SOU-WESTER

The Southwest Chapter—Antique & Classic Boat Society newsletter serving Arkansas, New Mexico, Oklahoma, and Texas

December 2008

The Bow

outgoing...President's Message-

The boat show season is over for this year. As we look forward to 2009, the first event will be The Houston Boat Show. It will be held at Reliant Center the beginning of January. This is a static display show. Any one wishing to display a boat or volunteer to man the booth, please contact Pat Nichols at 281-890-9649.

Many of you have asked about Lakewood Yacht Club. Repairs are moving forward. Bob Fuller has been working on the Keels and Wheels mailing list and will be sending out the "save the date" cards in the near future.

Lindy Robinson will be the new Southwest Chapter President for 2009.
The last three years have gone by quickly. I will now be the chapter secretary, taking minutes during meetings. Congratulations to Lindy.

Happy Holidays!
Robert

incoming...President's Message -

Hi! My name's Lindy Robinson, and if you've been to Keels and Wheels (among other events), you've probably met my wife Lisa and I. I'm honored that you voted me in to follow Robert Black.

The event occurring immediately is the Reliant Show. Thanks to all the volunteers and the Nichols for their dedication.

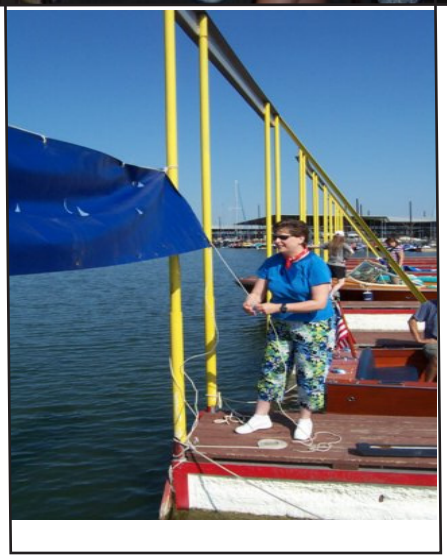
The next event of the year is the February board meeting/Keels and Wheels preperation meeting. As you know, Southeast Texas took a beating this past September from Hurricane Ike. Many of us in the club have found ourselves dealing with the clean-up and minor to major repairs in order to get along with our lives. Some of our members have lost their homes, boats, and belongings.. As Robert has relayed, Lakewood is hosting the annual show, but there are some changes.

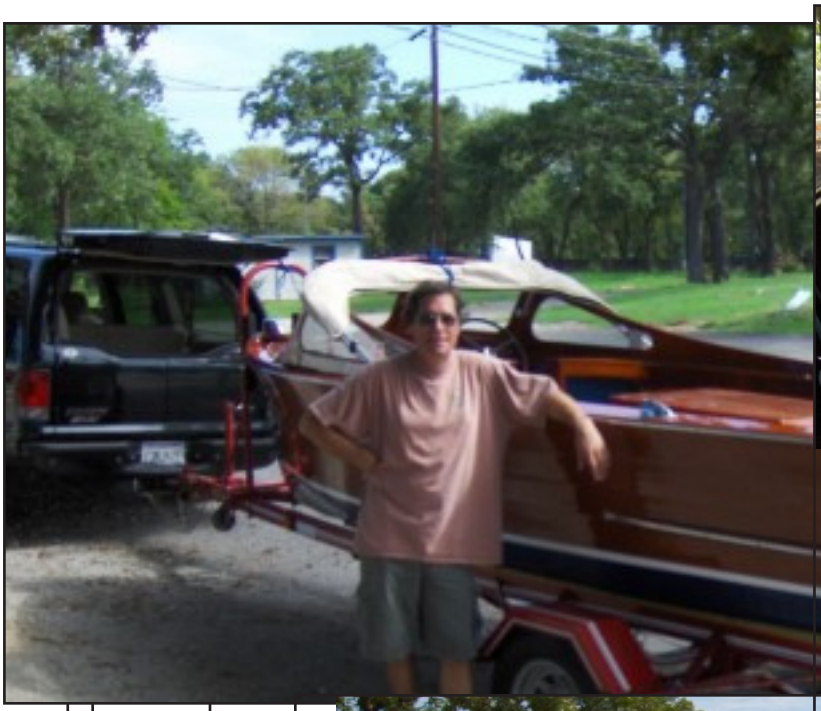
One change which we need to plan for is the loss of our "weekend clubhouse." The Cabanas were completely destroyed, and will not be rebuilt in the near term. As we need a facility for our members to work out of during the weekend, we will be discussing this item during the upcoming board meeting. If you have access to or input about the use of a travel trailer, motor home, yacht, or airconditioned tent, please let me or a board member know. After the February meeting (and remember...all are welcome!), we will know more about what will fit with Lakewood and the Concours committee's requirements.

Anyways, enjoy those beautiful January boating days!
Lindy

LAKE LEWISVILLE RIDE-N-SHOW
August 2008,

Deep discussions at Sneakey Petes.





Showing the newest acquisition...a ly-man, naturally!

23' Formula awaiting gentle hands...and a beautiful Chris Craft sloop on the hard.

Saturday night at the Van Guilders…what happens on lake lewisville, stays on lake lewisville???

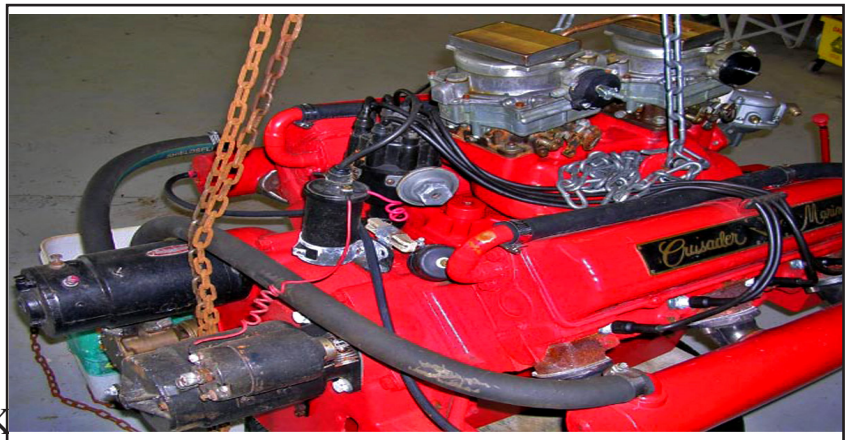
One of the premier shows that we support, the WBA/ ACBS Ride-N-Show, is held annually at Lake Lewisville - North of Dallas. The show starts with a Friday casual dinner at generous member's Garage Majal, then the boating/socializing at Sneakey Petes on Saturday. Saturday night found the waterfront party at the home of Mildred and Bob Van Guilder. Those who recovered early enough were encouraged to meet in the Lake Sunday morning for the "formation photos." The Sunday brunch at the waterside eatery concluded activities. A great turnout, and all had much fun!!!

The Caddy-HACK! Part1

By Brenden Macaluso

Prologue

Hummmmmmmmmmmm
Tick, tick, tick
Tap, tap, tap
Clank, clank, clank
Thud, thud, thud
CLUNK, CLUNK, CLUNK, CLUNK
BANG!!!!!



Here's the victim, 1959 Cadillaic 390, nice on the outside but a disaster on the inside.

Sizzle.....

That's right something in your boat's engine is broken, something big…
Now, besides figuring out how to get your boat back to the dock, you now have to figure out what happened to the engine. Since we have chosen to own vintage boats it also means we have vintage engines. So what do we do when it kicks the bucket (or when it is a rusty hulk in your next project)? It is not like we can just hit up Autozone or the local junk yard and find a suitable replacement. So we are left no other choice than to rebuild the damn thing, but before we begin, we need to figure why the engine failed?
The question that many of us are puzzled over is how do we go about rebuilding an engine that is obsolete? Your standard "crash and bang" rebuild shop wouldn't touch your engine with a ten foot pole (besides would you really trust them anyway?), and all the good old boys who knew how to work on this stuff have almost all died off. Parts are limited as well as difficult to find and knowledge on this ancient stuff is scarce (even with the internet!). It is our hope that when one of these old iron workhorses is rebuilt it is done right, and will last for years to come. So when a "rebuilt" engine fails in after only a few hours in the water it is a real kick to the face (and the wallet).

The Victim

This story is about a 1959 Cadillac 390 out of a 1957 Century Coronado. This engine was supposed to be "rebuilt" and "restored." Visually it played the part but some evil gremlins lurked inside. The engine ran for about 70 hours tops before the "clunking" started. It sounded like there was a hammer inside the engine pounding on the internal parts like an anvil. Our initial diagnosis was that a connecting rod had spun a bearing due to oil starvation. This was possibly from running the engine hard before it had properly warmed up. While we not exactly happy about disassembling an engine that is supposedly rebuilt, we remained optimistic that the repair would go quickly. Of course in a situation like this there is always a best and worst case scenario.

The plan

The best case was to yank the engine out of the boat (lucky for us it's a utility) open up the oil pan, find the culprit. Then after examining the damage to the connecting rod and the corresponding crankshaft journal, we would "sneak" the crank out of the bottom of the engine. The idea here is by unbolting the reminder of the rods as well as the main bearing caps we could then push all the pistons to the top of their respective cylinders bores so that the top of the piston touched the cylinder head, in order to gain enough clearance to carefully wiggle the crank out. Once the crank was out we then hoped to remove the damaged connecting rod and piston combo by sliding it out from

the bottom of the block. You may be asking why would we approach the repair this way? It was our goal to not remove the intake manifold, valve train or the cylinder heads of the engine, as that would necessitate and entire tear down, which was way more time, labor and parts than we wanted to deal with. Then we could have the crank ground undersized, install a new rod if necessary, put in some over sized bearings and button the whole thing back up.

However we all know that things never quite go as planned…

Upon removal from the boat and a subsequent draining of various engine fluids we bolted the old caddy to an engine stand and removed the oil pan. Quickly we found the #3 connecting rod flopping around on the crankshaft journal. It was loose, a little too lose for just spinning a bearing. The rod cap was removed to reveal…Absolutely nothing… the rod bearing was completely gone! I was shocked as I have never seen a bearing completely disappear. So where did it go? We initially found a few shavings in the sledge of the oil pan, yet there was not enough shaving material to make an entire pair or bearings. Upon closer inspection there were little bits and pieces of bearing material sticking to various internal surfaces of the engine and shavings were dripping out of several oil passages; an entire tear down was necessary. Piece by piece the beautiful red Caddy was disassembled and laid out on the work table and the damage was inspected more closely. The crankshaft had taken a beating and needed some major repair as the #3 rod journal was trashed. Similarly the #3 connecting rod was toasted beyond repair and needed to be replaced.

Upon looking at some other parts inside the engine, including the pistons, other bearings and gaskets, we began to wonder if this engine had actually been totally rebuilt or if someone just slapped in a few new parts and sent it out.

Hemis and Cadillac Crusaders

When Chris-Craft came out with the Cobra, its startling new Racing Runabout, in 1955, Chrysler Marine was converting the now famous Chrsler Hemi for marine use. The potential combination proved too tempting – Chris Craft no longer had an eight-cylinder engine, so the Hemi was just the thing to pack into the 21 foot version of the Cobra to give it 50 miles per hour plus speed. The Hemi was a 331 ci overhead valve V-8 that generated 200 horsepower at 4400 rpm in a 1100 poind package with downdraft carbs and a six volt electrical system. The first 21 foot Cobras were shipped with the Hemis.

The Cobra was also the recipient of a marinized Cadillac overhead valve V-8 as developed by Detroit Cadillac dealer Cal Connell, who founded Detroit Racing Equipment. DRE's 331 ci conversion generated 285 horsepower at 5200 rpm thanks to dual four barrel Rochester carbs. The Cadillac V-8 could push Century's 21 foot Coronado nearly 60 miles per hour – a speed that generated attention in Algonac. Ultimately Chris Craft purchased 24 of the hopped up Cadillacs, 17 of which ended up in 21 foot Cobras, giving them 55 miles per hour.

Chris Craft continued to offer the V-8, upgraded to 365ci in 1956 and 390 ci in 1959 until the introduction of the marinized version of the Chevy small-block. It was three of Connell's Cadillac engines that powered a 53 foot Constellation called ***Crusader Rabbit*** to an impressive 32 miles per hour. Connel adopted the name from the boat for his company, Cadillac Crusader Marine, leading to the origin of Crusader Marine. When Chevrolet introduced its 409 ci engine in the early 1960s, Crusader Marine ceased marinizing the Cadillac V-8s and switched to the Chevys. Some 800 Cadillacs were marinized from 1952 to 1960, all painted fire engine red.

from Chris Craft Boats by Anthony Mollica and Jack Savage.

Here is the beast of a crankshaft out of the Caddy. That funny looking gear on the front of crank is the drive adaptor for the trasmission, this is opposite from a car which drives from the flywheel side.

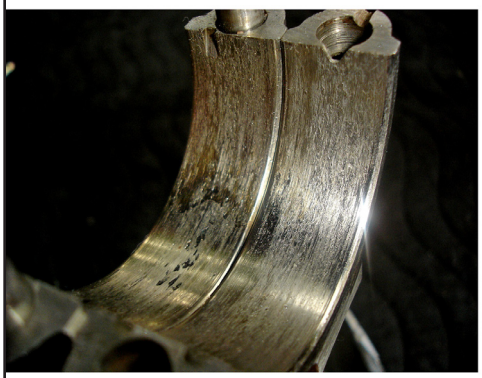
Auto-topsy

Well we knew what had failed in the engine, but we were not quite sure why it failed? Was our initial guess of oil starvation from running the cold engine hard correct? Why did the #3 rod fail, when typically the rod that goes is the one furthest from the oil pump (#1 in our case). The #4 rod which shares a common crankshaft journal with the #3 rod looked fine, and I would have suspected it to fail too. We needed a clear answer why this relatively fresh engine had such a catastrophic failure. After taken several critical internal measurements, further examining several parts and discussing this matter with several parts manufactures and expert crank grinders we came to a two part conclusion.

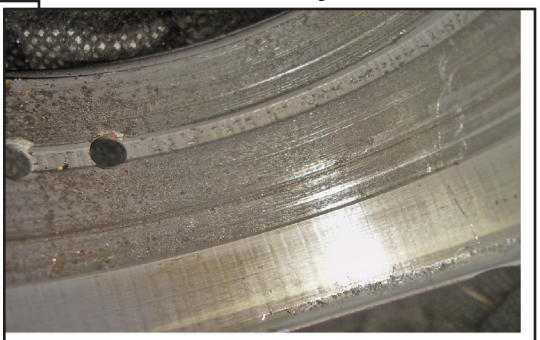
First, this engine was victim of poor quality machine work. Several of the internal clearances and measurements were so far off from the factory specification it is amazing that the engine ran as long as it did. Obviously the shop that did the machine work on this engine is subpar, which unfortunately is way more common than you might think.

Second, the engine rebuilder did not measure anything. This proves the rebuilder was worse than the machinist (hell they could be the same guy). A good rebuilder measures everything just to make sure the machine work is correct, in our case the rebuilder should have caught all the errors in the machine work. However, many rebuilders assume the machine shop "did it right" and assume all aftermarket parts fit the same way the factory ones did. Considering the rarity of our old engines, varying quality & availability of replacement parts, and questionable machine work it is curial that an engine is blueprinted (precisely measured and assembled to factory or performance specs) to ensure that the engine will live a happy long life.

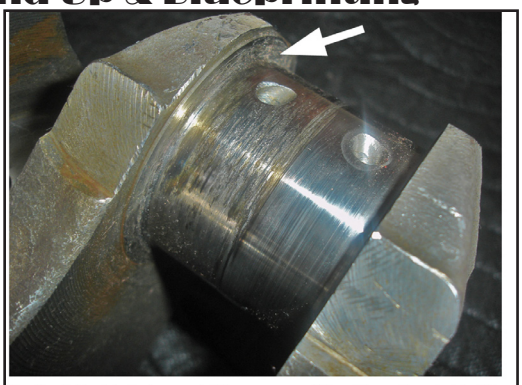
We will discuss that in **part 2: Rebuild Strategy, Parts Round Up & Blueprinting**



Rod #3... It should have a nice machined smooth surface not jagged metal splinters. Notice the black spots and pits, that is where the metal got too hot and then discolored.



This is a close up of one of the main bearings. Notice the sandpaper like texture of the bearing surface, that is bits of shreaded metal from the destroyed bearing lodged in the surface like shrapnel.



On the left side is journal #3, compare it to #4 on the right side. The damage also includes the thrust surface (arrow). Lucky for us this is a forgegd steel crank so it can be welded up and reground. If this was a cast iron crank we would be SOL.

Editor's note: Sorry for the delay. This issue should have gone "out"in September - before the Hill Country show - but ***due to Ike....*** Craig