09/08 NJ)

Sell-'72 Pre L Panteras- TWO to choose from, either $52,500, both have gorgeous paint & near- new mechanicals. Both have leather interiors & 17" wheels w/excel. tires. **#1**: Burgundy paint w/cream leather interior & white-faced gauges, recent performance-stock engine rebuild.

-OR-

#2 - Red w/bl. leather interior, stock gauges. Features big low-end-torque Aussie heads, solid lifter engine w/ polished ZF. Full Sierra brake system; stops on a dime. Updated street-stock handling pkg. Well known histories in Nor-Cal Chapter on both cars. Call Larry@ 775-8560-7011, <larrys@panteraparts.com> (09/08-NV)

Sell-'74 Pantera GTS, red/black paint, full resto only 57,180 orig. miles. Rare bone-stock car except for coated suspension, Jet-hot GTS headers, Hi-Flow water pump. A/C works, all new brakes, rebuilt calipers. Show condition- many awards. Asking $68,950 OBO. Was CA car, owned 14 yrs. Don, (610)731-4343 (10/08-PA)

Sell- 1972 model, two pod dash, 393 cu in 351W stroker alum heads, roller cam, Demon carb, overhauled ZF, tapered axle bearings, complete re-wiring, Hall brakes, air condensor in front- very cold air, $4000 Wilkinson 18" wheels. Original Ariz car- no rust. Call 505-259-1011 or <frb3@comcast.net> (10/08-NM)

Sell- Parts: Carbon fiber overlay hood (See Team Pantera Website photos)$450/like new. Fluidyne Alum. Radiator w/cooling fans $750/like new. Holly 830cfm blueprinted & flowed- $500/like new. Roush Hi-rise intake for 302B heads, port matched & polished- $550. MSD Pro Billet distributor w/blaster coil $400/like new. MSD 6AL w/rev limiter- $200/like new. NEW Perma-Cool Hi-Flow SINGLE Fan- 2,950 CFM!! Have used this same model SINGLE fan on my Ron Davis cup radiator for 2 yrs w/ no problems- $150/NEW. MOMO Race Seat w/brackets- $200. Hall (old style) AirBox w/aerospace duct hose $250. Chris Difani Air Box w/aerospace duct hose $200. Hall polished stainless steel A/C condenser & Fan $200/ like new. Eight (8) TWM billet polished 'shorty' 58mm velocity stacks $400/NEW. Four (4) billet polished De Tomaso wheel centers $100.00/NEW. Shipping extra, packing is FREE ;Mad Dawg Antenucci, <www.teampanteraracing.com> (1/09-CA)

WANTED-DeTomaso Pantera, Mangusta, any year, any model or condition. Top dollar paid- will pick up from anywhere in CONUS. Peter, (800)452-9910 (11/08-NY)

POCAMART PARTS

Sell- Complete set of Weber carbs on a Hall intake manifold. Excellent shape; photos avail. $2500 Coz, (460) 280-9250. (09/08-AZ)

Sell- **Cleaning out shop**- Factory GTS rear swaybar, OEM 7/8" (34mm) dia. bar w/aluminum logo center holders & poly- bushings, stock rubber outer bushings w/stock clamps- $150, two gas tank anti-rollover valves- $20 ea, reconditioned Ford/Laminova tubular oil-to-water heat exchanger, takes 12-15^{0}F off oil temp & increases water temp only 5^{0}F, take-apart/cleanable- $75, Perma-cool remote dual oil filter mount, w/ spin-on block adapter & AN fittings- $75. Four Holley 4bbls, all w/center-hung floats, electric chokes & dual-entry fuel logs- list #6619-vac-sec 600cfm; list #3310-vac-sec 750 w/quick-change secondary spring cap & set of Holley springs; polished list #80508 vac-sec 750 list # 4777-double pumper 650, make offers. (All plus shipping to your home). <jderyke@aol.com>, (775) 267-3907 (01/09-NV)

Sell- ZF transaxle, no bellhousing- $5800 + shipping. Call Ray Brown (650)796-5555, leave message (1/09-PA)

Sell- '72 PANTERA PARTS, Etc- OEM Air cleaner housing, blue base w/chrome top. *OEM steering wheel w/cushion. *OEM steering wheel/ no cushion. *OEM chrome outside mirror-driver's side. *OEM hand brake lever. *NOS U.S TailLight- red/ white, driver's side. *OEM brake master cyl. *NIB Motorcraft ASF 42 C-f8 sparkplugs. **Misc:** OEM valve cover oil cap, window switch (inop), brass window gear (new), Pantera owner ID/warranty card, 7" POCA ruler, 3 POCA cardboard drink coasters. POCA par-plaque, 10th annual L.V. Fun Rally, PI decals. 3 yellow model Panteras. **Magazines**- R &T- Apr '69, Mangusta w/ Mangusta on cover. Nov '71 Pantera. (2 copies). May '73- Pantera & Maserati Bora road tests, Pantera on cover (3 copies). Hot Rod Aug '72- Ford's 351 engine family, Jan'73- 351 Ford hop up article. Motor Trend Mar '72:Mr. Ford Wants It Right-5 pgs fm orig magazine. Road Test May'73-Pantera road test. **RACING PROGRAMS** w/autographs: 1.7th Palm Springs Road Races Nov-'91 signed by Carroll Shelby & Phil Hill- 2. 8th Palm Springs Road Races program Nov '92 signed by Carroll Shelby. Vintage Motorsports, May '99 signed by Phil Hill. Monterey Historic Auto Races Program, Aug'92. BOOKS- Brooklands Pantera 1970-1973; Brooklands DeTomaso Collection #1; Ferrari, The Man and His Machines, by Pete Lyons. PLEASE MAKE GOOD OFFER. Photos- **http://www.myspace.companteradetomaso/** (09/08)

Sell - Gr-4 Tail Lights- I'm *the* source for elusive Gr 4 tail lights, having sold nearly 30 sets in the past 3 yrs. Fully refurbished used pairs & the occasional NOS set. Sets have been described as: "Stunning!" "...incredible refurb job..." "Awesome refurbishing!" $375 - $650, Carello or Altissimo, chrome trim or blacked-out. Plug-'n-play sets complete w/ all mounting hardware. Larry Finch <**fresnofinches@aol.com**>, (559)281-3497 PST Photos at < **http://www.poca.com/index.php/gallery**> (01/09-CA)

PANTERA OWNERS CLUB OF AMERICA

BARRY GRANT

The BadMan:

A New Series of Inline Induction Systems

Dahlonega, GA – The BadMan, a new series of Inline induction systems from Triple-D Induction, is now available for the Small-block Chevy. With interchangeable venturi sleeves, airflow ratings are available from around 500 to over 1000 cfm. This unique, all-new Demon Inline four-barrel carburetor combined with a Triple-D Aero-ram intake manifold provides even and superior fuel distribution. This allows larger camshafts to operate at low engine speeds with low vacuum and improves low-speed idle, part-throttle drivability, and fuel consumption. The BadMan has no gaskets to leak under float level and has only three adjustments: two idle-mixture screws and one idle-speed screw. Designed with simple carburetor tuning and maintenance in mind, the BadMan is available in two finishes: "as cast" or silver powder coat (as shown). Models to suit Big-block Chevy and LS1 are already under development.

NEED THE WEBER LOOK BUT IN A LARGE CAPACITY CARB? BARRY GRANT HAS UP-DATED THE MUCH-SOUGHT INLINE 4-BBL AUTOLITE CARB FROM THE '60S INTO HIS DEMON LINE OF CARBS. WHILE THE ONLY CURRENT INTAKE FITS A SBC, THIS COULD BE FIXED BY A NUMBER OF SHOPS. ALSO, NO PRICE IS GIVEN....$$$?

POCA
P.O. Box 3574
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91773