UTAH VALLEY
- Model A Club -

THE MOTOMETER | Vol. 5 | No. 4 | April 2017

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WPA Tour
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REAR MAIN SEAL
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AAA Lakeside Storage during our photo scavenger hunt *Photographer, Greg Mack*

WHAT'S INSIDE

The purpose of the club is two-fold:

1. To serve as a medium of exchange of ideas, information, and parts for admirers of Model A Ford cars and trucks and to aid them in their efforts to restore and preserve these vehicles in their original likeness.

2. To unite in a central organization, all individuals who are interested in restoring the automobile in a manner to attract prestige and respect within the community. It shall further be the purpose of this club to help these individuals become better acquainted and encourage and maintain among its members the spirit of good fellowship, sociality, and fair play through sponsored activities including the use of the Model A Ford and family participation.

The Utah Valley Model A Club is a chapter of the Model A Club of America (MAFCA). Membership with MAFCA is highly encouraged. Meetings are on the 3rd Thursday of each month at 7:00 p.m. upstairs in the Larry H. Miller Ford Dealership at 1995 N. University Parkway in Provo

2017 Club Officers

CLUB OFFICERS

Chairman of the Board	Nicholas Mack
President	Reid Carlson
Vice President	Greg Mack
Secretary/Historian	Howard Eckstein
Treasurer	Diane & Brim Brimley

APPOINTED POSITIONS

Web Page	Nicholas & Greg Mack
Facebook	Clyde Munson
Photographer	Greg Mack
Activities	Clyde Munson
Awards	Kelly Barker
Newsletter	Robert Mack

A Message From Our President

SPRING HAS SPRUNG!

Spring is here and the season for spending more time driving our Model A's has arrived again, Hurrah ! ! We had a great kick-off activity with Model A's on the last Saturday in March. We had 5 Model A's (and two moderns) running all over Provo and Orem in a fun scavenger hunt. Outside of being with the club, my favorite part was our visit to AAA Lakeside Storage which has an outstanding (unbelievable) collection of highway memorabilia. Thanks to Clyde for a wonderful activity.

Our activity in April will be a Utah County WPA (Works Progress Administration) tour on April 22nd. Please let us know if you did not get the postcard mailer about our March activity, so we can make sure you get the April invitation.

April is also the month that we celebrate Easter, the resurrection, and the renewal of the earth as blossoms, flowers, and greenery cover the landscape. Remember that nearly all of the automobiles built between 1928 and 1932 have rusted away to oblivion or recycled. The largest number of survivors of that era are our Model A's. We should be proud of them and treat them with tender loving care (lube, oil changes, clean gas, occasional cleanings, and scheduled maintenance). Remember, their 90th birthday is approaching.

At night when it is really quiet, I can still hear a few of our Model A's sobbing. They require some mechanical work to get them roadworthy again. Kudos to many of you who are diligently working on them. Please ask me or anyone in the club if you need some assistance to complete the work. We all want to see the club's entire fleet operational.

I might mention that the back cover of the MAFCA magazine was again graced with one of our club's cars. Joe Fazzio's car was featured in a photo taken by Greg Mack. I am really impressed with our little club's presence in this national magazine. Of the 285 chapters in MAFCA, the Utah Valley Model A Club seems to be is getting a lot of attention.

Thanks for all you do,

Reid, 2017 President

2017 Calendar of Events

April
- 20th — Club Meeting, 7:00 p.m. Larry H Miller Ford, TechTalk, brake rebuild by Pat Hansen
- 22nd — Utah County WPA Tour led by Howard and Gemma, 10:00 a.m. Springville Museum of Art
- 29th — Salt A's car game day.

May
- 6th — Utah Lake and Eureka Tour
- 16-20th — Northern California Regional Meet, Lodi, CA
- 18th — Club Meeting, 7:00 p.m. Larry H Miller Ford, TechTalk, 500 & 1,000 mile vehicle service, Roger Davis
- 19-20th UVU Car Show, UVU Campus

June
- 3rd — Rat Fink Reunion, Manti
- 3rd — Heber Creeper Tour w/ Salty A's
- 5-9th — Omaha Regional Meet, Omaha, Nebraska
- 15th — Club Meeting, 7:00 p.m. Larry H Miller Ford, TechTalk, rebuilding transmission top tower, Clyde Munson
- 22-24th — North West Regional Meet, Coos Bay, Oregon, Hosts: The Myrtlewood A's

July
- 8th — Steel Days Car Show, Rotary Park, Spanish Fork, 8:00 a.m. registration, free for UVMAC
- 15th — Steel Days Grande Parade w/ Mayor JH Hadfield, meeting times TBA
- 20th — Club Meeting, 7:00 p.m. Larry H Miller Ford, TechTalk, lubrication points, Nicholas Mack
- 24th — Mapleton Pioneer Day Parade 9:00 a.m.
- 30th — Henry Ford's 153rd Birthday

August
- Lindon Car Show
- 24th — Club Meeting, 7:00 p.m. Larry H Miller Ford, TechTalk, Model A body styles by Bill Thompson
- 30th-Sept 2rd —Ely, Nevada Tour, ride the Nevada Northern Railway with Salty A's.

September
- 21th — Club Meeting, 7:00 p.m. Larry H Miller Ford, TechTalk, Timing & Setting Point, Bob Todd
- 24-29th —MAFCA National Tour, traveling Pacific Coast Highway, visit Half Moon Bay, Big Sur, Golden Gate Bridge, Monterey Bay, Carmel and San Francisco
- International Model A Day/Vintage Iron Chef

October
- 4th-7th — Annual Hershey Swap Meet, Hershey, PA
- 26th — Club Meeting, 7:00 p.m. Larry H Miller Ford
- Fall Color Tour with the Copper Classics Chapter of the Veteran Motor Car Club of America, Sanpete County

November
- 14th — Club Meeting, 7:00 p.m. Larry H Miller Ford

December
- TBA — Annual Christmas Dinner
- TBA — Christmas Light Tour

Richard Tucker – April 1
Diane Furr – April 2
Judith Judd – April 6
Wayne Atkinson – April 20
Elaine Hadfield – April 21
Jan Jacobs – April 22
JH Hadfield – April 23

March's Monthly Meeting

Attendance:

Howard Eckstein, Jan and Tony Jacobs, Clyde Munson, Pat Hansen, Nicholas and Greg Mack, Diane and Brim Brimley, Bill and Colette Thompson, Ron and Ellie Sessions, Bud Durant, Bob Anderson, Bob Todd. Richard Tucker, Roger Davis, Dick and Anice McCulloch, Fernando Salazar, Tim and Judy Isaksen, Syd Crockett and Robert Mack.

Club Business:

VP Greg Mack presided and conducted the meeting. One of the first things Greg did was to award Clyde with another Golden Wrench Award. Clyde wrote an article for the Motometer about building a "glove box" for his coupe. This qualified him for the Golden Wrench. See page 18 for a list of awards offered by UVMAC and MAFCA.

Treasury: Diane reported. We have $1546.59 in savings and $220.35 in checking. Robert provided $50.00 checks from Bert's Model A Center as well as Bratton's Antique Auto Parts. We expect a check from Snyder's soon. We appreciate their support, and in turn, hope you will support them.

Introduction: Kenneth Johns introduced himself tonight. He bought his Model A pickup in 1953 and still has it. It has had a long life on Ken's ranch in Wells, Nevada. It was used to haul everything associated with life on a ranch. Most recently it was used to haul salt. Ken moved the truck to Utah so he could restore it. Welcome to the family Ken! We're glad to have you aboard!

Injury List:

Cliff Godfrey is out of the hospital this week after heart surgery and is doing well. So well in fact, that he and Ellen are planning on participating in the March 25th photo scavenger hunt.

Pat Justesen is up and moving around. She makes small trips around the house and uses a walker outside as she prepares for her up coming marathon (just kidding about the marathon). We wish Pat a quick recovery.

Vern Cope wasn't at this month's meeting, but we hear his recuperation process is coming along nicely. He is walking two miles a day and is able to drive now. Vern is definitely glad the surgery is over with. Now comes the healing.

2017 Club Goals:

President Carlson has outlined four goals he would like us to strive toward:

1. Get all club member's cars running and on the road before the end of June.
2. Have an activity where everyone's car is in a club photograph.
3. Develop a 90th anniversary/celebration gift for the Model A's as they each turn 90 years old.

Other Business:

Activities:

- March 25th: Photo Scavenger Hunt: Meet at the Fort Utah Park at Geneva Road and Center Street in Provo. From there we will drive to the scavenger hunt location. Make sure to bring your camera or a phone capable of taking pictures. We will leave the park at 10:00 a.m.

- April 22nd: WPA Tour: We will be visiting nine out of the fifty-seven sites constructed in Utah Valley. Because of the nature of some locations we will only drive by them; others we will stop and have pictures taken for next year's calendar. Howard has prepared a travel guide for each vehicle that will give a brief history of each site as well as driving directions (in case anyone gets lost).

- Heber Creeper Trip: The date may change due to conflicts with the UVU swap meet and car show. Originally the tour was scheduled on the 20th, but it may be moved to May 6th. Clyde will discuss it with the Salty A's, who had originally organized the tour.

- Rat Fink Reunion in Manti will be on the June 3rd weekend for those who want to participate.

- A lengthy discussion evolved concerning our biggest tour for the year — **The Ely Tour**. Clyde presented a 3 1/2 day tour that would provide a more leisurely driving tour with more time to see the sites. The pros and cons of time constraints dominated the conversation. More information is forthcoming.

- The summer's activities schedule is very full with more activities available than we can fit in. This is a great problem to have! Clyde will unveil the solidified schedule as we get closer to the touring season.

Other Items:
Greg and the board in general, are encouraging everyone to get involved in the activities this summer. By doing so, we (as individuals and as a group) can qualify for several awards; see page 18 for more details.

TechTalk:

Rebuilding a Distributor was this month's topic presented by Tony Jacobs. We learned the best way possible, with hands-on instruction. Tony divided us into four groups, gave each group a distributor body and parts to rebuild it. With handouts showing an "exploded view" of the distributor, we were able to rebuild them, discussing issues and problems typically faced when rebuilding distributors.

Heard it Through the Grapevine

OUT & ABOUT WITH CLUB MEMBERS

Now that JH's car is on the road, **Howard Eckstein** has teamed up with **Wayne Carlton.** He and Wayne are going to take on Reid's challenge and get yet another Model A on the road in 2017. Wayne, just like JH, has a 1929 Tudor. But his needs a little more work than JH's. With Howard and Wayne working together, they will get it done. Hopefully it will be completed in time for the club photograph this summer.

Bud Durant, compromised by polio, has been under the weather recently. He said, "What can you expect, I'm 76 years old!" He did make it to this month's meeting.

Wayne and Jan Atkinson are making steady progress with their Roadster. The machining on the engine is done and the chassis is almost finished. Their plan is to have it drivable for a trip to the Midwest Regional Meet in Omaha, Nebraska in June.

Richard Judd has been working on his car with **Howard**'s assistance. They have installed new brakes, a new fan and a new lower pulley. He'll have his Tudor ready for the summer driving season.

Ron Session, with the help of **Alan Justesen**, and **Bill Thompson** reinstalled his rebuilt engine on March 11, a Saturday afternoon. It was a challenge until they got it past the engine mounts.

Correction:

Clyde informed me that the 1931 engine numbers didn't survive the xls to PDF conversion. Here is the correct chart showing all engine numbers from October 1927 through March, 1932.

		1928			1929			1930			1931
Starting #	Ending #	Date	Starting #	Ending #	Date	Starting #	Ending #	Date	Starting #	Ending #	Date
1	137	Oct '27	810123	983136	Jan	2742696	2826649	Jan	4237501	4310300	Jan
138	971	Nov '27	983137	1127171	Feb	2826650	2940776	Feb	4310301	4393627	Feb
972	5257	Dec '27	1127172	1298827	Mar	2940777	3114465	Mar	4393628	4520831	Mar
5276	17251	Jan	1298828	1478647	Apr	3114466	3304703	Apr	4520832	4611921	Apr
17252	36016	Feb	1478648	1663401	May	3304704	3509306	May	4611922	4695999	May
36017	67700	Mar	1663402	1854831	Jun	3509307	3702547	Jun	4696000	4746730	Jun
67701	109740	Apr	1854832	2045422	Jul	3702548	3771362	Jul	4746731	4803000	Jul
109741	165726	May	2045423	2243920	Aug	3771363	3883888	Aug	none	none	Aug
165727	224276	Jun	2243921	2396932	Sep	3883889	4005973	Sep	4803001	4824809	Sep
224277	295707	Jul	2396933	2571781	Oct	4005974	4093995	Oct	4824810	4826746	Oct
295708	384867	Aug	2571782	2678140	Nov	4093996	4177733	Nov	4826747	4830806	Nov
384868	473030	Sep	2678141	2742695	Dec	4177734	4237500	Dec	none	none	Dec
473031	585696	Oct							4830807	4842983	Jan
585697	697829	Nov							4842984	4846691	Feb
697830	810122	Dec							4846692	4849340	Mar

April Fools?

FACT OR FICTION

O'Reilly Auto Parts

is always on the leading edge of technology. Don't have an Aries muffler? Simple fix, add muffler bearings to your current exhaust and it's just as good as the top dollar model.

Bosco's Collapsible Rubber Driver

This may look like an April Fool's joke, but it isn't. This is a Model A era advertisement. Bosco's Collapsible Rubber Driver, was an inflatable device with derby and mustache. "So lifelike and terrifying," reads an advertisement, "… **nobody a foot away can tell it isn't a real live man**!"

I wish I knew about this devise before I spent a bundle on my current electronic alarm system.

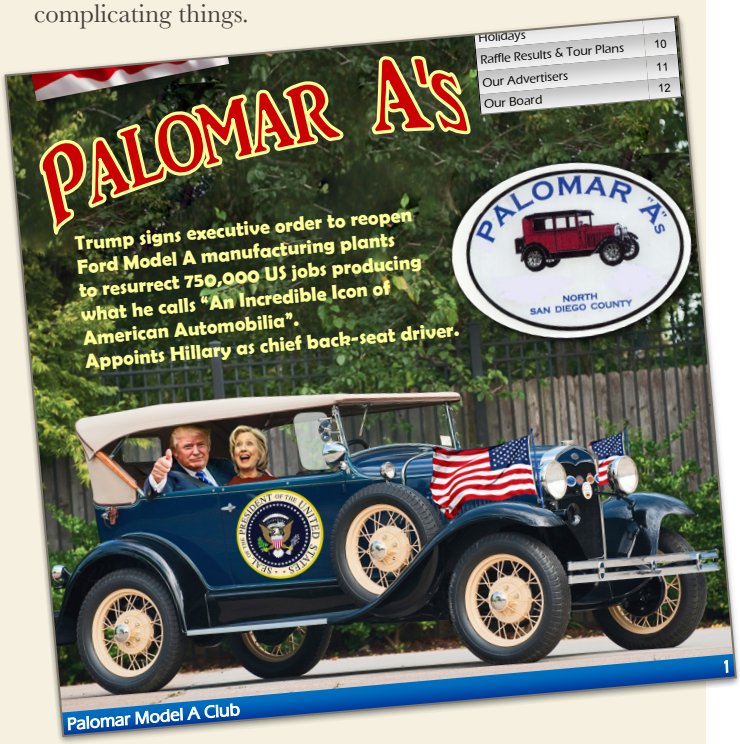
Headline of Polomar A's *The Reflector*

Ran across this intriguing cover of the Jan/Feb issue of *The Reflector*, the newsletter of the Polomar A's. It caught my eye. At the risk of getting political, I thought you might enjoy it too.

This could be exciting, considering the safety issues government agencies would fight over, not to mention the EPA concerns with dripping oil along the roads and parking lots of America. Or, it could be considered a new highway resurfacing project.

Then there is the terrifying thought of who would be taking control of the "back seat."

Rolling out a new line of Model A's would be exciting, but, the more I think about it, we'll have enough excitement during the next four years without complicating things.



Works Progress Administration Tour

HOWARD & GEMMA ECKSTEIN — TOUR HOSTS

Our upcoming WPA tour is on Saturday, April 22 at 10:00. Meet at the Springville Museum of Art. Bring your camera and your Model A.

During the mid-1930s, the effects of the great depression were in full swing. Utah was one of the hardest hit states during that time. In fact, we were 5th in the amount of federal New Deal money spent among the other 47 states of the union.

The New Deal, a catchphrase invented by Franklin Roosevelt, was an alphabet soup of new government agencies. Following is a partial list of the programs created during that time; some of which you may recognize today:

1. 1933 Agricultural Adjustment Administration (AAA)
2. 1933 Civilian Conservation Corps (CCC)
3. 1933 Civil Works Administration (CWA)
4. 1933 Public Works Administration (PWA)
5. 1934 Federal Housing Administration (FHA)
6. 1934 Securities and Exchange Commission (SEC)
7. 1935 Social Security Administration (SSA)
8. 1935 Works Progress Administration (WPA)
9. 1938 Food, Drug and Cosmetic Act (FDC)

Our tour will pass by, and where practical, photograph our cars with WPA projects in the composition. We'll pass by some of them due to inaccessibility. We'll meet at the Springville Museum of Art where there are a lot of angles for a good shot. From there we'll drive to the Utah State Hospital Amphitheater where there are many opportunities for good group photos. Our next planned photo stop is the Federal Building in Provo, then to the American Fork Cemetery rock wall. We'll finish at the amphitheater at Quail Cove in American Fork (across from the Timpanogos LDS Temple). After that, we'll drive over to La Fountain Mexican Restaurant for our timely repast. The entire tour from start to finish at the restaurant is 26.7 miles; just a little more than a marathon. With the stops, the travel plan should occupy about 2 1/2 hours.

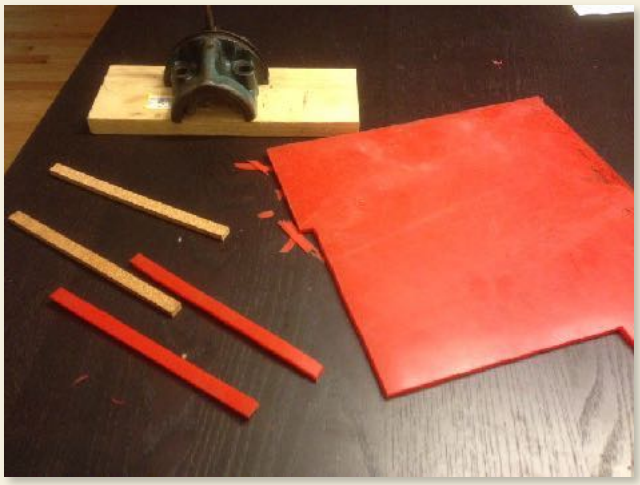
WPA sites we'll see

1. Springville Museum of Art 126 E 400 S, Springville
2. Utah State Hospital Castle Amphitheater 1300 E Center, Provo
3. Superintendent's residence Utah State Hospital 1079 E Center St. Provo
4. Carnegie Library Provo 15 N 100 E Provo
5. Federal Building Provo 88 West 100 North Provo, (Mural inside)
6. Pioneer Museum in Provo 500 W 600 N Provo,
7. Training school amphitheater AF 851 E 700 N, American Fork
8. American Fork cemetery wall 600 N 100 E

Copies of the photos we take will be submitted to Robert Mack for use in next year's club calendar.

Golden Wrench — Rear Main Seal

BY CLYDE MUNSON



If you have ever removed the oil pan on your model A, you have come across the junky piece of cork Ford decided was a good idea to use for the rear of the pan where it goes around the rear main. I hate these. I have cracked one before and learned new amazing words from the experience.

If for some crazy reason you were to decide to drop the pan under a shade tree on the side of the road to pull a couple of shims it would be almost impossible to reuse that stupid piece of cork while the rest of your pan gasket would likely be okay.

Many years ago I was putting my engine together and found some rubber that was the right thickness, so I cut it to fit and tossed the dumb bit of cork I cracked in the trash bin. The rubber worked great, but was not really designed for what I was using it for. So, when I was getting ready to rebuild my engine this last time I found some oil safe silicone material online at the correct thickness. I cut it to size and used it as the rear pan seal.

If anyone needs an extra rear pan cork seal, I have one I'm not using. Or, I could just make you a better one out of the silicone material.

Photo Scavenger Hunt

BY ALLISON MACK

A cold, rainy morning dawned on the day designated for our annual Model A Photo Scavenger Hunt, and yet, as if divinely mandated, the rain stopped as the Utah Valley Model A Club saddled up and headed for its first surprise stop, AAA Lakeside Storage. And what a surprise it was. There among the storage units was a vast and varied collection of vintage signs, gas pumps, model A's, airplanes and even a Superman phone booth!

It seems that over the last five years, Sparky Sparks made it his mission to collect as many old signs and gas pumps as he could (his goal is 100). He searched the Internet, attended swap meets and created an incomparable collection of every sign and gas pump imaginable. From Conoco, Texaco, Amoco, Utoco, to Sinclair, Skelly, Fire Chief and Mobile; you name it, he had it. And the vintage gas pumps almost outnumbered the signs. The gas pump's antiquity was manifested by their rusty appearance, but the rust and fading, chipped paint only added to their charm. They sported old familiar names like Skychief, Mohawk, Frontier and Red Indian Gas. And had they been operational, we would have seen the need for pumping the gas via a pump handle before putting the gas nozzle into the car.

As a pharmaceutical salesman, Sparky toured the country pulling a trailer behind him in hopes of collecting cars. He found some too, adding a Model A pickup, 1929 Tudor, and a 1930 Erskine Speedster to his collection that included his father's yellow 1931 Deluxe Phaeton.

After admiring Sparky's collection, Clyde and Jenn Munson handed each team a list of 23 photo opportunities for our scavenger hunt. Howard and Jemma used their visit to AAA expeditiously by finding 6 of the required photos on-site, including taking a picture "of something made to look larger than life" (a carousel horse) and taking a picture "of your car in the same frame as a bell" (Bell Telephone Booth). They enlisted the help of a grounds keeper at the Provo Pioneer Village, who suspiciously questioned their reason for their visit. After explaining that they needed to "take a picture of two things that rhymed," the gentleman pointed to the old wagon wheel leaning against the pioneer cabin, then pointed to Gemma's shoe and said, "Wheel, heel." Done. Howard thinks that the grounds keeper probably belongs to the MENSA group.

One of the harder photo ops was to take a picture of a bear. Reid and Elaine found a stuffed bear in the BYU Bookstore, while Robert, Greg and Allison made the trip to the Bean Museum for their bear. Nicholas and his crew took a picture of the Charmin Toilet Paper bear, and Howard and Gemma found a multitude of bears at the Black Bear Diner.

Creating a phrase using candy bars was a challenge as well. The Carlson's came up with, "1000 Grand, That's It, Baby Ruth." Grant and Angie spelled out " Octopus Kisses Swedish Fish." But Nicholas, Timothy and Tim's friend excelled with "Mr. Goodbar Take 5 Turtles."

The Carlson's found their picture of someone "eating an ice cream cone" at a yogurt shop (does yogurt count?). Greg went to McDonald's for his ice cream with a cherry on top, and Jan and Wayne Atkinson stopped by Baskin Robbins for their ice cream treat.

There weren't too many who found a "street name that is a verb," but Clyde and Jenn used Center Street for their verb, and Nicholas' team found Park Street.

Clyde found gassing up his car with "exactly 1 gallon" a little troublesome, but everyone excelled with the "duck face" picture. I am sure if you can coax a few into showing you their pix, you might have quite the belly-laugh!

I think most everyone had a great time! The Carlson's were just glad that their car didn't break down, while a few others wished they had brought their cars. Nicholas loved the old signs and gas pumps saying that it helped him "imagine a simpler time of life," and Greg just loved the chance to drive that old Model A. Thank you Clyde and Jenn for another great activity!!


SALLY BEAUTY
BIG BLAST DRYER SALE
$10 OFF
SOUR BRITE OCTOPUS
KISSES
Swedish Fish
2.38
THIS SALE $
1.000
GALLONS

When Spark Plugs Cry Foul

BY HOWARD ECKSTEIN

The lowly spark plug leads a long and difficult life. Generally it does its work without complaint and we motorists take it for granted. That is until one or more of them start to balk. What's up with those things, anyway? Why are they misfiring?

All a spark plug needs to do is ignite a compressed mixture of gasoline and air so that the charge burns completely. The rest is up to the members of the ignition system, carburetor performance and the integrity of the engine components.

Mind the Gap

To get a spark to jump a gap is not that hard. All that is needed is for electrons to get from one electrode to the other. We accomplish this by forcing them across an open gap with high voltage. The amount of voltage required depends upon the dielectric of the medium between the electrodes.

A dielectric is not quite an insulator; but is a very poor conductor of electricity such as a gas. In the case of our spark plugs, it's the high resistance of the air/fuel mixture in the cylinders. The distance of the gap is also a factor in how much voltage is needed. A smaller plug gap requires less voltage to make the jump than a larger one. Under normal operating conditions our plugs can require 20,000 volts or more.

A spark plug operates on the same principles as lightning. In both cases, Opposite charges are built up on the electrodes which get strong enough to ionize the air between them; thus creating a path for the spark which then discharges through the gap. This little spark is very hot and is more than adequate to ignite the compressed fuel in the cylinder.

If we look at the construction of a spark plug, we can see that great effort is made to insulate the two electrodes from each other. We want the full voltage of the spark to be directed through the gap. See **Fig 1**.

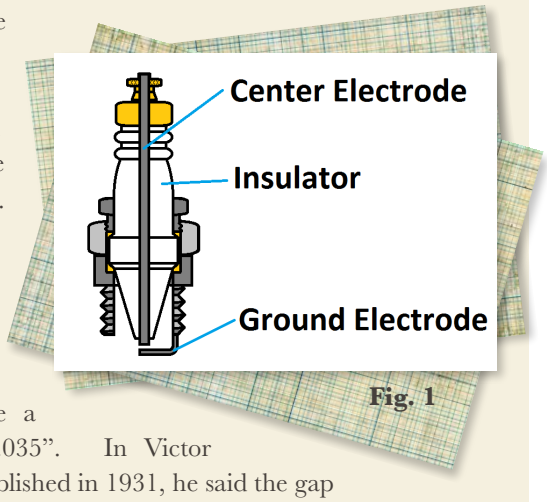


Fig. 1

Most Model A manuals published today advocate a plug gap of .035". In Victor Page's book published in 1931, he said the gap should be about 1/32" (.031") or the thickness of a worn dime. In September 1928, a service bulletin announced the discontinuation of the double venturi carburetor for a single venturi design with a change in all the jet orifice sizes. In connection with this supersession, the bulletin said to adjust plug gaps to .027". In April 1930, another bulletin specified the gap to be between .032" and .035"; so .035" it is.

When accelerating or climbing a hill, the driver opens the throttle and more of the air/fuel mixture is suddenly packed in the cylinders before engine speed can catch up. Under this condition, greater voltage is needed to ionize the extra air in the gap sufficiently to create an arc between the electrodes of the spark plug. If there is not a sound electrical delivery system to the plug, a misfire occurs.

Ignition Health

The primary ignition runs through the 6 volt side of the coil and includes the ignition switch, points and condenser. Wire terminals need to be clean and tight with the distributer and engine block well grounded.

Ignition points need to be clean and properly aligned to reduce resistance that can rob high voltage output from the coil. In addition, the point arm spring pressure needs to be strong to prevent "point float" at high speeds. In **Fig 2** you can see how the points are

Fig. 2

mounted in the distributor. Over time the spring gets a new memory as it is held in its installed position. Notice that the spring of the old points arm in the foreground is curled half way around. This spring has lost much of its original tension, thus its strength is compromised. The one in the back is new with its straighter thus stronger spring which is able to resist point float.

Starting with the ignition coil's big terminal and ending with the tips of the center electrodes of the spark plugs, the secondary ignition circuit conducts high voltage for the spark at the gap. Any break down along the way can cause what is called a "voltage leak" which robs power from where it is needed. Not all the high voltage escapes through these leak areas, but enough can to be diverted from the plug gaps to cause misfiring. Here are some of the secondary ignition failures this writer has seen:

1. *Carbon tracking in the big terminal of the coil.* This is usually a crack in the tower which over time has been leaking some of the high voltage to the case. After a while, the repeated weak electric arc causes carbon from the air to deposit in the crack and form a lower resistance path for some of the voltage. This is easily diagnosed at night while the engine is being accelerated. Little arcs can be seen where the carbon track is located. A water leak from the radiator or water pump can be picked up by the fan and sprayed onto the coil exacerbating this problem.
2. *Moisture under the distributor cap and in the body.* These parts are not sealed very well due to the advance arm knockout in the body. Sometimes condensation can accumulate here. Car washes are a great source for water droplets in the distributor, thus shorting out the spark.
3. *Defects in the distributor body.* The internal conductors that are cast into the body can arc across internally. This leads to internal carbon tracking which will eventually burn through the case.
4. *The spark control rod can vibrate around to become too close to the distributor-to-plug connector for cylinder #3.* Simply rotate the rod until it is away from the brass strip.
5. *The "stinger" wire from the coil to the cap may have a bad spot in the insulation.* If too long a wire is used and allowed to drape on the hot engine or to chafe against the #3 or #4 plug connectors or other metal parts, the insulation becomes compromised and carbon tracking begins. Usually the wound has a white and dried appearance. An arc here can also be seen after dark.
6. *The rotor can be damaged by a loose-fitting body.* With a snug fitting body on the distributor, there should be about a .025" gap between the end of the rotor and the terminals in the body. If the body fits loosely, it can slip off center. A rotor that has smacked the body terminals can have a crack which soon becomes carbon tracked. It generally shorts to the distributor shaft through the center of the rotor.

7. *A worn carbon button in the cap does not transfer voltage well to the rotor.* In addition, excessive wear of the rotor brush indicates time to replace it. See **Fig 3.** Here the rotor brush (the stainless steel part) has sustained continual arcing which has eaten part of it away. The spark has grounded out through the Bakelite to the distributor shaft. Notice the large white burn mark on the top of the rotor.

Fig. 3

8. *Dirty distributor parts cause trouble as the dirt can create a pathway to ground.* This won't cause a direct short, but enough voltage will leak off to cause a misfire under load. Clean the cap, body and rotor with carburetor cleaner or replace them if they are too hard to get clean.

Air/Fuel Ratio is Important

Way back in the days of ancient Greece, there was a philosophical school of thought called the Stoics. Part of their belief was that everything should be in balance with as little extravagance as possible. Today, we talk of air/fuel mixtures as stoichiometric when they are in ratios that produce the best performance.

An example of this is familiar to anyone who has started a fire. If you set a lit match against a log, there's just too much fuel and not enough air to get the log to ignite. Tinder, on the other hand, is made up of smaller pieces of fuel where air is present between them. By lighting the tinder, the fire will grow to eventually heat up and involve the log. In this example there are three elements needed to ignite the log. First, air/fuel ratio must be correct. Second, sufficient heat has to be present. And third, getting the log to burn takes time.

For most engines, a stoichiometric air/fuel ratio of about 14.7 to 1 produces the best performance. This is 14.7 parts of air to 1 part of gasoline. It's possible to burn different ratios, but the results will be categorized as too rich or too lean; meaning there is either too much fuel in the mix for rich and excessive air when running lean.

Even with a correct air/fuel ratio, plugs can become gas fouled if the fuel is not vaporized effectively. The carburetor atomizes the gas into small droplets and the heat of the manifold causes the droplets to vaporize. Like the tinder in the log example, the more the fuel is vaporized, the better it will burn.

One rare condition that can gas foul the plugs is carburetor icing. Due to the small opening of the throttle at idle, the air that passes through that area is suddenly depressurized above the throttle plate. This drop in pressure dramatically lowers the temperature of the air passing through. Water ice can condense inside and outside the carburetor around the throttle area when ambient temperatures are below freezing. See **Fig 4.** This photo was taken at a time when the engine had been sitting at idle for a while in humid sub-freezing weather. To ameliorate this icing problem, the intake and exhaust manifolds are bolted together so that heat is transferred to the air passing through the carburetor. Under these conditions, the fuel is poorly vaporized and although the air/fuel ratio is correct, some of the gasoline is not burned completely, leading to gas fouling of the plugs.

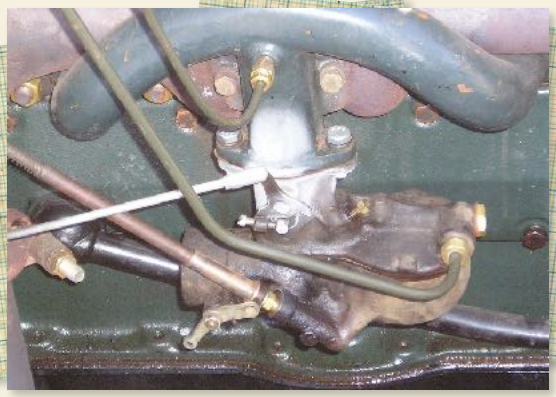


Fig. 4

the insulator and electrodes creating a short circuit which is a cause for a misfiring plug.

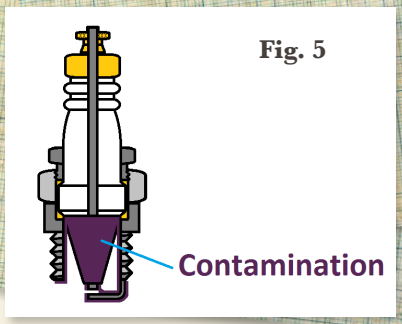


Fig. 5

When a plug gets a little fouled, it will begin to misfire occasionally. Depending on the conditions, the plug can clean itself. Spark plugs are designed to be self-cleaning where an engine is in good operating condition.

Cleanliness is Paramount

Any condition with the plug that creates a lower resistance than that found in the gap will provide an alternate path for the electrical discharge. The electricity finds its way to ground but not through the gap; so no spark is created, thus resulting in a misfire. If this condition persists, carbon, gasoline and oil eventually build up on the insulator and electrodes until the plug is no longer able to sustain a spark even under good conditions. **Fig 5** illustrates deposits on

Did we read that right: self-cleaning? If plugs couldn't clean themselves, you wouldn't be able to make it much past the end of your driveway after having just started the engine with the choke. To demonstrate how the heat of combustion can clean the plugs, **Fig 6** shows a badly carbon fouled plug being cleaned with the flame of a propane torch.

Fig. 6

Of course it will be understood that if the plug is so badly fouled that no spark is present, flame from combustion in the cylinder will not exist; thus the plug can't clean itself.

Heat Range

To accommodate variations in engine demand, the spark plug is built so that the tip of the insulator retains the proper amount of heat to keep it clean. In order to keep the insulator of the spark plug at the optimum temperature for the engine, plugs are designed to have a hot or cold heat range. In any given engine, too cold of a plug can foul easily and too hot of a plug can cause pre-ignition which is harmful to the engine.

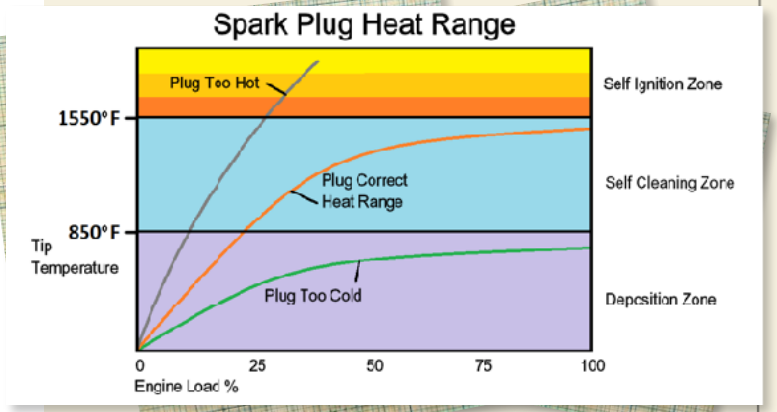
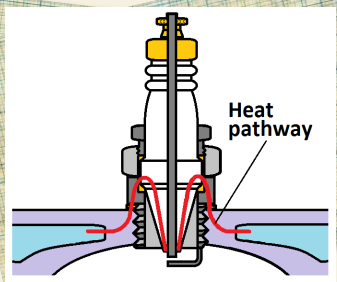


Fig. 7

In **Fig 7** the blue zone above 850 F is the temperature range where carbon and deposits will be burned off; as shown in the demonstration in Fig 6. The ideal is to have a plug that operates in this temperature range under all driving conditions. The orange line shows that even with a correct heat range plug, operating at slow speeds below 25% of engine load does not elevate the temperature of the insulator into the sweet zone.

This leads us into a discussion of what constitutes a "cold" or "hot" plug. **Fig 8** shows how the heat of combustion travels from the tip of the insulator to the metal base of the plug. Here the heat is absorbed by the cylinder head which in turn is cooled with recirculating water. The difference between a hot or cold plug has to do with the distance the heat travels to get to the base of the plug.

Fig. 8



Spark plug engineers design insulators with different length tips to achieve the heat ranges recommended by engine manufacturers. **Fig 9** shows various insulator lengths.

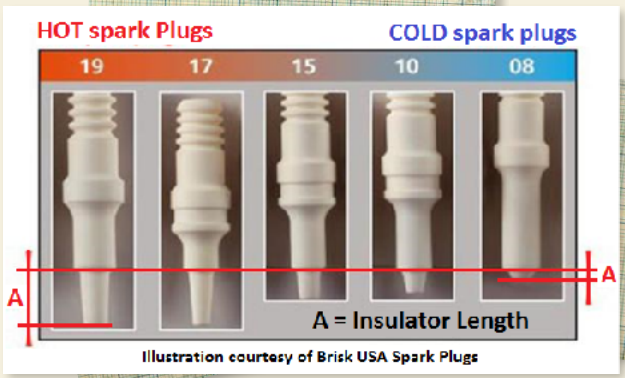


Fig. 9

The longer length insulator retains heat more easily since the distance to the base of the plug is greater. This is referred to as a "hot" plug. Heat travels quickly to the base with the short insulator and consequently operates at a lower temperature, thus it's called a "cold" plug.

Fig 10 shows two plugs from the same manufacturer. The plug labeled W-18 is hotter than the W-14. This is evidenced by the height of the base to accommodate a taller insulator.

Fig. 10

Even with the right heat range, an improper air/fuel ratio can lead to fouling or pre-ignition. **Fig 11** shows that for a given plug, a change in air/fuel mixture can adversely affect it. As the air/fuel mixture gets richer, incomplete combustion occurs, which results in carbon fouling of the plugs. A leaner mixture runs hotter and will cause the deposits to glow bright red. This is hot enough to set off the charge of gasoline in the cylinder before the spark is supplied by the ignition system. Pre-ignition is a spontaneous combustion of the fuel before the properly timed spark. By occurring too early, it can put shock loads on the bearings and crankshaft. This "glow plug" effect is visible in the top right photo in Fig 6 where the ground electrode is glowing red in the torch flame.

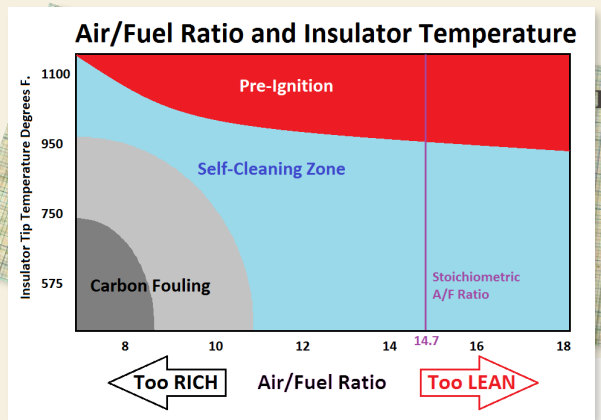
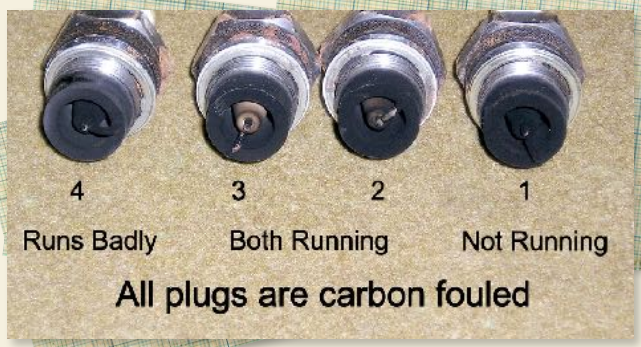


Fig. 11

Fig 12 shows four Model A plugs of the correct heat range (Champion 3X) which were quickly carbon fouled due to oversize jets in the carburetor. Although the newly rebuilt engine ran, it was never able to develop much power on a road test and idled badly. Cylinders 2 and 3 were doing all the work, and even they were struggling.

Fig. 12



Cylinders 1 and 4 were not contributing much to the power of the engine nor the smoothness of the idle. Once the carburetor was rebuilt using properly-sized jets and the plugs cleaned, this engine ran like it should. No more black smoke was belching out of the tailpipe.

It should be remembered that carbon build up on the plugs is an indicator of the deposits that will be found in the combustion chambers, on the valves and

on the tops of the pistons. If poor running conditions are left unattended for many miles, these deposits will build up and harden on those surfaces and can lead to pre-ignition even though new plugs have been installed. When that happens, it is necessary to pull the cylinder head and scrape the carbon off of these areas.

One word about worn engines that blow blue smoke: there are no spark plugs on Earth that will perform well in an oil burner; the plugs will oil foul in short order. Loose valve guides or worn piston rings that allow too much oil to get into the combustion chambers need to be corrected. This usually means an engine rebuild is in order

What is the best plug for my car?

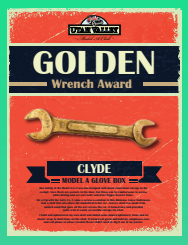
As a rule of thumb, slow parade driving and puttering around the block with the grandkids does not generate a lot of plug insulator heat, thus making that car an easy candidate for plug fouling. A hot plug would be good in that case. On the other hand, a car that is driven on long tours with the club and is otherwise a daily driver, a colder plug would be OK. For the average Model A driver who parades this week and tours the next, a mid-range plug is just fine. In fact, that's the plug the Ford factory recommended for the Model A; the Champion 3X, of which reproductions are now available.

There are other plugs on the market today that work well and it is up to you to try them out to decide which works best for your driving conditions. A conversation with the technical staff at any of the catalog houses can help you decide which plugs to order. In reality, there is not a big difference in the heat ranges for new spark plugs available for the Model A today. You may find some older plugs like those in **Fig 13** at swap meets that have different heat ranges, but be wise; old used plugs are great for looks but may not be so good for dependability.

It is estimated that for each 1000 miles driven, the plug gap increases by .001" due to erosion of the electrodes from the arcing they sustain. It's good to check and adjust your plug gaps about every 5000 miles. By keeping your carburetor in top working order, your ignition system tuned up and the plug gaps set right, a good set of plugs will last a long time. Do this and your spark plugs will never cry "foul."

Fig.

Recognition Reminder



1. **Golden Wrench Award:** Work on a component of your car (it can be anything from timing the engine or changing tubes in your tires, to rebuilding the transmission or rebuilding the brakes. Then write up a one-page article (with pictures) about the repair for the newsletter. Clyde has an example in this issue.

2. **13+ Award:** Drive your Model A at least once each month for twelve months. It don't have to be twelve consecutive months, but twelve months total. The Model A needs to participate in one or more club activities.

3. **Mileage Award**: Track the mileage you drive your Model A. Once you've driven 500 miles, you earn a 500 mile patch. You can also earn 1000, 1500, 2000, and 5000 mile patches.

4. **MAFCA Chapter Touring Award:** The club's Model A's travel an average of 800 miles per car in a year. This will be the first year we have tried to earn this award. We would like to make this an annual program.

5. **MAFCA 100,000 Mile Challenge:** Add the mileage of all cars that participate in an activity, and submit it to MAFCA. If all clubs do this, and the total mileage reaches or surpasses 100,000 miles they will send out a decal to each participant.

The Fashion Journal

EXCERPTS FROM THE *PEOPLE HISTORY.COM*

From : The People History.com

1929

Allerton Model Suit

Price: $23.50
Description This suit will be the instant choice of men whose taste is for the rich custom look of softly blended shades of tan or gray now a leading favorite for dress wear. The genuine Newport plaid adds the correct touch of elegance that means real style to the best dressers of the country. The weave is of close super-twist all wool yarns positively unsurpassed for wearing qualities and holding shape and press. Broad shouldered coat in the newest authentic two-button peaked lapel--half lined with handsome rayon. Choose from tan or medium gray colored plaid.

Basque Dress

Price: $2.98
Description Dainty, cool, and wonderfully becoming to the youthful figure is this beautiful little Basque dress. Fine quality organdie finish Batiste, printed in a gay all-over pattern, uses solid color organdie to top the full gathered skirt and to edge the graceful collar. Lace trims collar and pockets. Silk ribbon at shoulder and waist.

Vestee Style Shirt

Price: $1.95
Description Imported English cotton broadcloth overblouse shows panel rows of fine pin tucking, also cross bar tucking on collar and turnback buttoned cuffs. Low "vest pockets". Button strap back. Choose from white or tan.

Wool Trousers

Price: $3.85
Description Style sensation! A strikingly original style designing of fine, closely woven all wool trousers--featuring the latest hookless fastener device with new v-shaped belt loops, pleated fronts and smart slash pockets. The novelty weave pattern is shown to best advantage in the striped medium gray or brown colors. Expertly tailored for perfect fit and correct hang.

Editor's Note: In the next few months we will be looking at sample clothing from the Model A Era. We hope this will give you inspiration for your era wardrobe. Remember, you can consult with Elaine Carson about era dress and Jenn Munson is our era expert cosmologist.

New Idea Frock

Price: $15.98
Description Lovely "New Idea" frock of all silk georgette crepe. Novel double drape of self and contrasting georgette, caught to the waist-front by a row of tiny self buttons and rhinestone ornament. Loose back drape edged with the contrasting color. Picot-edged tiers of self material give dainty fullness and drape to the skirt. Colors come in Monet blue with flesh contrast or Helvetia green with tan contrast.

Reversible Apron Dress

Price: $1.00
Description Thousands of women always keep a good supply of these reversible apron dresses. Durable cotton broadcloth in four practical shades and all white. Collar, cuffs and pocket-tops are white broadcloth. Remarkable for their durability and low price. Choose from copen blue, rose, all white, lavender, or green.

Silk Georgette Crepe Dress

Price: $14.95
Description Combining a sheer, fine all silk georgette crepe with lovely lace. Lace edges collar and forms dainty vestee. Picoted plaited frills or georgette finish the sleeves, inset tiers form a cascade drapery for the flare skirt. Hipband has plaited self tab and pin. Full seco slip. Choose from Goya red or Blue "De Lyon".

The Ritz Suit

Price: $22.50
Description "Ritz" in name, character and outstanding elegance. Real up-to-the minute style. Note the newest type coat--the fashionable double breasted vest with lapels--the pleated trousers that young men everywhere demand--and the favorite 19-inch cuff bottoms. You'll admire the unusual quality of the tailoring--coat collar hugs the neck--vest fits smoothly--trousers have the proper hang and width. Fine satiny rayon half-lining gives just the right trimming to the coat. The all wool fabrics are specially selected for smooth, close weave sure to retain their shape and press. One--the beautiful oxford gray shown--the other the new midnight blue--both patterned in the latest panel effect with neat pin stripes in silver.

New Sponsors!

Bert's, Snyder's & Bratton's are new sponsors!

That's right, the three biggest Model A parts suppliers are now sponsoring our club. They each have donated $50 to help the club in its various functions. Because of their confidence in us, we would encourage you to support them every time you need parts for your car.

Snyder's Antique Auto can be reached at :12925 Woodworth Rd, New Springfield, OH 44443, or by phone at: (330) 549-5313. Their web page is: http://www.snydersantiqueauto.com/

Bratton's Antique Auto Parts can be reached at: 1606 Back Acre Circle, Mount Airy, MD 21771-7703 or by phone at: (301) 829-9880. Their web page is: https://www.brattons.com/

Bert's Model A Center is the closest to us. Their address is: 2767 S. Tejon Ave, Englewood, CO 80110 or by phone at: (800) 321-3800. Their web page is: http://modelastore.com/

Classified Ads

Wayne Atkinson has something for everyone.

- New .060 over positions $90
- New .060 over piston rings $35
- New brake rods (6 pieces) $75
- 30-31 Radiator - looks good
- 30-31 Radiator - may need cleaning and repair
- Generators - unknown condition
- Water pumps, misc. parts and complete
- 4 blade fans
- Good used cylinder heads
- Tillotson carbs - unknown condition
- Zenith carbs - unknown condition
- Used Hill ring & pinion - look good
- Misc rear-end parts - housings etc.
- 30-31 steering wheels - not perfect
- 30-31 horn button & light switch rod
- 2 transmissions

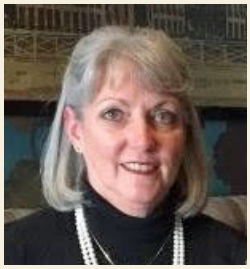
You can contact Wayne in Fairview at (641) 390-0870.

Mark Layton and **Tony Jacobs** have a lot of parts for sale too. If you need something for your car, call Mark at (801) 361-7300 or Tony at (801) 796-0396. They may have what you are looking for.

Joe Fazzio is selling a lot of his stuff, and he has ALOT! Even if you think you might need a part, call him (541) 990-2162 before he sells them all.

Model A Ford Club of America
Established 1957
"The Largest Car Club in the World Dedicated to One Type of Automobile"

Model A Ford Club of America



Spring arrives this month and thus for most of the country, the Model A touring season begins for 2017. I hope all of you are ready for some wonderful, fun days in your cars with your friends. There isn't a more relaxing day than driving the back roads and enjoying it from the front seat of a Model A!

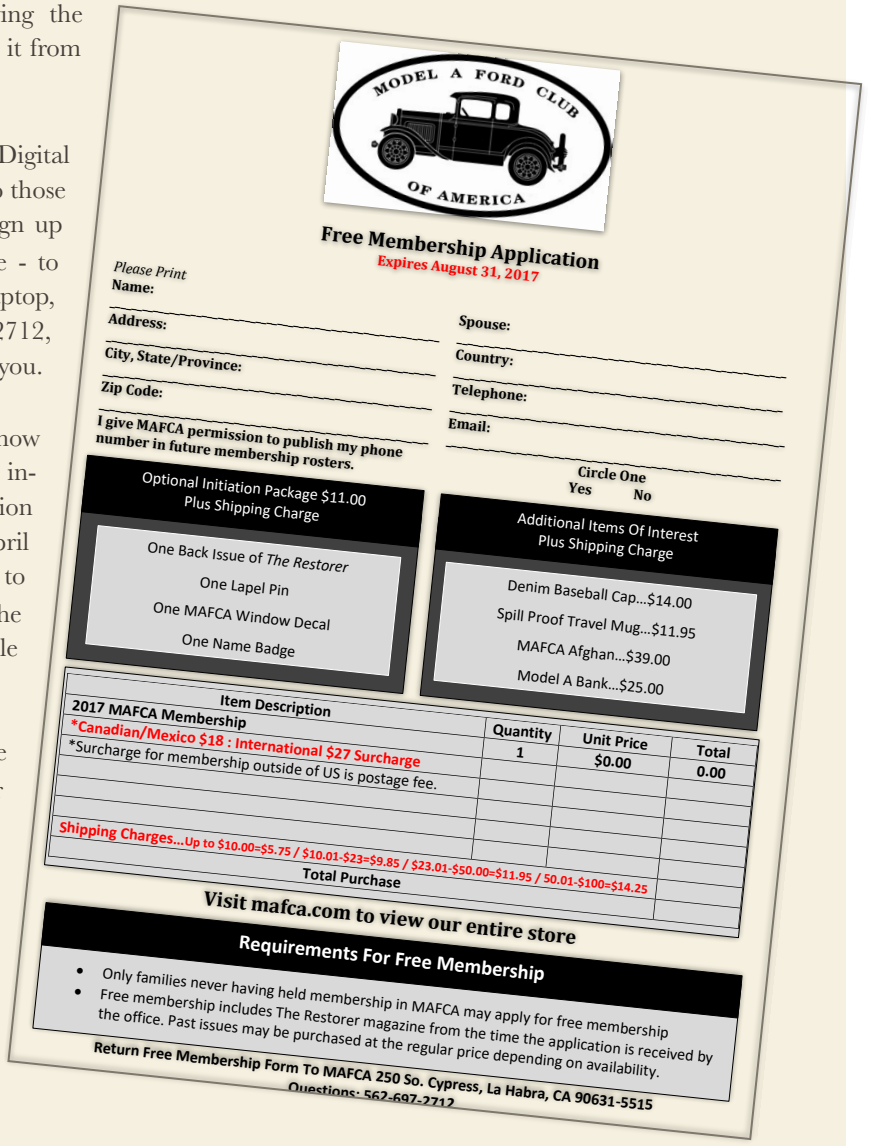
The January/February and March/April Digital Editions of The Restorer have been delivered to those of you who signed up for it. If you did not sign up and would like to receive the magazine online - to take with you everywhere you take your laptop, tablet, or smart phone, call the office, 562-697-2712, and the ladies will be more than happy to assist you.

Registration for the 2017 National Tour is now open for all members. You will find links to in-depth information about the tour and registration forms on our website and in the March/April issue of The Restorer. You will not be able to download the forms from the Digital issue of The Restorer, as the magazine is not downloadable for personal use.

Each year, MAFCA seeks candidates for the Board of Directors from all over the US. Your help is needed to guide our club; and this year, there will be four vacancies. In the March/April issue of The Restorer and on the website, Running for the Board Page, you will find answers for basic questions about what being a Board member would entail. If you have more questions, please contact Garth Shreading, 2017 MAFCA Membership Director and Election Chairperson.

FREE MEMBERSHIP

MAFCA is offering free memberships to anyone who has never been a member before. If you haven't, give it a try. IT'S FREE! Just cut out this form, fill it in and mail it to the address below. You'll be glad you did.



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Expires August 31, 2017

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Address:
City, State/Province:
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Spouse:
Country:
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Circle One Yes No

Optional Initiation Package $11.00 Plus Shipping Charge
- One Back Issue of *The Restorer*
- One Lapel Pin
- One MAFCA Window Decal
- One Name Badge

Additional Items Of Interest Plus Shipping Charge
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- Spill Proof Travel Mug...$11.95
- MAFCA Afghan...$39.00
- Model A Bank...$25.00

Item Description	Quantity	Unit Price	Total
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*Canadian/Mexico $18 : International $27 Surcharge			
*Surcharge for membership outside of US is postage fee.			
Shipping Charges...Up to $10.00=$5.75 / $10.01-$23=$9.85 / $23.01-$50.00=$11.95 / 50.01-$100=$14.25			
Total Purchase			

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Requirements For Free Membership
- Only families never having held membership in MAFCA may apply for free membership
- Free membership includes The Restorer magazine from the time the application is received by the office. Past issues may be purchased at the regular price depending on availability.

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Questions: 562-697-2712

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