



# Shelby Life

Shelby American Automobile  
Club – Motor City Region

Volume 36, Issue 1

January, 2011

## President's Corner

Text by Steve White, Photo by Rich Tweedle



**The Show 35 was the biggest SAAC-MCR event of the year. It was a huge success. The club had many other interesting events and activities during 2010.**

It's hard to believe, but another year has already sped on by! We've had lots of good club experiences this year to be proud of. We had both a Spring and Summer Cruise, as well as our first pre-cruise Woodward Dream Cruise get together – all a resounding success! Our premier event, the Show portion of Show & Go was a huge success, with excellent weather and a good chance you read about it in the January 2011 issue of Mustang Monthly. The swap meet that accompanied the Show was a sellout and the Winter Swap Meet at Gorno Ford was also another success. We also had 3 track events at Waterford Hills that went off without a hitch and didn't lose money! We also were asked to put on a car show in September for a fallen Police Officer's fund raiser in Woodhaven. We were only too pleased to help out and also to provide donations to the silent auction.

Not to forget, we started the year off with our annual holiday party, this time at the Detroit Historical Museum. Surprisingly, many members had never been there, or it had been decades since a visit. We were fortunate to be able to view the Cougar II concept car built on a Cobra chassis and found languishing in a storage building. It was brought back to displayable condition by our own Jeff Burgy and was one of the highlights of the event. Many members lingered and socialized around it for quite

a long time. The Motorsports Hall of Fame also was sharing a small space there as a temporary home since their recent move from Novi.

Chili has always been a big part of the Carroll Shelby legend and so are our annual winter and fall chili challenges. Craig and Bonnie Shefferly volunteered at the 11<sup>th</sup> hour to host the winter chili event at their house and a warm social gathering was had by all who attended. The fall was our annual visit to Big Norway Lake in central Michigan at John and Trish's Autodrome. This year we added a different route and a cider mill stop along the way for a change of pace. There are still plenty of options for other routes and side stops, depending upon the time we want to include in the trip, for future travel there.

We were also fortunate to have several guest speakers this year come to our meetings and share with us some technical or historical insights. It's hoped we can have some more in 2011, but scheduling is always a bit of a challenge.

2011 is already shaping up for another great year. Our holiday party will shortly be upon us at another new venue, keeping up the variety and expanding our experiences. The Winter Swap Meet is all set.

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## President's Corner *(Continued)*

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Due to other national event schedule conflicts, it looks like this year's Show & Go dates will shift a little later in the year than traditionally scheduled.

Some potential events I'd like given some consideration are events spread out more evenly over the year. We typically have a big gap in events from Show & Go to the Labor Day Classic. This year we did have a summer cruise, and hopefully we can again in 2011. We also had our first Woodward pre-cruise hangout event, and hopefully that can be a repeat. I'd also like to see more camaraderie tied with traveling events. In the earlier days of the club, we used to caravan together as a group to the National convention. In the last decade or so, everyone started going on their own or not attending as much, probably due to personal schedules and personal preferences. Whether it is possible for the recently announced SAAC-36 at VIR over Memorial Day weekend is undetermined at this early stage, but we know a few key members have already indicated they're going. Also, it'd be nice to get a bigger turnout of club members at the fall chili challenge, but seems that some don't want to travel "that far". It appears that our club seems to have an aversion to travel, which seems odd, as most people do many further trips for other reasons. Many other Mustang, Shelby, or Ford marque clubs have road trips and overnight stays, such as the SVTOA WI region annual fall trek to the Dells and overnight stay, or the local T-bird club trip this year to the Wills Museum. Some events can be done as a long day, if people don't want to spend the night, but an overnigher is enjoyable too as a mini getaway. It is for those reasons that one potential holiday party venue was ruled out, especially travel in the winter.

Other potential new events could be to the Wills Sainte Claire Museum in Marysville, possibly tied in with the Spring Cruise, or as a separate event and possibly a visit to the Gilmore Museum. Childe Wills actually has strong connection to the early days of Ford Motor Company. He was a chief engineer at Ford and helped introduce the widespread use of high-temp vanadium steel and he is credited with designing the planetary transmission used in the Model T. He later developed his own line of cars for a brief time. This could also be an overnight event staying in St. Claire or Port Huron or just a day trip. The Gilmore Museum in Hickory Corners, north east of Kalamazoo, is an awesome site. Many buildings, each dedicated to specific marque, era or type of car, spread out of many acres in an idyllic setting is something that everyone should visit. I've been there twice, once in the late nineties by myself on my travel day returning from Gingerman, and in 2009 on another return from Gingerman, this time with my wife. For Cathy to say that she was really impressed and liked a car museum tells you how special a place it is! This could be another day run, with meeting up somewhere centrally on the west side and caravanning from there. What do you think about such activities?

Unfortunately, over the past year we lost a number of members to health reasons, some long-term, and some suddenly. They are and will be missed by all those whose lives they touched

Winter may put a damper on your car enthusiast's activities, but cheer up! – spring and the next car event season is just around the corner!!



**SAAC-MCR members were asked to put on a car show in September for a fallen Police Officer's fund raiser in Woodhaven. We were only too pleased to help out and also to provide donations to the silent auction.**



### **Membership Report** *by Rich Tweedle, Membership Dir.*

SAAC-MCR Membership Status: We have 107 Members as of 12/10/10

New members include: *Dwight Kreuger, Rick Schans and Gary & Janice O'Donnell*



# SAAC-MCR 2010 Harvest Happening Open Track Event

by Mike Nyberg

The weather was perfect for an open track event at Waterford Hills Road Racing Track. Participants arrive at 8:00 am for Tech Inspection to make sure their cars are safe to participate. There is a Driver's Meeting at around 9:00 am to go over the rules of safe driving during the open track sessions. The track was a little "slick" in the first open track sessions due to being cold. The track warmed up with open track activity and the sun.

There were 30 Harvest Happening participants. 26 had pre-registered and 4 were "walk-ins". There were 13 Mustangs and the remaining 17 were a wide variety of cars.

The first open track session began at 10:00 am. Lunch occurs around noon. The participants are grouped into four run groups (Driver Class) depending on car capabilities and driver skill. Normally each run group has a twenty minute session on the track. That means there are usually six sessions before lunch. Two of the run groups get two sessions on the track. The other two run groups get only one before lunch and they have been at the track for four hours (8:00 am for Tech until noon). Darius changed the length of the open track sessions to fifteen minutes so all the run groups would get two sessions on the track before lunch. All the comments I heard indicated participants liked the change.

Timothy Aiken brought his Nissan GTR for his first open track experience. His son Richard, a Nissan electronics engineer talked his dad into buying the high-tech sports car. Richard developed the Blue Tooth interface for the GTR. When I found out Richard was an electronics engineer I talked to him about an electrical problem I am having with our 2005 Sable. The radio turns off for a second when the brakes are applied during night time driving. He thought it was an electrical short that was causing the problem. Fortunately my wife had driven the Sable to the track. Richard wanted to look at the car to see if he could diagnose the problem. He moved some wires near the brake peddle in the process of trying to find the fuse panel. We have not had the problem since. The SAAC-MCR open track events are a great environment to get car related problems solved.

The Harvest Happening was the last SAAC-MCR open track event for the 2010 season. We all need to work on making any necessary improvements on our cars so we are ready for the 2011 season. The first 2011 SAAC-MCR open track event will be in mid-June 2011.



**Lunch break is an opportunity to rest and do some bench racing before an afternoon of open track sessions.**



**One of the objectives of the SAAC-MCR open track events is to get new people involved in the sport. I think we have Davin son of Katie and Chris Duffy, hooked at a very young age.**



**Several Ford "Foci" participated in the 2010 SAAC-MCR Harvest Happening.**

**Left: The Driver's Meeting was conducted under the old oak tree.**

# The Brief History of Ford Automatic Transmissions

by Tom Greene

Ford automatic transmissions have a relatively short history when compared to that of the Ford Motor Company. The first Ford manufactured automatic transmission was used in the 1951 Ford. (For perspective: auto transmission manufacturing started at Ford *after* some of us were born). Because there is so much material on automatic transmissions, let's talk about them in segments: Rear Wheel Drive and Front Wheel Drive handled separately and transmission history of each major group handled in chronology:

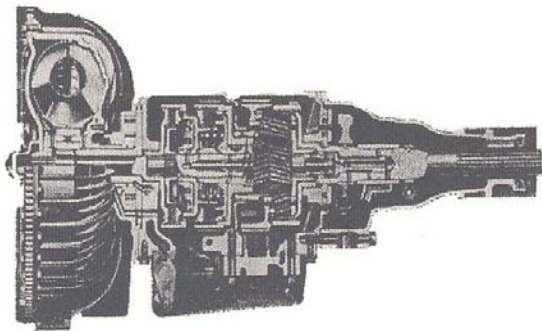
As my personal preference for vehicle configurations is Rear-Wheel-Drive, we get to cover those first.

## REAR WHEEL DRIVE

### EARLY HISTORY

That first Ford manufactured auto transmission was the FX (Market name, Ford-O-Matic) This transmission was a Borg-Warner design licensed by Ford and manufactured by Ford at the Fairfax plant in Southern Ohio. The FX was applied in pickups by 1954 (calendar year or model year – conflicting data exists for trucks).

The FX is identifiable by the cast iron case, the cast iron converter housing with screens to support air cooling of the torque converter and the use of linkage TV (Throttle Valve) – the rod that attached from the carburetor to the transmission that moved in proportion to the opening of the throttle plate and regulated transmission pressure proportionally to engine torque.



**FACTOID:** The Lincoln had an automatic transmission starting in 1952 with the new body style – Ford purchased a GM Hydramatic and used it until 1954. (Now there's a question you can ask of people who think they know Ford history). It was replaced by the newly designed MX transmission for use in Lincoln in 1955 my.

The MX was a higher torque capacity transmission than the FX. It retained the Ravigneaux (compound) gearset 3-speed arrangement and incorporated external cooling. The HX transmission was evolved and launched in 1958 for use in Edsel and Lincoln (with Edsel having the first "shift-by-wire" transmissions in production – recall the buttons in the center of the steering wheel with P R N D L – rather than a shift lever?

The HX transmission was also used in the 430 Lincoln and T'Birds and the 406 and 427 Galaxies – and in the 427 Thunderbolt. Each of these transmissions shared the trait of a separate converter housing bolted to a cast iron main case with an extension housing that utilized a slip yoke drive shaft. The air cooling of the first applications was replaced with oil-to-water and/or oil-to-air heat exchangers to cool the fluid.

These transmissions were heavy, the Ravigneaux gear sets were somewhat noisy, but they served faithfully for 15 years of service before being supplanted by families of Simpson gear set transmissions that were lighter and quieter –

BUT – the "Cruise-O-Matic" family did not go away. The Cruise-O evolved into the FMX in 1969 (cleverly named by replacing the FX, and MX transmissions) enhanced with improved gear design and manufacturing and an aluminum converter housing. It continued to be built at the Fairfax, Ohio transmission plant and remained in production until 1979 – when the transmission "morphed" into a 4-speed transmission utilizing the Ravigneaux gear set. The transmission began in 1951 and remained in production for 28 years through the 1979 model year.

The 2-Speed. Ford did a "me too" by selling 2-speed transmissions beginning in 1958 and then mercifully cancelling the use of the 2-speed after 1963 forever. The performance was poor and it was nearly as heavy as the 3-speed. So the positive attributes of 2-speeds were they shifted automatically.

### MODERN ERA OF 3-SPEED AUTOMATIC TRANSMISSIONS

Moving on to what I call "modern transmissions", the C4 and C6 and C3 transmissions. One can think of the C4 and C6 and C3 in the same thought process. The C6 is essentially a pantograph version of the C4, with the later-arriving C3 being a downsized version of this kinematic structure – each with a few mechanical differences. These three transmissions share Simpson gear set 3-speeds using an open 3-element torque converter, aluminum cases low-reaction one-way clutches and synchronous band-to clutch 2-3 shifts.

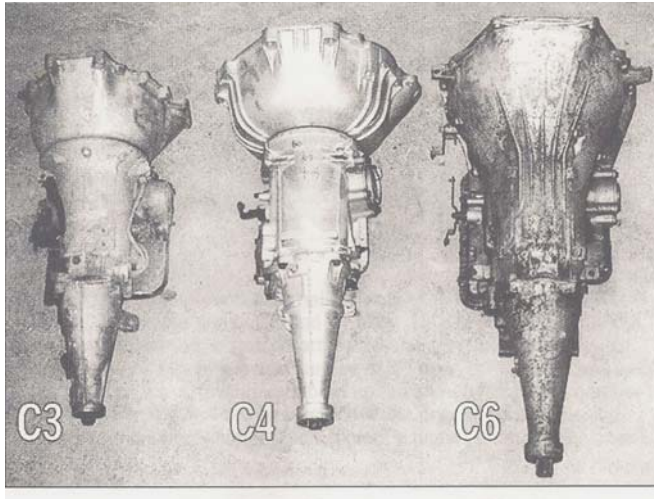
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# Ford Auto Trans History

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**C3**

**C4**

**C6**

### THE C4 TRANSMISSION

The C4 was launched in 1964 (hence the name C4 matching the part number for things sold for the decade of the 60s (C) and the number denoting the year, but you all know this piece of history). The C4 replaced the 2-speed and immediately ushered in a better performing automatic transmission with "pretty good" shift quality and nearly imperceptible gear noise.

The C4 was a "clean sheet" design, and was the first Simpson gear set transmission for Ford. The C4 was manufactured in Sharonville, Ohio (just a few miles from the Fairfax plant).

The C4 transmission is identifiable in its many forms – there were both small and large flange cases, the large flange having the dipstick tube screwed into the side of the oil pan and the small flange case having the dipstick entering at front of the case immediately behind the converter housing. Both transmissions came in either 4x2 or 4x4 configuration. A C4 always had an aluminum case and separate, bolted-on converter housing and an intermediate servo that bolts to the case on the front passenger side of the transmission. There is a stamped reverse servo cover on the driver side of the case at the rear. The C4 utilized a vacuum modulator valve eliminating the mechanical linkage that required adjustment. The C4 came with converter sizes from 10- $\frac{1}{4}$  inch thru 12 inch.

At launch in '64, the transmission external controls were configured as: P R N D2 D1 and L. D2 provided use of 2<sup>nd</sup> and 3<sup>rd</sup> gear. D1 provided 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup>. D2 allowing 2-speed operation was an artifact of replacing the 2-speed transmission but this attribute allowed the use of 2<sup>nd</sup> gear starts. This was useful for creeping away on ice or towing your boat up the launch ramp.



### The Ford C4 Automatic Transmission

Remember the attribute of 2<sup>nd</sup> gear starts as Ford has remained the only auto transmission manufacturer to continuously support selection of a higher (numerically lower) gear ratio for start up. During the heyday production volume of the C4 reached 5,400 units per day, or over 1.5 million transmissions per year. It was used in most all vehicles Ford sold from Pinto through Galaxie, Falcons to F150's and with engines from 2.0L engines thru 351's. It was the transmission of choice for Bill Stroppe and Parnelli Jones to get the power from the small block Ford in the "Big Oly" to the Baja ground. Many parts have been remanufactured for the C4 allowing it to be used still today in drag racing with engines making 4 times the torque for which the transmission was designed.

Your humble author was responsible for the calibration for nearly 1 million transmissions in just the 1977 model year having responsibility for the 200 cid, 250 cid, 351W 351M and 302 Versailles applications. Heavy responsibility for a grade 7 engineer then.

The C4 transmission was in production from 1964 through 1985 (A Borg-Warner centrifugal converter clutch was added in 1984 and the transmission was redesignated a C5). The salvage yards have MANY C4 transmissions to choose from – just don't expect to find a transmission with a C servo which was used only in 1965 and 66 and only with the 289 HiPo – you will recognize the intermediate servo usage as that for the GT350 automatic cars.

### THE C6 TRANSMISSION

Maintaining the naming convention, the C6 launched in 1966 model year. In 1966, Ford also commonized the manual shift controls for all 3 speed transmissions to be P R N D 2 1 with manual selection of 2<sup>nd</sup> gear regardless of speed. The internal name for this hydraulic control configuration was the "GT" controls as both C4 and C6 launched in the 1966 Fairlane. The approach of being able to select the gear ratio of choice manually in an automatic transmission was commercially called "Select Shift Automatic". This term is still applied to the cars being produced today.

The C6 transmission is "the brute". It had the highest input torque capacity of the time, and the shafts and gears and clutches were designed to handle (with a substantial safety factor) everything the engines of the day

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# Ford Auto Trans History

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were projected to output – from 427 cammers to 500 inch Lincoln engines. The C6 is a legend among truckers with a Texas rancher's quote to a Chevy dealer (we had a service tech contacted to address the buyer's question and he heard it first-hand). "I'll take that C30 truck with the 454, but only if you put a C6 trans in it".

The C6 is visually identified by the one-piece aluminum case and converter housing and vacuum modulator protruding from the passenger side rear of the case. The C6 also uses an intermediate servo bolted to the case with hex head screws at the right front of the case. The attribute of one piece case is a significant increase in driveline rigidity increasing driveline resonant speed and improving smoothness. The one-piece converter housing requires the transmission match the rear face of the engine block resulting in the transmissions for FE's more difficult to find with the transmission for the CJ the most valuable.



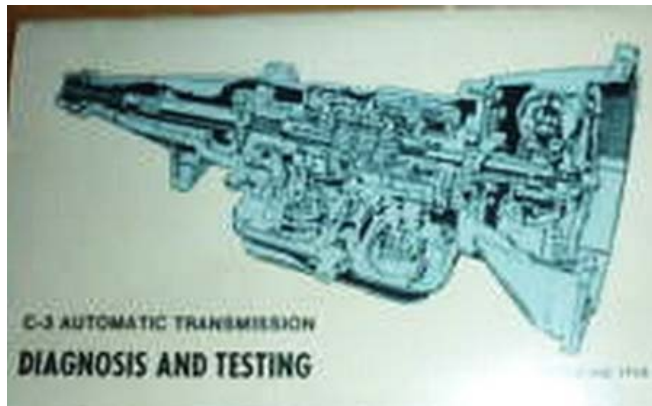
Many of us are familiar with the C6 legendary torque capacity and durability. The C6 proves that tough reputations are earned based on demonstrated toughness. The C6 earned every inch of its reputation. The C6 became known as "the truck transmission" and the Truck Office VP, Jim Englehart, who was long a fan of the C6 performance in his trucks came to our office personally for an in-depth review of the durability results of other transmissions.

Later on in the C6 life, the U-Haul owners came to Ford with a proposal (more like a mandate) that this transmission remain available to them for the rental truck fleet even though it was being phased out to launch the E4OD beginning in 1989. I was in the meeting with them and can tell you they were deadly serious about it – so much so that we did agree to a life time build of C6's and put them in storage to support their F and E series buys for 1989, 1990 and 1991 – that meant >100,000 transmissions were built and stored for assembly into the U-Haul fleet buy. The C6 was in production from 1966 thru the 1990 model year – 24 years in production by Ford. It remains a work horse even today, 44 years after it was launched

with transmissions being supplied from remanufacturers and used in snow groomers and industrial applications.

## THE C3 TRANSMISSION

The C3 transmission is also a kinematic twin to the C4 and C6 transmissions. It is visually identifiable by the external cooler bypass tube and vacuum modulator protruding from the passenger side of the transmission, and the intermediate servo also on the passenger side front of the case but as opposed to C4 and C6, held in with a snap ring not screws.



The C3 launched in 1974 in Pinto, Mustang II, European Capri, and later in Fairmont, LTD (Fox body LTD), Thunderbird, Ranger, Bronco II, Aerostar and Explorer. This transmission was used with engines from 1.6L thru 4.6L, in Europe and in the US. It was the small transmission whose introduction was perfectly aligned with the first oil embargo of 1974. Recall the demand for small engine, more fuel efficient vehicles was high, and the C3 filled the requirement perfectly. It was the most efficient 3 speed of the time.

The C3 was so named to continue the heritage of the C4 and C6 transmissions rather than name it the D4. It was called C3 due to its size compared to C4/C6. It shared the 2 simple planet Simpson gear set arrangement, but was designed for small, high revving engines such as the 2.0 L European engines, 2.3, 2.6, 2.8 and 3.0 engines used in the European Capri. For those of us who worked on C4 and C6, the transmission gears resembled "Swiss Watch" components. The C3 achieved the reputation of being the "best shifting" automatic from Ford and delivered outstanding durability and reliability.

It was used in the T-Bird Turbo coupe in 1982 and 1983 and provided great function, but it "just needed to shift one more time" to lower the highway engine speed, as quoted by vehicle office director.

More Next Issue:



## SAAC-MCR Show 35 Sponsors



Thomson Automotive sponsored the Best of Show Engine Award.

## TOTAL PERFORMANCE

Sponsored the Best of Show Full Size Ford Award.



Sponsored the Best of Show Late Model Mustang Award.



Sponsored the Best of Show Early Model Mustang AND the Best of Show Truck Awards.



Sponsored the Best of Show Fairlane Award.



Sponsored the Best of Show Shelby Award.



Collector Car & Boat Insurance™

Supplied Hagerty goodie bags.



Fifteen Greater Detroit Area Ford dealers supported SAAC-MCR Show 35.



left: Milan Dragway supplied free passes to the dragway and gift certificates to raffle.



AutoTrader/Mark Storm supplied 300 copies of the Mustang & Ford AutoTrader Classic, June 2010 Issue.



Pegasus supplied 300 catalogs.

# Meet the Member—The Many Sides of Rich Tweedle

*Text by Linda Kidd and Photos by Rich Tweedle,*

Rich Tweedle, is in charge of membership, photographer of club events, communications coordinator and librarian of SAAC-MCR. With all of his club involvement one might assume you know Rich Tweedle, but there is much more to this member.

Rich is married to Sandy. They have a daughter, Cheryl, who with her husband delighted them with a grandson born during the Woodward Dream Cruise. They named him Chase. Rich and Sandy have had three dogs named A.J. , Shelby, and Cobra, but only one at a time. This family really loves automobiles!

Rich met Jeff Burgy, a founding member of SAAC-MCR, at the 1976 Autorama. Jeff owned a '72 Pantera and Rich owned a '71 Pantera. It was an instant connection. Rich attended a winter Show & Tell event where members share their car enthusiasm and pictures. He attended seminars and Show and Go's at Ford World Headquarters during '77 and '78. Rich and Sandy became members in 1979.

The Tweedles and five other families caravanned to the 1993 SAAC National Club Convention at Watkin's Glen in New York. It is one of Rich's favorite tracks. He says it is a fantastic and challenging experience.

When asked what his favorite club events are Rich replied, "All of them!" At the time of his interview he was looking forward to the Color Tour and Chili Party. He and Sandy make their own chili and enjoy sampling other chili creations. He proudly mentioned that they never have much chili to bring home, so they know many participants also enjoy it. They love the family orientation of the club.

Rich started his excitement with automobiles at a very young age. When he was a kid he would sit up in his bedroom window and count the different makes going by on Conner Ave. He and his brother were allowed to tape car pictures on all the walls and the ceiling of their bedroom.

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**1969 Mustang Mach I Acapulco Blue 351 2 barrel, 4 speed Rich liked the way the interior helped to make him feel like part of the car.**



**1971 Mustang Mach I Dark Jade 351-C 4 barrel, 4 speed, Detroit Locker**



**1971 DeTomaso Pantera Red, 351-C 4 barrel, 5 speed ZF trans. This Pantera actually was a "Y" car – Executive Evaluation car. Rich found it in the WHQ Garage and tagged it.**



**1967 Mustang 2+2 Nightmist Blue, 289 2 barrel, 3 speed stick. Beautiful the way it was appointed.**



**1976 Mustang II Cobra II 2.8 liter V6, 2 barrel, 4 speed Blue with white stripes**



## Meet the Member *(Continued)*

*(Continued from page 8)*

While working for Ford Motor Company Rich continued his love of automobiles. Rich's position at Ford Motor Co. allowed him to see interesting Ford products before they were available to the public. He knew the car he wanted to buy before it was available at the dealer.

Rich was not able to limit his list of cars owned to a top 10, because he liked each of his cars for their own special reasons. Some of Rich Tweedle's favorite cars he has owned or currently owns are pictured in this article.

Rich Tweedle began his career with Ford by sending them a letter while he was still in the service. They sent him an application and that led to his 35 ½ years with the company. He designed many different chassis car parts including: the wheels, brakes, frames, and exhaust systems.

Did you know that local roads were re-created on the Ford Proving Grounds to find out how the cars would handle on real roads? Rich said that running on the track was a blast! The Belgian Blocks were great for checking out suspension on cars and if the exhaust systems Rich designed rattled.

Another aspect of Rich's infatuation with cars is his extensive collection of scale models. He is grateful that his wife enjoys his collection so much that she has permitted him to keep part of them in cases in the family room. His models range in size from Hot Wheels to 1/18 scale. Although most of the cars are Fords he also has sports cars and race cars. They do take up a lot less garage space than the full sized cars. Cars are also the theme of his book collection. These books cover automotive histories, racing, and race car drivers.

Rich has additional hobbies, including photography and movies. His main camera subjects are cars. He has also been dubbed "Captain Video" for his club videos. His favorite action movies are LeMans with Steve McQueen and Bullitt which has his favorite car chase. Rich also belongs to the Ford Motorsports Club.

Although Rich enjoyed traveling, especially out west in Colorado, Utah, and Wyoming he and his family prefer spending time at their cottage in the Irish Hills. That may make you think about the MIS Speedway. Rich said that was a major selling point of the cottage in his mind.

Boating is an exciting way to enjoy wonderful summer days in Michigan, especially at Tweedle's cottage. Rich's first boat was a 1993 22' pontoon with a 40 hp outboard. He found out how fast it was when a friend on a Waverunner rode along side and told him how fast he was going. It topped out at 17 mph. He figures his newer 22' pontoon boat with a 50 hp outboard does 19 mph. When gas was cheap he was known for running WOT (Wide Open Throttle). Boating can be as tempting as a car to race. Boating does compete with Rich's car enthusiasm.

Now you know some of the many sides of Rich Tweedle.



**1979 Capri RS Turbo 2.3 liter turbo, 4 speed, Green metallic**



**Above Left: 2006 Mustang 4.0 L V6 with Pony option, Vista Blue**

**Above Right: 1985-1/2 Mustang SVO 2.3 liter, turbo charged, 5 speed. Rich feels this car was the most fun. He drove it on several road courses. Lots of fun to drive.**



**Sandy and Rich Tweedle's 1999 22 foot Crest II pontoon boat with 50 hp outboard motor on a lake at their cottage in the Irish Hills.**

## Joe Bradley, Guest Speaker

*Text and Photos by Joe Bradley*

Joe Bradley was the guest speaker at the SAAC-MCR meeting, October 7, 2010 and shared with us some of his Ford automotive high performance experiences. The performance "bug" first hit with the introduction of the 64 1/2 Mustang, Joe's Dad talked his friend and neighbor, Bob Acton to switch from drag racing and go road racing with the new Mustang. The Mustang sedan was replaced with a GT350 R which was raced locally by Bob, his son Ed, and then by Joe. Other cars that passed through the Bradley garage included a Mk2 Cobra, Sunbeam Tiger, Boss 429, Pantera, several Mach 1's, Torino Cobra, and a Jag XKE. Joe's presentation included projecting home photo's of the early days of Ford Total Performance.

**Right: Bob Acton, Waterford Hills, Hipo 289 with Webers under the teardrop hood. This is the second coupe that was raced, the first was a "A" code, which was retired as soon as the HiPo motor came out.**



**Above: A "younger" Mike Riemenschneider and Joe with Plymouth local Don Strand, this was taken in about 1994 in front of the Diagnostic Service Buildings in Allen Park**



**Above: The HiPo - now looking more like a GT350 coupe, these two notch backs were probably the very first Mustangs that hit a road course career.**

**Right: CSX 2535 at a MIS Autocross, 1971, Dad and I restored this car from an insurance total loss. The car had impacted a telephone pole head on. The car was purchased in 1969 with less than 6,000 miles on the speedo. The frame was bent, and the aluminum from 6" behind the front wheels to the nose all was replaced with new sheet metal, still sold by Shelby at the time. The Cobra was campaigned at many local gymkhana and autocross's, frequently took class wins and several "time of days". The engine was a bone stock 289 HiPo.**





## Guest Speaker (Continued)



Left: 5R528, a bargain of the century! What we didn't foresee then, this was the going price for used race cars.

SHELBY GT350 66 full competition B Production. Fresh engine, mags, tires, numerous extras, never hit hard or rolled. Plus 4-wheel trailer, elec. brakes, new tires, both for \$3995. Ready to race. J.C. Bradley - R. Acton, 16245 Southampton, Livonia, Mich. 48154; KE3-3005 days, GA2-5373 nite. C



Above Right: 6: 5R528, Waterford Hills, 1971 I was lucky enough to be able to campaign the car at Waterford in 1971, the sound of the car with the R package of no sound deadening in the body was one of the thrills of my life. The car had a really wild cam and it would break loose the tires at anytime the throttle was pressed too hard. The car survived and is treasured by the current owner. It was delivered by a Shelby transport fresh from California in 1966. The tailgate was opened by the Shelby driver and in the trailer was the GT350R, two 427 Cobras and a street version GT350. At about 9:00 o'clock on a summer night, the Shelby driver hops in the R, fires it up in the enclosed trailer (straight exhaust) backs it down the ramps into a quiet Livonia subdivision. The car was quickly driven into the garage and shut off (we had great, understanding, neighbors!)



Left: 1971 Pantera and Cobra in garage - good times! Joe's Dad ordered the Pantera as a management lease vehicle from FMCC when they came to

market in 1971, the intention was to buy it at the end of the years lease. The Cobra was sold to make room for the Pantera. The Pantera became a problem car and Dad just turned it in the following year, and we ended up with an empty garage - the glory days were coming to an end.



Above: Joe Sr. racing his Tiger, Waterford Hills, 1965 Joe Sr. got the racing bug and bought the Tiger new in 1965. The 260 cid engine got a cam and some head work, aluminum intake and a holley, some exhaust work also. Joe Jr. used it to take his Mom grocery shopping once a week (scary fast).



Left: Joe and his Spec Racer, Grattan raceway, 2000 . Joe Jr. returned to the road courses in 1998 when he purchased a used SCCA Spec Racer, the car was originally the Renault powertrain. During the winter of 1998 it got the Roush 1.9L Ford conversion. The car was raced at Grattan, Gingerman, Mid-Ohio, Elkhart Lake, and Blackhawk Farms. Joe's favorite experience was the down hill straight into turn 5 at Elkhart Lake, what a rush.



## Street or Track Bilstein Coilover System for '65-'70 Mustang and other Vintage Fords

*By Shaun Burgess— Club Member and Owner of Street or Track LLC*

What is a suspension? Webster's Dictionary describes it as, 'A mechanical system of springs or shock absorbers connecting the wheels and axles to the chassis of a wheeled vehicle.' As far as the majority of automobile drivers are concerned, that is as much as they know or care to know. For the performance driving enthusiast or racer however, it means a whole lot more than just that. It's what controls the wheel and the path it takes over dips and bumps, how it interacts with the pavement, how it helps get and keep traction, tire longevity, adjustability, tune ability, alignment options, a huge amount of factors come into play!

Considering these factors is what we do at Street or Track. What would be the point of re-designing the stock components if there was no benefit? Why just build something for the sake of building it? I personally take great pride and get a lot of satisfaction out of knowing we've shaved off a tenth around Waterford, built something a customer really needed or having a customer tell me they really like how their car handles now.

Having already figured out the control arm geometry we wanted with our conventional spring/shock tubular upper and lower control arms, we were able to spend pretty much all of 2010 developing our new coilover systems spring and shock package. This is an area that I feel is really overlooked by most restorers, builders and to a large extent, the aftermarket suppliers. It isn't quite as simple as just choosing a shock that fits the gap and 'sort or feels right' when you drive down the road. If you want to achieve the nicest ride or the quickest lap possible you have to dive deeper into the system. That's just what we did. A quick benefits list of our coil over system compared to a conventional spring/shock arrangement would be:

- Easy ride height adjustment. Our shocks feature a threaded sleeve; simply rotate the adjuster with the supplied wrench to raise, lower or cross weight the car. No cutting springs, no guessing.
- 50% better motion ratio allows use of lighter springs and more shock motion for improved control.
- Coil over springs can be purchased in 25lb increments, which is a vast improvement over the conventional spring offerings.
- We've designed our system to feature super easy spring/shock removal. The entire spring/shock assembly is held on by 1 bolt on the top and 1 bolt on the bottom. No spring compressors, no swearing.
- Heim bearing shock ends further reduce bind found in stock setup. This transmits road forces directly to the spring & shock allowing it to do what it's designed to do and get the tire back on the road quicker for more control and better handling. This can be compared to the benefits



**Here are all the parts waiting to be installed onto Mike's car**



**From left to right: the stock shock cap, our engine bay cover plate, the aluminum upper mount spacer and the upper mount**



**3 holes need to be drilled into the stock upper spring seat on 67-70 cars, no holes are required for 65-66 cars.**

*(Continued on page 13)*



## Street or Track Coilover (Continued)

(Continued from page 12)

found in using roller spring perches on a conventional system. Other systems on the market that use rubber or polyurethane shock bushings will bind during regular suspension travel and when the strut rod is used to move the lower control arm to set caster.

Our first step was to find a good shock supplier, one with a history of great shocks, a racing resume and knowledgeable support staff. We found this with Bilstein. If Porsche and Audi are using them for their production cars then they must be all right for our old Mustangs! The next thing we did was gather data, all sorts of data and lots of it, including car corner weights, sprung and unsprung component weights. We computed wheel rate, tire rate, and motion ratio. I could go into what all these terms mean but the article would get really long! You can find out what these fancy words mean with a quick Google or picking up a copy of 'How to Make Your Car Handle' by Fred Puhn or 'Tune to Win' by Carroll Smith. Armed with this data, we were able to design our first few shock curves. To give our customers more choices, we designed 3 shock valving and spring packages named 'Street', 'Sport' and 'Race'. Each package gets a different shock curve and a different spring rate.

We sent our shock curves to Bilstein who sent us the 'shim stacks' for our test shocks. The shim stacks are nothing more than a series of discs, plates, springs and spacers of various diameters, thicknesses, some with notches and orifices that get 'stacked' above and below the shocks piston to create the rebound and compression properties of the shock. By rearranging and changing these plates and adding and/or removing them you can change the rebound and compression force curves of the shock and how it performs.

We had plotted out several curves for each of the Street, Sport and Race valvings so we could test back to back. We'd build 2 sets of the Street valving shocks and spring combinations, test drive one, switch to the other and log the differences we felt. Our initial tests and customer feedback is confirming that the Street valved system is giving drivers great road feel and car control with no bone jarring teeth rattling ride!

For the Sport and Race systems things got a bit more involved. Several Sport valved shocks were tested back to back on the street just like the Street valved system. The Sport system gives a 'sportier' ride on the street but can also handle race track duty. The testing for the Sport valving was similar to the Street system testing; run a street driven test loop back to back and record driver feedback. For our track testing, Gingerman and Waterford were our test bed. We ran my 66 Mustang with the Sport system and our hired 'butt dyno', Jason Kolk ran the Race system in his 65 Mustang. Our program consisted pretty much of taking a few

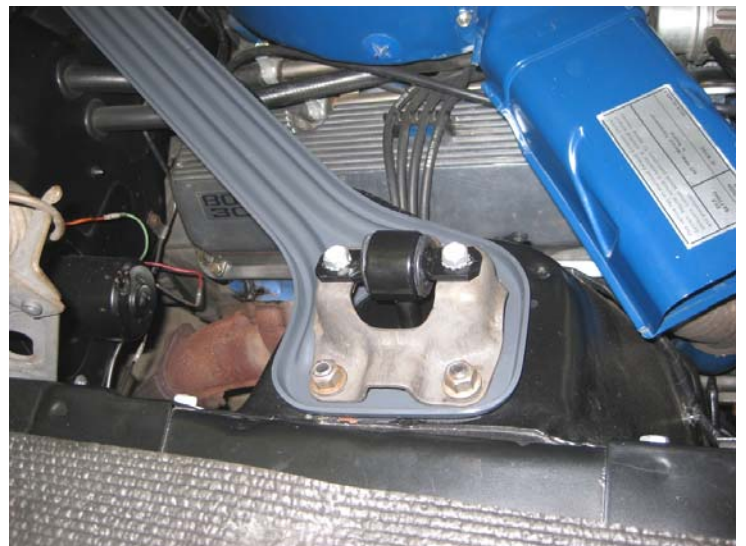
(Continued on page 14)



**Our engine bay cover plate slips under the export brace to cover the hole (it also acts as a template for drilling the holes on 67-70 cars). One of the features of the system Mike really liked is that we are able to install the kit and use a stock 'dummy' shock so the suspension appears stock from the engine bay. We drilled a hole in the engine bay cover for the stock dummy shock to sit in.**



**Mike supplied this stock dummy cut down shock**



**Here is the stock dummy shock and shock cap installed**

## Street or Track Coilover (Continued)

(Continued from page 13)

sets of different valved shocks to the track and run laps swapping shocks between sessions. Armed with a DL1 GPS data logger we were able to record lap times, g-forces, sector times and throttle/brake usage to tune the system to yield the quickest lap times.

After several months of testing we took another pair of Race shocks to the clubs October 'Harvest Happening' Waterford track day event. Jason was tasked with running consistent laps while we switched out shocks between sessions. The first session out yielded a pretty quick time. Second session we switched to a different valving curve with the same spring rate, this was slower. We went back to the first valving for the 3<sup>rd</sup> session to validate it was still quicker, and it was. Jason ran a 1:22.21. We also averaged the fastest 10 laps of each valving for more validation and proved the first valving was indeed quicker. We felt happy with the day's progress so ran the 4<sup>th</sup> session for fun! The tires were done after that so we called it a day.

During development we needed a 69-70 car to test fit some of the parts on. I'd sent out an email to the club to see if anyone was interested and Mike Nyberg responded. Mike had seen us out at the track throughout 2010 during testing and liked the look of the system. Mike wanted the Street valved system so he could enjoy cruising around to the many shows he visits during the Summer months. He brought over his beautiful 1970 BOSS 302 in September and we started the installation.

The installation of the 'dummy shock' modification is described in the accompanying pictures with captions.

There you have it. Easy install!



**Street or Track Bilstein Coilover System completely installed. All show in the engine bay, all go underneath!**



## ***Time to Renew Your Membership***

***Club memberships expire on January 1st***

***An application form is on the reverse side of this page***

***Dues are \$20 per year***

***Please fill out form and  
send it and your check to:***

***SAAC-MCR  
35334 Griswald  
Clinton Twp., Mi 48035-2619***

**(If you do not want to cut the renewal form, on the next page, out of the newsletter it can be found on the SAAC-MCR website at:**

**[www.saac-mcr.com](http://www.saac-mcr.com)**

**Then click on Membership.)**





# SHELBY AMERICAN AUTOMOBILE CLUB MOTOR CITY REGION MEMBERSHIP APPLICATION

Annual Dues \$20

NEW \_\_\_\_\_ RENEWAL \_\_\_\_\_ DATE \_\_\_\_\_

Name \_\_\_\_\_ Spouse \_\_\_\_\_

Children (Ages) \_\_\_\_\_

Address \_\_\_\_\_

Phone: Home \_\_\_\_\_ Work \_\_\_\_\_

Email Address \_\_\_\_\_

VEHICLES			CONDITION
Type	Year	Color	(restoration, fair, good, excellent, show, original)
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

What are your interests?

☐ Autocross    ☐ Drag Racing    ☐ Car Shows    ☐ Open Track  
☐ Rallies    ☐ Swap Meets    ☐ Tech Seminars    ☐ Vintage Racing  
☐ Social Events    Other \_\_\_\_\_

Which club activities are you willing to help with?

☐ Newsletter Articles    ☐ Planning & Organizing Events    ☐ Work Events  
☐ Other (Describe) \_\_\_\_\_

Please make checks payable to:  
Mail to:

SAAC-MCR  
 35334 Griswald  
 Clinton Twp., Mi 48035-2619  
 Attn: Rich Tweedle

## SAAC-MCR Fall Colour Tour and Chili Party October 16, 2010

by Rich Tweedle

It was decided that we would try a new route to the Guyer Autodrome this year and our President, Steve White, mapped out the way starting at the Meijer's parking lot on M-59 (aka Highland Road) and Bogie Lake Road where Steve & Cathy White, Craig & Bonnie Shefferly, Arlene Jacobs and Rich & Sandy Tweedle met. We traveled all the way to Bob's Big Boy, also on M-59, taking a whole 14 minutes. Tom & Phyllis Greene met us there. Needing a rest we ate breakfast and continued on our trek heading west to I-96 toward Lansing which turned into I-496 then merged into US-127 which would take us all the way to Clare.

We stopped off at Uncle John's Cider Mill and of course had some cider, donuts and some good-humored fun. Off to Clare, MI we went. Along the way Craig got a call from Mrs. Betki that they were on their way also and were some miles behind us. With the length of the call and the updates from Kathy as to mile markers Craig figured out when they would catch up to us. And did they! As they went by our cars were pushed sideways by the airflow off that Red Mustang convertible. We did have one hiccup. Seems that Michigan State had a home game on the 16<sup>th</sup>. US-127 was three lanes of moving parking lot up through the Lansing exits. Better planning next year – wasn't a car event, how were we to know?

We arrived in Clare, taking the back way in rather than drive the length of the city, using the bypass and M-10 back to US-127 to our motel, the Days Inn (which used to be the Holiday Inn Express, then two other failed names. Days Inn took it over when their newer building almost next door had a fire in the attic). Better for us as this place has a pool and Jacuzzi.

The drive to John & Trish's home was nice. Lots of fall colours along M-115 and into John's neighborhood along Big Norway Lake. We arrived early and helped set up the party room on the upper floor of the Autodrome. Randy & Kathy Betki were already there. John and Trish invite their neighbors to join us which assures us of having many chili's. This year we had ten to sample. With almost thirty people present there wasn't much chili being taken home. Besides the main course(s) there was a table devoted to appetizers and sides and another (Craig's favorite) for desserts. Be sure to see the color photos on the club web site – [www.saac-mcr.net](http://www.saac-mcr.net).

The winning chili was presented by Jerry Burger, a Big Norway Lake resident. He was presented a Trish Judson original hand-made blanket for his prize.

Afterward we went for the annual, in good weather, boat ride using two pontoon boats. It was jacket temperature but not too cool. Much colour around the lake but not much animal life this year. After getting back to the dock the sun started dropping and

(Continued on page 17)



Left to Right: Steve & Cathy White, Arlene Jacobs, Hostess Trish Judson and Sandy Tweedle



Left to Right: Kathy Betki, Bonnie & Craig Shefferly and Randy Betki



The host John Guyer announcing the winning chili



## Fall Colour Tour and Chili Party (Continued)

(Continued from page 16)

so did the temp. It got rather chilly so we joined the neighbors at the bonfire with its usual chimney log. After an enjoyable period of warming up and possibly melting a couple of shoe toes we headed back to the motel. Craig and Rich were the only ones to venture to the Jacuzzi.

It's an overall nice club outing. If you don't want to spend the night, it isn't that far from home. In fact, Tom & Phyllis went home that evening as Tennessee was beckoning again and Randy & Kathy drove back to the Ile.

The drive to John & Trish's home was nice. Lots of fall colours along M-115 and into John's neighborhood along Big Norway Lake.

### Winning Chili Recipe

#### Chili Yum Yum by Jerry Burger

##### Ingredients:

- 1 32oz can tomato juice
- 1 lb ground beef
- 1 chopped medium onion
- 1 chopped green pepper
- 1 14.5oz can diced tomatoes
- 1 large can chili hot beans (undrained)
- 1 10.5oz can condensed beef broth
- 1 6.5oz can tomato paste
- 2 TBLS chili powder
- 1.5 tsp ground cumin
- 1 tsp salt
- 1 tsp sugar
- 1/4 tsp black pepper
- 1/8 tsp baking powder

##### Directions:

1. Brown and drain ground beef.
2. Add all ingredients and bring to a boil.
3. Cook on low heat for 30 minutes. stir now and then.

The prize for the best chili, a blanket made by the hostess, Trish Judson.



Everyone goes for a pontoon boat ride on Norway Lake.



The Colour Tour and Chile Party ends with conversation around chimney log bond fire.

# Installing a Tremec T-56 Six Speed Transmission in a 1969 Mustang

By John Yarema - Club Member and Owner of Die Trends

Just before the Labor Day Classic, club member Jeff Seaman called to tell me he had a catastrophic failure of his T-10 four speed in his 69 Mustang. I didn't see it for a month but boy was it broke. Jeff decided to replace broken transmission with a T-56 six speed but couldn't find one locally. I found a New Magnum T-56 Cobra transmission with upgraded parts to handle 700lbs/ft of torque but that was \$2800 and didn't come with a bell housing. Jeff told his wife Becca to buy the transmission from D&D performance. She called them and I went and got it. Notice the chain of command! Then I was off to Jeff's house to get the 69 Mustang.

Jeff's car has a 351W with an 11" flywheel. Rather than change Jeff's balanced flywheel and clutch to a 10" clutch, I decided to make my own bell housing.

The location of all the holes in the small block Ford bell housing were located by putting it on a milling machine and writing down the x and y coordinates from the readout. A bell housing from another T-56 was then put on the mill and all its co-ordinates were picked up and compared on the computer to get the new bell housing bolt locations. Next a used Lakewood blow proof bell housing was put on the Bridgeport and 1.5" was cut off the back. Steel was then welded to the bell housing, the face was ground flat on the wet grinder. It was put back on the Bridgeport to drill the mounting holes for the T-56 transmission.

Jeff came out the next day and he started by putting on the flywheel with way too much Loctite! He then pulled the passenger side valve cover to get clearance to pull the header out while I milled some more clearance in the bell housing. After lunch we picked up a carbon fiber clutch, a rebuilt Centerforce pressure plate and bolts at Suburban. When we got back we put the bell housing on and the transmission in for a mock up. Wow was it heavy 129lbs! We left the transmission sitting on a 4x4 at the rear.

A day or two later, a cross member was made from a flat piece of 3/16" thick steel. It was bent to get to the transmission mount attachment point located 5 inches further toward the rear of the car. Smaller pieces were made to fit the other attachment points while clearing the body of the car, the transmission, and the exhaust. The transmission mount was so far rearward that the weight of the transmission would put a bending moment on the original body cross member mounts, so a hole was drilled through each flange of the seat perches where they meet the floor. My daughter Gen held the 2' breaker bar on the inside of the car while I tightened the nuts from underneath. Two straps were made to fit to the cross member. Now the cross member supports the transmission with four bolts with only a downward force. The parts and gussets were tack welded together and TIG welded by Dale, the owner of Prima Welding. The transmission was then pulled

(Continued on page 19)



This is the plate developed to check the center of the bell housing



Transmission mount cross member was fabricated from 3/16" steel and designed to attach to the stock sub-frame location and holes drilled through each flange of the seat perches where they meet the floor. This picture was taken before the part was powder coated.



This Photo illustrates how the transmission mount cross member needed to be designed to fit the confined space created by the exhaust system



## T-56 Install

(Continued)

(Continued from page 18)

out to finish the clutch assembly.

Once the transmission was out I wanted to be sure the bell housing would hold the transmission on the correct center line of the crank. Normally a bell housing has a round hole to center the transmission on the input shaft cover and you can check if the center of this hole is correct by rotating the crank with an indicator on the flywheel. With the T-56 there is no such hole, just two 3/8" pins to locate the transmission. The locations from used parts were picked and although my math was correct, I had to prove that the centerline was correct. A check gauge was made from a flat piece of steel by adding the 3/8" pin pattern, two clearance holes for bolts and a hole where the center of the input should be. This gauge was put on the transmission and the center of the input shaft was checked by trying pin gages to see if the same one fits top and bottom, left and right. It turned out that the math was correct so now the plate could be used as a tool to find the crank center. The bell housing was bolted to the block then the plate was bolted to the bell housing to check the hole for runout. The whole business of checking took a bit of tinkering around but it is important that the center is correct. One other thing I needed to do was measure the distance from the back of the bell housing to the pressure plate fingers to set the hydraulic throw out bearing. With just a twist the jack screw to the right setting, it could be pushed on and the O ring held it in place.

I tried to put the clutch pressure plate on Jeff's 11" flywheel but the bolts didn't make sense. The pattern that was used put one 5/16-18 bolt through the 8 mm locator pin hole in one spot and a 5/16" bolt through one of the two 13/32" holes. A bolt wouldn't go in the other 13/32" hole because there was no tapped hole in the flywheel. To correct this, the flywheel was taken off and set up on the Bridgeport. The center was picked up, and a new set of 3/8-16 holes were drilled to hold the pressure plate correctly. The clutch cover was powder coated and the flywheel was put on with the correct amount of Loctite. Extra 10-32 tapped holes were added to the bell housing for any cover plates that might be needed later before the bell housing was powder coated. The throw out bearing was adjusted to fit correctly and some clearance was milled on the upper covers for the shifters on the transmission. I installed the transmission and assembled all eight bolts in the transmission into the bell housing. I put the cross member in before I went home, but the next day it was pulled out to make some more clearances for the shifter. It had to put in a few times to get everything in right.

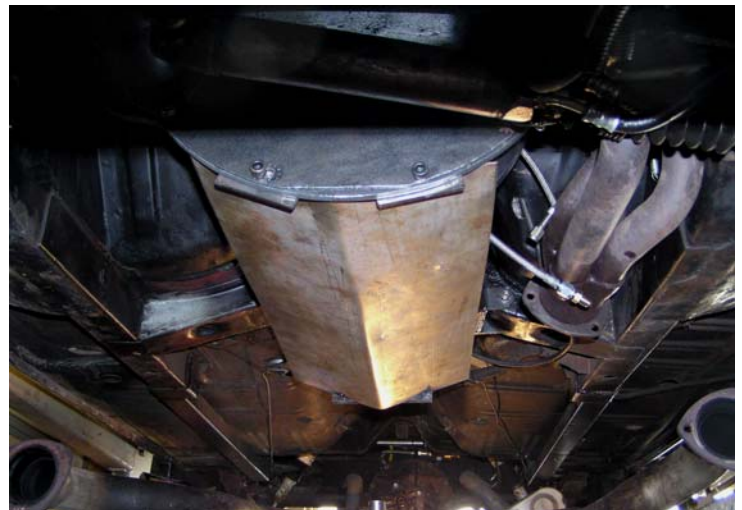
Jeff came by in the early afternoon on the way to DynoTech to get the driveshaft shortened and balanced. When we got back I put the new yoke on the axle for that bigger new drive shaft. Then I put the holes in the shifter handle and set it up so Jeff could try it while he was there. He got a chance to run the car thru the gears, with the engine off of course.

We had to take the rear cross member down (AGAIN!@!) so Jeff could put the vent tube on the transmission. The transmission was done. Becca brought the drive shaft to me and I spent Wednesday bolting stuff in. A skid plate was fabricated and added so Jeff won't damage his transmission by dragging over speed bumps or rail road tracks. We still need to add fluids and try it out but we got snow!!

When I got into writing this article, Mike Nyberg asked me if I could just buy a bell housing. I looked it up and the answer is yes! In fact Modern Driveline will sell you a kit to put this transmission in for only \$5611.34 + \$100 shipping and you have to put it together. Yes that includes the Magnum transmission!



**Skid plate powder coated and ready to install.**



**Mock up installation of the skid plate before final design, which is pictured above**

## Weight Jacking *Text and Photos by Steve White*

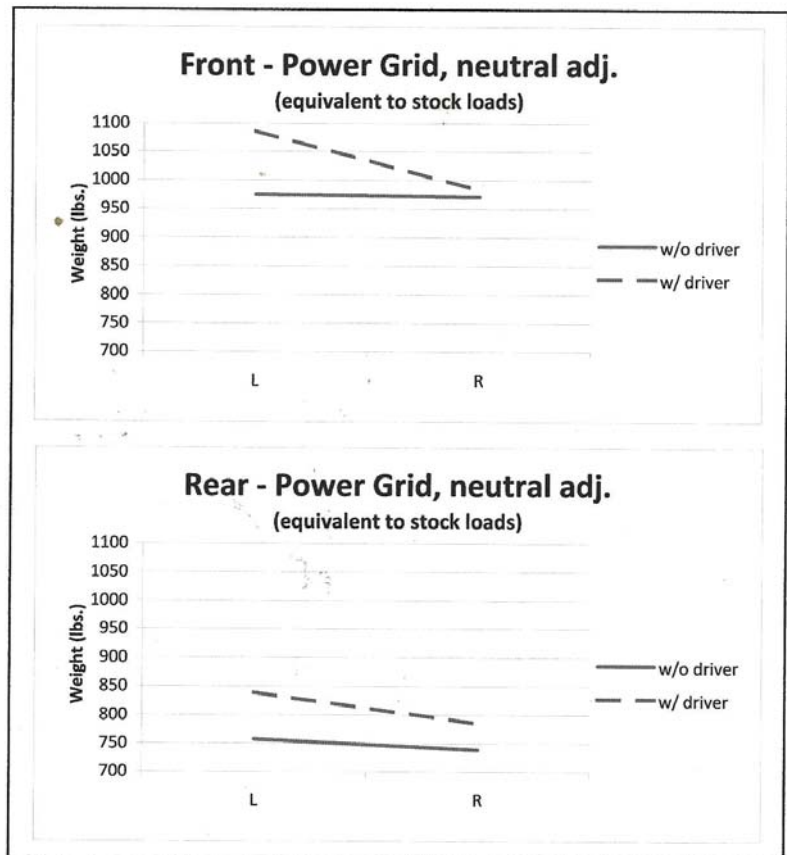
Having the ability to adjust the weight on each corner of your car can help balance it for better handling. Short of going the expensive coilover route, other options are possible. On late model Mustangs, adjustable rear lower control arms with weight jackers built in to the lower spring perch are available and can serve this purpose, but what about the front? For those who want to retain stock style suspension, a relatively new front suspension part is available.

Chip Minich of Powergrid, Inc. in Novi, MI has developed a line of adjustable sway bar end links for the front sway bar. By adjusting the length of each link independently, preloading of the sway bar has the effect of changing the corner weight of the respective wheel. Independent adjustment at each lower control arm is made via Heim style ball joints. This allows freedom of movement through the suspension travel and eliminates any binding of the parts. It is my personal suspension philosophy to use parts that free up the suspension so it can move through its motions without binding. You can increase your spring rate or sway bar diameter to get the control you need, rather than rely on built in resistance that you can't control.

The first step is measure your corner weights in the current configuration, before you make any changes. Fortunately, I was able to borrow a scale set from a fellow club member (Gary Roys). When setting up your car, you () need to take the measurements with driver in it, as that's the condition that it will be driven on the track. Weights without driver can be interesting too. I was surprised to find that the weights side-to-side without the driver were nearly equal, considering that there was a big heavy battery in the left front corner. I was also surprised to find that with me in the car, the weight distribution front to rear actually improved with more rearward bias.

When setting up with the adjustable end links, the front suspension must be in its static fully loaded position. With the stock sway bar end links removed, rotate the sway bar so its side arms are level. Once the sway bar is leveled, you can adjust the new end links so they go in without any preload. The reason you want to perform the set up with the sway bar horizontal is geometric. When one side goes up a certain amount, the other side goes down an equal amount. If the bar is not horizontal, the change

*(Continued on page 21)*



**Adjustable sway bar endlink installed with the sway bar in proper set-up position.**



## Weight Jacking (Continued)

(Continued from page 20)

in forces on each wheel will have different vectors and will effect balanced handling.

After you level the bar, you can remeasure the corner weights. Mine were extremely close to the stock measurements without the driver. With the driver in place, you can then begin adjusting the lengths of the respective end links to try to compensate for the driver. The left front will naturally be the heaviest with the driver in place, so you can start by shortening the LF end link to reduce the weight on that corner (i.e. essentially "lifting" the wheel). This has the tendency to distribute more weight to the RF. However, when adjusting any corner, it also has a tendency to add or remove weight from the diagonally opposite corner, or in this case lightening the RR. It also increases the weight on the LR, which can have a positive effect, since it will provide more grip to the outside tire.

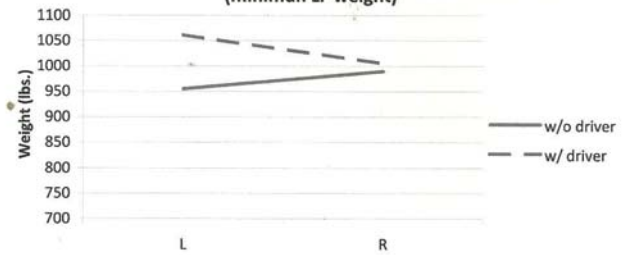
Since most road courses feature more right turns than left, the LF is the heaviest loaded dynamically, and the RR the lightest. In trying to balance out the front weights statically, the RR can be lightened. This could potentially cause the RR to lock up early on braking, or spin on acceleration coming out of a turn under power, but with adjustable end links you can dial it back if necessary.

Tentatively we have arrangements in February for Chip to either attend our general membership meeting and go into a more detailed tech talk, or potentially we could have an "off-site" tech seminar at another location to describe his products, as well as provide an overview of his full range of chassis services. Stay tuned to your e-mails inbox for further updates!

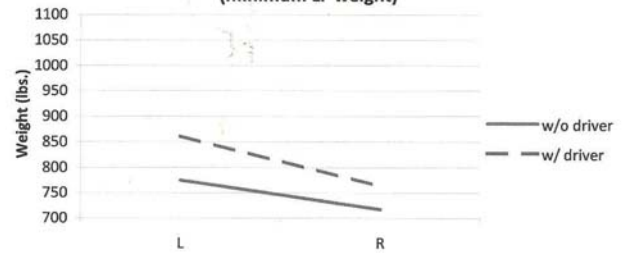


Each wheel is on a flat weight scale which are connected to the readout display unit

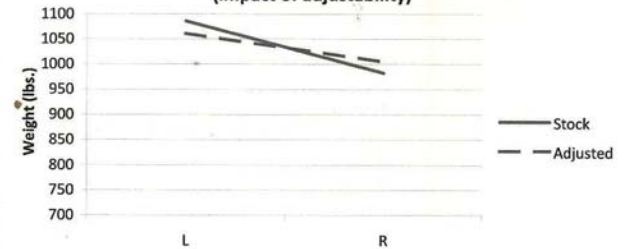
Front - Power Grid, max LF adj.  
(minimum LF weight)



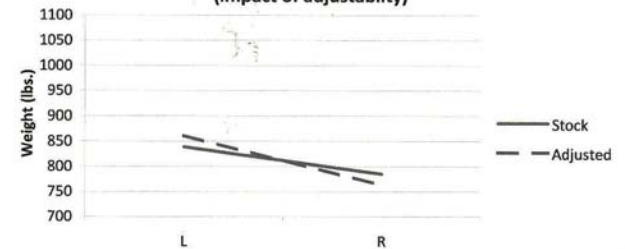
Rear - Power Grid, max LF adj.  
(minimum LF weight)



Front w/driver  
(impact of adjustability)



Rear w/driver  
(impact of adjustability)



# SAAC-MCR 2009 May Summary Financial Report

by Craig Shefferly

Item Description	November 2010 Only			Nov. 2010 Year to Date			Nov. 2009 Year to Date		
	Income	Expenses	Income O /(U) Exp	Income	Expenses	Income O /(U) Exp.	Income	Expenses	Income O /(U) Exp.
<b>1. Annual Membership</b>	\$20.00			\$1,800.00			\$1,880.00		
A. Newsletter					\$1,096.04			\$947.50	
B. Hot Line Phone					\$291.00			\$139.23	
C. Club Corp. renewal					\$289.00				
D. Membership Cards								\$53.46	
E. Mailing Newsletters to New Members								\$37.80	
F. Funeral Flowers					\$169.95				
G. Club Insurance					\$1,756.00			\$1,500.00	
<b>Sub Total</b>	\$20.00	\$0.00	\$20.00	\$1,800.00	\$3,601.99	(\$1,801.99)	\$1,880.00	\$2,677.99	(\$797.99)
<b>1. Monthly Meeting Food</b>		\$118.04	(\$118.04)	\$24.00	\$1,628.08	(\$1,604.08)		\$1,917.50	(\$1,917.50)
<b>2. Holiday Party</b>				\$1,655.00	\$2,389.23	(\$734.23)	\$1,662.00	\$3,755.24	(\$2,093.24)
<b>3. Programs</b>									
A. Swap Meet				\$2,067.00	\$639.49	\$1,427.51	\$2,633.00	\$611.40	\$2,021.60
B. Show 35				\$7,713.00	\$4,461.76	\$3,251.24	\$6,498.00	\$2,936.03	\$3,561.97
C. Go 35				\$5,151.95	\$2,960.00	\$2,191.95	\$4,032.44	\$3,365.50	\$666.94
D. Labor Day Classic				\$3,294.00	\$2,850.00	\$444.00	\$4,021.96	\$3,423.00	\$598.96
E. Harvest Happening				\$3,705.41	\$3,160.00	\$545.41	\$2,687.09	\$2,773.00	(\$85.91)
F. Woodward pre-cruise					\$99.83	(\$99.83)			
<b>4. Club Jackets</b>				\$120.00		\$120.00	\$180.00	\$234.07	(\$54.07)
<b>5. Club Pins &amp; Patches</b>				\$35.00		\$35.00	\$55.00		\$55.00
<b>6. Club Golf Shirts</b>				\$180.00		\$180.00	\$210.00	\$270.40	(\$60.40)
<b>7. T-shirts Shirts</b>				\$648.00	\$429.64	\$218.36	\$630.00		\$630.00
<b>8. '10 Trailer Replacem't Items/'09 Reorg</b>					\$606.08	(\$606.08)	\$2,254.00	\$1,734.98	\$519.02
<b>9. Signs</b>					\$956.78	(\$956.78)			
<b>10. '10 Sound System/'09 Tables</b>					\$813.61	(\$813.61)			
<b>11. Office Supplies</b>								\$138.03	(\$138.03)
<b>12. Decals-Inside</b>		\$146.00			\$146.00	(\$146.00)			
<b>13. Misc/Gifts/Book fee for Tom</b>					\$40.00	(\$40.00)	\$6.00	\$350.00	(\$344.00)
<b>Totals</b>	\$20.00	\$264.04	(\$244.04)	\$26,393.36	\$24,782.49	\$1,610.87	\$26,749.49	\$24,187.14	\$2,562.35
<b>Beginning Cash on Hand</b>			\$10,661.79			\$8,806.88			\$8,403.69
<b>Ending Cash on Hand</b>		CK.Book	\$10,417.75 10.377.75			\$10,417.75			\$10,966.04

## December Meeting Minutes Continued from Following Page

(Continued from page 23)

**New Vehicle Report:** - Mike Reimenschneider has a new Red 2011 Mustang GT - 4 bags of salt or sand will help to drive a Mustang in the snow.

**Club Website Report:** Dean Ricci is retiring from the website - may sell website to us - will need a webmaster - Darius may be interested

**Swap 'n Sell:** - Shawn Foltz friend has 2006 Mustang GT for sale - best offer - Brian Kaltz has Mark VIII for sale - Darius Rudis has F-150 spare tire (full size)

**President's Report:** - Holiday Venue is the Automotive Hall of Fame in Dearborn on Jan. 22, 2011- they are happy with Epoch Catering - All Board of Director positions remain unchanged with the exception of Darius may take on our Website.





# SAAC-MCR Abridged Meeting Minutes

by Rich Tweedle and Cathy White

October 1, 2010

Mtg. called to order @ 7:48PM – 36 Attendees

## Welcome & Recognition of new faces

-Mark DeLuca /AC Cobra kit car/took 25 years to build/428SCJ/ 3 yrs on road-Dwight Kreuger/2011 Shelby will have by Christmas/51Mercury w/4.6L Mustang engine, lead sled

-Chip Bling/Classic roadster Cobra kit car/1926 Model T street rod

**Financial Report:** \$10,400.00 (almost \$1,400 better than last year)

**Editors Report:** -Thanks for contributions to newsletter

**Membership Report:** 104 members

**Club Library:** still open for business

**National News and Insider Info:** Absent

**Competition Report:** -Trans-Am fantasy event – good-SCMC – North Carolina based club – low turnout at GingerMan-Harvest Happening event 10/10/10 – 18 people for Waterford as of tonight

**Show / Event Report:** -Show 'n Go 36 – May 29 & 30, 2011 (tentatively)-Fallen Officer Fund Raiser in Woodhaven –thanks for all contributions

**Advertising Report:** Absent (will start for S&G as soon as date finalized)

**Tech Exchange:** -John Yarema: Hi-Po exhaust manifolds hit non Hi-Po motor mounts - must be modified-Mark Kluwik: Saline wheels crumbling-chrome is lifting of wheel/tire is losing air at bead. RTV seal on rim bead fixes slow leaks, per Tom Greene. -SVT Focus – clutch issues – SVTOA has tech bulletin on clutch, Steve White to forward

**New Vehicle Report:** -Darius: nephew turned 16 - his Dad bought him 1964 Ford F-100, options heater and radio 33,000 original miles

-LS Lincoln 2001-5,000 miles V8-Marc: '93 Shelby – son's car

**Club Website Report:** Absent

**Swap 'n Sell:** See Rich Tweedle

**President's Report:** -Happy Birthday to all October birthdays-Guest speakers leave for winter make winter schedule plan problematic-future Tech speaker possibility – Powergrid adjustable sway bar end links-members open Tech forum-next month nominations for officers-Randy to run November meeting (Steve will be in Germany)

-2011 Holiday party suggestions- Autozone has a deal on calendars – take order

Joe Bradley presentation on Mustangs, Shelby's & race cars "back in the day"

November 4, 2010

Mtg. called to order @ 8:01 PM by Randy Betki, subbing for Steve White

## Welcome & Recognition of new faces

- Dwight Kreuger, invited by Mike Nyberg. He joined the Club tonight. He just took delivery of a 2011 Shelby GT500 w/Performance Pkg.

**Financial Report:** Craig Shefferly: \$10661 with a couple of bills outstanding.

**Editors Report:** Mike Nyberg: Next issue is in the works. Have contributors for all articles except Colour Tour & Chili Party.

**Membership Report:** Rich Tweedle: 107 members as of tonight.

**Club Library:** Rich Tweedle: SAAC 35 added, couple of items donated at meeting.

**National News and Insider Info:** Jeff Burgy: Unable to attend.

**Competition Report:** Darius Rudis: Excellent turnout for Harvest Happening – great weather and a safe event. One minor off. Went to 15 minute sessions to allow all groups to run prior to lunch. 20 minute sessions in the afternoon. Worked well. Shall use next year. Modified pit lane usage (in paddock). Cars going to hot pit lane park on left side. Cars leaving the track stay on the right side entering the paddock. No crossovers, making it safer. Also moved the registration table so it's under the oak tree next to the tech line.

**Show / Event Report:** Jim Binder: Starting to visit local clubs and talking up pre-registration. Possibly have a "Best Club Participation" award.

**Advertising Report:** Mike Riemenschneider: Nothing out yet for Swap & Sell – need date.

**Tech Exchange:** Phil Jacobs: J.Y. asked about hydraulic lifters not bleeding down. Possibly 12 years old, vehicle sat for a long time. 289 HiPo with vibration – consensus is harmonic balancer. M.N. has vibration in '70 Boss 302, possibly driveshaft. Use of urethane motor mounts not recommended. Could cause breakage due to system being tightened down too much and body flex.

**New Vehicle Report:** Darius' daughter bought a 2001 Mazda Tribute (Escape based) SUV for \$2800. Needs some work, nothing drastic.

**Club Website Report:** Updates have been done. Club members need to access and view Dean's work. Many event photos have been added.

**Swap 'n Sell:** Sent out on club email.

**President's Report:** Steve White was not present, being in Germany on company business.

**Etcetera:** Tim Young is setting up a 1500 horsepower dyno. Question on continuing Guest Speakers: Overwhelmingly YES. Nominations for club offices: So far no additional nominations. All officers running for another year.

December 2, 2010

Mtg. called to order @ 8:00PM by Steve White

## Welcome & Recognition of new faces: No new faces

**Financial Report:** \$10,400.00 cash on hand

**Editors Report:** - Status sheet shows 75% of articles are complete - Tech articles number 7-10 pages, in good shape - In good shape for publishing

**Membership Report:** 107members

**Club Library:** Boss 302 SPEED show will be added-Jeff Seaman listed in credits

**National News and Insider Info:** - Jeff Burgy mentioned Shelby cruise on March 13-19 to Belise - SAAC 36 – VIR, May 27, 28, 29, 2010, 4.2 mile grand course, Superfest with SVTOA & SCMC, Boss 302 Reunion possible - Mustang Monthly – Shelby annual publication is on sale

**Competition Report:** - Show 'n Go – tentatively changed to June 11 and 12 due to National Convention, Show will be on the 12<sup>th</sup> - Caravan to VIR possible – recommended to stay in Danville, VA (not New Boston! – S. White)

**Show / Event Report:** March 6, 2011 is Gorno Ford swap meet

**Advertising Report:** - 8 advance ads were placed for Show 'n Go - will change after new date is set - Gorno Ford Swap advertising to start

**Tech Exchange:** - Steve White's 2003 Explorer-door ajar light comes on when it's wet – solution is to take latch off and spray with WD-40 – sensor is in door latch. - Suggestion for a community build of an electric Mustang – any interest? - Bud Koss indicates mini bulb #74 may be the correct one for modern Ford instrument clusters?

(Continued on page 22)

## Shelby American Automobile Club – Motor City Region



Dedicated to the preservation, care, history and enjoyment of the automobiles produced by Shelby American and/or Ford Motor Co.

Monthly Meeting,  
First Thursday of  
every Month  
7:00 pm at Mama  
Mia's Restaurant  
27770 Plymouth  
Rd., Livonia, MI  
West of Inkster Rd.

Newsletter editor; Mike Nyberg  
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Technical Editor: John Logan

**We're on the Web!**  
[www.saac-mcr.net](http://www.saac-mcr.net)

Mailing Address Line 1  
Mailing Address Line 2  
Mailing Address Line 3

## 2011 Events Calendar

January	22	SAAC-MCR Holiday Party, Automotive Hall of Fame, Dearborn, MI
February	25 - 27	Detroit Autorama, Cobo Hall, Detroit, MI
March	6	SAAC-MCR Winter Swap Meet, Gorno Ford, Woodhaven, MI
April	TBD	SAAC-MCR Spring Cruise
May	20 - 22	34th Annual Shelby Spring Fling hosted by Indiana SAAC, Brown County State Park, Nashville, IN.
	27-29	SAAC 36, Virginia International Raceway, Alton, VA
June	12	SAAC-MCR Motor City Show and Go 36 Ford World Headquarters - Dearborn, MI
	TBD	SAAC-MCR Motor City Show and Go Open Track Event (and Driver's School) Waterford Hills Road Race Course - Clarkston, MI
June	19	Eyes on Design at the Edsel and Eleanor Ford Mansion, Grosse Pointe Shores, MI
	31	Concours d'Elegance of America at St. Johns (formerly at Meadow Brook), Plymouth, MI
July	TBD	SAAC-MCR Summer Cruise



**The sun was shining so bright Greg Cragel had to put up his colorful umbrella at the Harvest Happening open track event. (See related story on page 3)**

August	7	MOCSEM Mustang Memories All Ford Car Show and Swap Meet—BOSS Reunion, Ford WHQ, Dearborn, MI
	TBD	SAAC-MCR Woodward Pre-Cruise
	20	Woodward Dream Cruise, Pontiac to Ferndale, MI
Sept.	TBD	SAAC-MCR Labor Day Classic - Open Track Event Waterford Hills Race Course - Clarkston, MI
Oct.	TBD	SAAC-MCR Harvest Happening - Open Track Event - Waterford Hills Road Race Course - Clarkston, MI
	TBD	SAAC-MCR Fall Color Tour and Chili Party at John and Trish Guyer's Autodrome, Lake, MI

**Check the SAAC-MCR website at:  
[www.saac-mcr.net](http://www.saac-mcr.net)  
for the latest information about events.**