

The Hyphens

A Newsletter for E-M-F, Flanders
and Everitt Owners Everywhere



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Editor's Column

As I write this, the snow is falling here in the Chicagoland area, but my thoughts are on getting behind the wheel (or tiller) of one of the old cars and burning up some gasoline. These winter months seem to drag on forever.

I had such a great time at Hershey 2019. I was so sore from walking after the first day I could barely make it back to my car. But the best part was meeting people and chatting for a while. I ran into several E-M-F Registry members as I walked the fields, and our Registry meeting in Jim Gorel's space was great. Meeting people is what makes a swap meet, and the antique car hobby in general, fun for me.

The following people have made donations since the last issue and I would like to thank them:

- Edward Hilbush (On Swap Field)
- Vince Cassidy (On Swap Field)
- Many un-named people at EMF Registry meeting via passed hat.
- John Moreton (mail in donation)
- Bruce Boggess (mail in donation)
- Jerry Mandel (mail in donation)

Many thanks to these and all those who have donated over the years to help defray the costs of this newsletter and the website. The funds are in good shape right now, but if you feel lead to help, I will accept donations to help defer the costs.

If you are going to Chickasha, come to the Registry meeting and say hi! I plan to be there.

Happy Motoring!!!

John M. Daly

Don't Forget

Chickasha E-M-F
Registry Meeting. Fri.
3/20@ 4:00 PM CDT –
Look for signs at the
show for room location



Flanders Transaxle insides seeing the light of day.

The Continuing saga of the Handley's Flanders Project

By Peter Handley

NOTE: The first part of this article can be found in the September, 2019 issue.

State of the Transaxle

After discovering the damaged transaxle housing, we decided to remove the rear end from the car and assess the damage. Once we got through the thick black grease, we discovered that the wheel bearings and axles showed a fair amount of wear, but the pinon and gears were not in too bad shape.

The usual teeth grinding on the edges was visible, but the main mating surfaces were generally free from too much wear. However, close scrutiny will be required of these to ensure they can be used.

When observing the pinon drive shaft however, it was soon apparent that the shaft was bent when the box was damaged, and will subsequently have to be replaced. See **Photo 1**.

Luckily we have another transaxle housing that we picked up in all the parts

acquired over the years. So we plan to refurbish and swap the parts over.

Which Motor?

At this stage, we decided to take stock of what we have and decide the best way forward. After looking over the car careful, both dad and I felt that we would like to keep the cars original patina look, however we both felt that we would like the car to be reliable, and as we were going to have to rebuild the transaxle, it wouldn't be too much more effort to pull down the motor and rebuild that as well right?

As we had started the engine that came with the car and it was complete and original, we decided to remove it, and store it. That way we would always have the cars original motor in its as found state. Instead, we decided to rebuild the motor Dad picked up,

*A Handley Restoration
Continued on page 2*



Photo 1: The Pinion drive shaft does not quite look right to me. What do you think?

A Handley Restoration

Continued from page 1

all those years ago, from Kookabookra. After pulling down and cleaning up the motor, we sent the block for a hot bath and had it re-bored an 1/8 of an inch to a final size 3 3/4 inches. The crank case was cleaned, and the oiler box and sight glass flushed out.

The cam shaft is in good condition, but the crank shaft had minor wear grooves. So we sent it off to be re-ground before making new white metal bearings. **See Photo 2.**

The original cast iron pistons and rings were in ok condition but were quite heavy. We are planning on balancing this engine, so lighter pistons are a must to get the most out of the process. Therefore, we looked for a more modern equivalent that we could substitute that was a lot lighter. In talking to a piston supplier, they had ones that were very close off a 1911 Wolseley. Unfortunately, at

\$500 each, we couldn't justify the expense. Dad has restored a few Model T Fords over the years and looking through some odds and ends as well as a parts catalogue, we found a high compression (dome) top piston was of similar shape and would fit with some minor modifications. The cost, being \$80 for a set of 4, sealed the deal.

The gudgeon pin size and height is a bit different to the standard Flanders one, so we had to modify the connecting rods. This process involved cutting and welding on new tops of the connecting rods, at the correct height so the appropriate compression could be maintained. These were then machined to the correct size. We then manufactured a custom big end mold and poured and machined our own white metal bearings to match the now machined crankshaft.

A custom face plate to ensure that the main bearings were perfectly parallel to each other was manufactured. That way both

main bearings could be bolted to the face plate and machined very accurately. **See Photo 3.** We also lengthened the bearings by welding some aluminum on the outside. This was so that an oil seal could be fitted.

After some measuring and hunting through catalogues, it was found the 350 Chevrolet valves would fit into the motor with very minor modifications. The valve seats were re-ground and we machined some new valve guides to suite.

The push rods (cam followers) have to be slightly lengthened to suite, and we are currently in the process of determining the best method to do this.

In the next instalments we will discuss the body work, final motor assembly and upgrades to the transaxle.

Editors Note: Many thanks to Peter for assembling this information. I always enjoy seeing how others overcome challenges when restoring or maintaining these wonderful old automobiles. I look forward to hearing more in an upcoming issue!!!



Photo 2: The crank-shaft and cam-shaft



Photo 3: Jig for machining rod bearings on the lathe



Machining Rear trans-axle parts.



Trans-axle part machining completed.

President's Message

*By Daryl Kemerer,
E-M-F Registry President*

What's Under the Hood?

We have all experienced many people viewing our vehicles and they often ask "how fast will it go?" Usually I explain that the car cruises between 30 and 40, but I declare I'm afraid to actually see how fast it will go! Then, I slowly open the hood and questions come flying at me (not from under the hood, but from the onlookers). What are those brass things beside the spark plugs? What is the large thing with wires coming out? How do you start it? Etc., etc.

From the beginning the E-M-F Company asserted that they combine the best of technology to date to mass produce and deliver a great quality, full-size automobile at an affordable price. Well...they certainly did, and they, like many other early manufacturers, had design weaknesses that ultimately could cause their vehicles to fail to proceed. I have often witnessed large, touted and acclaimed T-head engine vehicles and other esteemed marques sputter, misfire, and even disappear into a trailer early in a tour never to be seen again. Most E-M-F and Flanders cars on tours I have attended do very well with only occasional minor mishaps. That being said, I would like to offer my opinion on some of the weaknesses and the solutions provided by the E-M-F Company.

The E-M-F "30" was designed by William Kelly, who earlier designed all of the Wayne automobiles. As an aside, the magnificent large Wayne that was at our E-M-F Centennial was recently sold at the 2019 Hershey Fall Meet. The Wayne was as beautiful and impressive a restoration as any historical automobile at the Hershey sale. It sold at a much lower price than many expected. [Oh! If only my pockets were lined with gold instead of cotton]. At the departure of Everitt and Metzger from the E-M-F Company, William Kelly accompanied them in the manufacture of the Everitt 30. Following the Studebaker take-over, Walter Flanders remained in control of production and hired James Heaslet, who was working at Studebaker, to design the Flanders "20."

While both the E-M-F and Flanders drive trains share many similarities, I will explain some differing aspects of the designs. Under the hood in the E-M-F, Kelly used two large double cylinder jugs and Heaslet designed an en bloc four-cylinder head for the Flanders. While the double jugs of the E-M-F design allow the carburetor to be on the opposite side of the manifolds, the Flanders en bloc required the carburetor to be on the same side as the water pump and the magneto. Both shared the same oil lubrication system and I have driven two E-M-Fs and two Flanders on tours with confidence in the system working. It took a great deal of time to finally get our 1911 E-M-F roadster oiling system to be sealed successfully. The only drawback, I

believe, in the oil reservoir system is that the oil in the crankcase is drawn back into the reservoir as the engine cools, contaminating the oil in the reservoir.

The Heaslet engine compartment has a sub-frame design with a parallel tube along each side of the engine connecting the front and back cross-members. The water pump and magneto are mounted on the left side tube and with the right-side tube unfettered, these tubes strengthened the unit allowing the engine, along with the flywheel and clutch, to be removed for repair. Since the tubes extend forward through the front cross-member, the radiator is also mounted on the sub-frame for easy removal (not that a Flanders engine often needs repairs).

Both the E-M-F and Flanders vehicles did have major flaws in initial design which were corrected in early production. Both designs use the rear transaxle approach, like Packard and other manufacturers, to transfer power to the rear wheels. Kelly initially used the band clutch which proved to be less than successful. The change to a cone flywheel and clutch solved the problem. However, to disengage the engine the clutch now moves the entire driveshaft to a rearward position. I believe this hasty design change resulted in transferring undue stress on the rear universal sleeve, on the transmission case (front), and bushing. This solution works very well as long as the support torque arm to the transmission and the clutch and driver are working in sweet harmony. Otherwise, the mighty power and torque of the E-M-F engine may cause fierce noises in the transmission and even shear woodruff keys.

The Heaslet design of the Flanders "20" also had a major concept flaw transferring power to the rear wheels. Heaslet initially used a two-speed selective transmission with 26 inch wheels. It quickly became apparent that an intermediate gear was needed for hill climbing. After a short run of the two-speed production, a three-speed transmission was adopted for better hill climbing and even provided an upgrade to compete with the Ford Model T.

Heaslet's good idea was the reverse cone clutch. By reversing the cone at the flywheel the clutch pedal disengages the engine by moving the cone toward the front of the engine. This allows the transfer of engine power at the front universal sleeve on the clutch hub (spider). From the front universal the power drive to the transaxle in the rear was via the shaft inside a torsion tube. The torsion tube provides strong support to the front of the transmission as well as housing the drive shaft. Heaslet's design eliminates the forward and backward movement of the open driveshaft that occurs in the E-M-F design and offers better support for the transaxle.

As good as this design is, Heaslet must have had a bad day when he placed the shifting rods entering the bottom front of the transmission. In addition to this slip in attention to shifting details Heaslet also has a right-hand thread on the water pump under the

hood. Hence, when the engine is running the water pump nut is spun loose. These two minor faults result in water puddles on the floor in the front, and transmission lube on the floor in the rear of Flanders vehicles. LeRoy Pelletier (advertising guru) would likely suggest that these minor oversights in design were purposely included to remind owners to check water and lubrication before pathfinding for a Glidden tour or embarking on an E-M-F Company Outing. My solutions to these Flanders oversights is to make an arm locking the hex nut in place on the water pump, and rubber boots made from bicycle tire tubes on the shifter rods to slow underneath puddles.

While I sit writing on a cold, gray day in western PA, I anticipate a warmer day soon so that I might test my Flanders water pump nut and transmission boots. Kathy and I plan to attend the 2020 Outing in Connecticut with a fantastic, fails to flounder Flanders suburban. We hope to see you there, as Linda and Jim Gorel have an exciting week planned. Let's share our ideas and experiences. Remember, E-M-Fs and Flanders are as good under the hood as they are eye-catching and appealing on the outside! Time to check the water pump nut.

Daryl Kemerer

Harrah's Last Hurrah!

As you know, the E-M-F Registry is an affiliated registry of the Horseless Carriage Club of America (HCCA). If you are not yet a member of the HCCA, I strongly suggest you join. The bimonthly Horseless Carriage Gazette is well worth the cost of membership in my opinion.

As HCCA Members, you and your E-M-F, Flanders or Everitt are invited to the Horseless Carriage Club of America 2020 National Convention and Tour, headquartered at Harrah's Lake Tahoe in Stateline, Nevada, April 19-22, 2020. They will be commemorating Bill Harrah's legendary Reno tours and are hoping for a substantial number of cars on the tour, which is exactly how Mr. Harrah would have wanted it.

The convention and tour will include three days of touring, following the routes created in the 1950s by Mr. Harrah. They will tour around Lake Tahoe, down into the Washoe Valley to visit car collections, to the National Auto Museum in Reno, and to the mining town of Virginia City.

For details about the tour schedule, registration, and hotel reservations, please visit their website at <https://hcca-annual-tour.eventcreate.com/>

You can also go to the Events page on the **E-M-F Homepage** to download a registration packet for this event.

For questions, contact the host, **Don Plumb**, at CONTACT INFO HIDDEN

2020 E-M-F Company Outing Tour.

Our Next E-M-F Company Outing will be by the Shore in New England July 12-18, 2020. Your Hosts will be Jim & Linda Gorel.

With arrivals on Sunday July 12th, and departing on Saturday the 18th. Lodging will be at the Hilton Garden Inn, in Preston CT.

We have many attractions to visit during the week including:

- William Gillette's Castle home.
- The Navy Sub Base, where we can board a real Submarine.
- A visit to the Mystic Maritime Village including a New England Clam Bake, River Cruise, and more.
- A visit to an up / down Saw Mill, an Indian Museum, a Steam Museum, and more.

So, come join us in Connecticut for the next E-M-F Company Outing 2020, and enjoy the Scenic New England Coast and attractions we have to offer you.

In Connecticut during July, we have moderate temperatures 80's to low 90's, with rolling hills that are many, but not too large, which makes for easy driving. Since CT is a small state, our attractions are also close by so our driving distances will be shorter and easy going. During your driving there is an ample supply of Stone Walls to see and be amazed at. We grow them like Potatoes here in CT.

For more information, please contact **Jim & Linda Gorel** at CONTACT INFO HIDDEN. *You can find the registration packet on the Events page of the E-M-F Homepage website.*

E-M-F Parts For Sale

Radiator medallions for Canadian E-M-F's. I have had a few reproduced from an original pattern. Available in either brass or aluminum. These were used from 1910 to mid 1912 when the E-M-F Company of Canada was taken over by Studebaker. \$40 US or \$50 CDN, includes postage. **John Smith** CONTACT INFO HIDDEN

Have for sale **EMF carb.** Appears complete and good shape. Asking \$485. **Layden Butler** CONTACT INFO HIDDEN

EMF parts for sale. Hershey spot RJW 27-30. **Ken Campbell** - CONTACT INFO HIDDEN

EMF Frame for sale. **Carol Storms** CONTACT INFO HIDDEN



E-M-F Parts Wanted

Looking for an original **Radiator Cap** for an E-M-F 30. I need one for my 1912. I would also like to find a **restore-able hood appropriate for a 1912 E-M-F.** Also, any **Rear Fenders** for a 1912 Demi Tonneau out there? I would be interested. **John Daly** CONTACT INFO HIDDEN

Looking for a **Flanders 20 brass radiator script** and a **brass Studebaker radiator script.** **Bob Lester,** CONTACT INFO HIDDEN

A Thought to Ponder

(In honor of spring being right around the corner) - When does it stop being partly cloudy and start being partly sunny?

E-M-F Services

Rear Wheel Hub Pullers custom made for the E-M-F (and other cars). <http://customhubpullers.com/> or call **George** at CONTACT INFO HIDDEN

Metal spinning's one inch to 96 inch's, all metals for early cars. Brass lights and other parts. Call me to discuss your needs! **Larry Gibson** CONTACT INFO HIDDEN.

“The Hyphens” is the official publication of the “E-M-F Registry” – an affiliated registry of the **Horseless Carriage Club of America.** There are no membership dues at this time.

Donations are accepted to help with the cost of the newsletter and Website.

President: **Daryl Kemerer** CONTACT INFO HIDDEN

Vice President: **Floyd Jaehnert** - CONTACT INFO HIDDEN

Main Contact/Newsletter Editor/Webmaster/Secretary/Treasurer: **John M. Daly** - CONTACT INFO HIDDEN - Visit us online at <http://EMFAuto.org>

Upcoming E-M-F “30” Events

March 20th, 2020 at 4:00 CDT - E-M-F Registry Meeting at Chickasha Pre-WWII Meet on the Friday afternoon of the show. It will be in one of the meeting rooms in the south building. This will be a time to meet up with other owners, register your E-M-F with the E-M-F Registry, check/update your E-M-F Registry information and discuss the future of the E-M-F Registry. If you are going to Chickasha, please plan on attending. **For more information contact: Tom Ruggles** CONTACT INFO HIDDEN

July 12th -18th, 2020 – Our next E-M-F Company outing tour!!! It will be by the Shore in New England July 12-18, 2020! If you did not receive a Registration packet via the email distribution, it can be downloaded on the E-M-F Homepage Events page. **Contact Jim & Linda Gorel for more information** at CONTACT INFO HIDDEN

October 8th, 2020 3:00 PM Hershey Time - E-M-F Registry Owners Meeting at 2018 Hershey AACA Fall Meet – at **Jim Gorel's spaces CI 73-75.** If you are going to Hershey, please plan on attending. **For more information contact: Daryl Kemerer** CONTACT INFO HIDDEN

NOTE: If you have received this issue via US mail, and have an email address, can you please send me an email at CONTACT INFO HIDDEN (**NOTE: There is an Underscore, i.e _ , between “John” and “Daly”**) so I can save some money and start delivering *The Hyphens* by email?