

WESTERN

'A' MODEL NEWS

THE OFFICIAL NEWSLETTER OF
THE MODEL A RESTORERS CLUB (WESTERN AUSTRALIA BRANCH) INC.

NOVEMBER MEETING

Sunday, 27th November, 1983.

RESTORATION RUN.

Starting at Bill Spencer's Workshop, 10,a.m. Cnr. Townsend Rd. and Churchill Avenue, Subiaco.

Bill has several cars to look at including a 1930 Phaeton, his newly restored 1929 Sports Coupe and a magnificent Daimler plus the remains of several other cars.

Next stop is at [REDACTED] to see Bill Bennie's current state of restoration on the 1928 A.R. Phaeton. It is starting to look like an 'A' at last and will go in for upholstery and hood in a few weeks.

LUNCH will be at our President's home at [REDACTED] North Beach. There is a barbecue or you can bring a cold lunch. Max has progressed on his coupe and has also done some work on his motor bikes.

After lunch its across to John Luca's workshop at [REDACTED] Balcatta. John is progressing on his 1929 Tudor. When finished it will be a welcome addition to the Club.

Our last call will be to Ross Letch's home at [REDACTED] Greenwood. His 1928 Phaeton is really looking great in its Dark Green and Black colours. Ross has rebuilt his engine and it won't be long before he is mobile.

This should be an interesting restoration run and we all usually learn something from these type of runs. It has the effect of urging you on to do some more on your car so come along and hopefully be inspired!

One small request - from past experience garages can be dangerous places for children. Make sure yours have something on their feet and they know they must not touch anything.

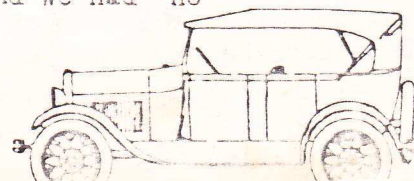
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LAST MEETING. Not a large attendance but once again we all had a good time with a drive around the river and beaches and finishing at a park in Manning for afternoon tea. A highlight of the day was meeting round-the-world traveller in Stan Guignard from Ontario, Canada in his 1928 Phaeton. Stan is collecting money to help fight Cancer and seems to be very successful at it too.

I drove with him during the run and we were stopped by a very shapely young woman in Bicton waving a \$5 note. After realizing my luck hadn't changed Stan graciously accepted her donation and gave her a postcard of his car.

Sitting in the front passenger seat in a left hand drive car is an experience in itself. You can't see the clearance on the left mudguard but of course the driver can and you continuously have the feeling that you are far too close to the parked cars, and as for pulling out to the right or doing a right hand turn it feels like suicide - but Stan is used to all that and we had no problems.

CHRISTMAS DINNER Thursday 1st December, Civic Theatre
Restaurant, 380 Beaufort St. Meet outside at
7 p.m., they would like us seated by 7.15p.m. please.



NEW MEMBERS. We welcome Ann and Keith McAllan of Mt. Pleasant who have a 1928 Tudor which needs full restoration. Also Philip Raccuia of Morley who has an unrestored 1928 Roadster and who would be appreciative of tips and advice on the restoring of his car.

We hope to see you all on the restoration run on Sunday.

OVERSEAS NEWS. From England - Steve and Louise Read advise that they have "found" four A Model owners in their vicinity - one being the owner of a 1928 Roadster shipped from Australia many years ago. As these people do not belong to a Club in England Steve has suggested that they join us as overseas members. This could lead to interesting correspondence between enthusiasts in both countries.

MEMBERSHIP ROSTER. Sorry - not ready yet, still working on it, will publish as soon as possible.

RESTORATION TIPS. Thanks to Ross Letch for this one.

If you want to do your own pinstriping and you naturally want a professional finish, try this method.

Purchase a roll of "letraset" mapping tape from Jackson's Art Supplies in William Street, Perth. Get the 1/16th inch wide gloss finish at \$6.38 roll. Select a colour to contrast with your trim colour so that you can see what you are doing. Also buy a roll of $\frac{3}{4}$ inch Cellotape.

First place the 1/16" tape in exactly the position your stripe will go - tape it easy and use every care at this stage particularly on curves. Stand back and look from 6-8 feet away to make sure it is straight and even and centrally places on the thin swage line across back of the car. The tape can be lifted a few times and remains quite sticky.

When you are satisfied it is exactly right, proceed to stick a strip of Cellotape over the top of your striping tape. When the whole car is taped in this manner proceed to next step. Press the Cellotape down firmly. Take a very sharp razor or scapel blade and starting at any selected point of a door edge make a small cut through the Cellotape on either side of striping tape then carefully lift the little tab of tape and pull the striping tape through the Cellotape and off the car.

You will be left with the Cellotape and a 1/16" gap where the stripe will be. Be sure to press the Cellotape down firmly all round so your stripe doesn't "creep" under the tape.

If your car is painted in Acrylic use enamel for the stripe; don't attempt to use acrylic as it will fuse with the underneath paint and will defy alterations (if required).

So now using a soft artists sable brush and your selected enamel colour, carefully paint over the "space". Lean towards overpainting the space to avoid an even thinner line in places than the 1/16th required. Your paint should be fluid enough not to leave brushmarks but no thin enough to run.

The time to strip the Cellotape off is best left until the enamel is a shade dry beyond the "tacky" stage. If you leave it too long there will be a hard sharp edge, or too soon and it may smudge or worse, run. When removing the Cellotape it is best peeled slowly off and angled back against itself. This ensures a clean cut edge to the stripe. Use two hands and be careful when the end of a length is reached and stop it from flicking back against the body or worse reattaching itself to the fresh new stripe - it can happen easily.

The whole job requires some care and a little patience but the result is well worth it. Ross has made a first class job of his car using this method.

A point to remember when striping an A Model, there are very definite and established areas for the stripe. There were no stripes on the edges of bonnet louvres or across the back of the front seat and only the 1930-31 Deluxe vehicles and Town cars had a stripe around the petrol tank inside the car.

Colours should be in the vintage era and on Australian cars can be whatever you choose as our cars were painted in different combinations than the U.S. or Canadian cars. Generally combinations should lean towards subtle understated.

CLUTCH CHATTER

WATER PUMP AND FAN

Editor's Note: On our recent trip to the National Meet in New York, we heard of four members that had their Model "A" fan blades break while enroute. There may have been others. Two of the fans were the two-blade type and the other two were the four-blade type. As a result we are reprinting this article which was the combined efforts of Paul Moller, George Klecka, Bill Friar, Dick Byrom, Ray Jackson, Norman Pearson, Ed Francis and George DeAngelis.

Fuel, ignition and cooling are the three major areas that may cause you to pull off the road and lift that "A" hood. Of these three, cooling problems are the least excusable. The key to an efficient cooling system is the water pump fan assembly. There's probably no assembly on the "A" that everyone knows so much about, but understands so little. If you don't believe that the pump fan assembly can "shut" you down, then just ask another member. Odds are that he can relate some sad personal experience with a cooling problem. And "sad" is an apt expression, because most water pump fan assemblies which cause trouble are the result of pure neglect. Many an "A" owner has spent hundreds of dollars on restoring the engine . . . but merely paints the old water pump and installs it.

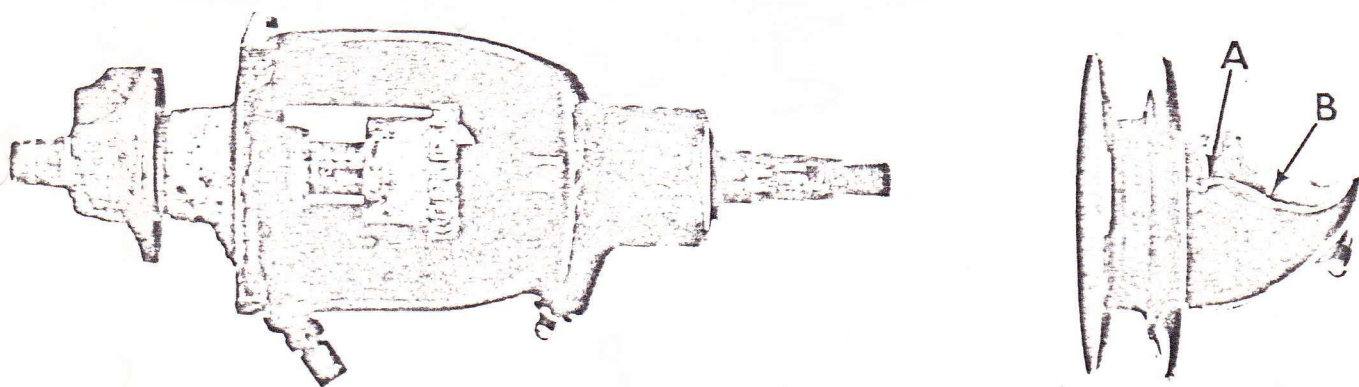
Have you ever seen an "A" with a fan blade protruding through the hood? Have you wondered what might have happened if the operator had been turning the engine at the time? Recently, in a new pump, we saw a pump shaft which had pulled out of the impeller causing extensive damage to the radiator.

Can these types of failures be detected before they occur? What can be done to the water pump fan assembly to reduce failure? A periodic check of the pump fan assembly may avoid a serious problem.

The Model "A" has a thermo-syphon cooling system, assisted by a pump. Heated water rises in the engine block to the water pump where the flow is assisted and then down through the many tubes of the radiator where the heated water rejects some of its heat through the tubes of the radiator. The fan attached to the front end of the water pump shaft pulls the airflow past the tubes and fins to carry away the heat. The cooler water returns to the engine block passages by means of the water lower return pipe and hoses coupled to the water inlet casting. If the pump is not functioning correctly, inadequate water circulation will contribute to overheating.

Condition of the pump can be checked through your personal audio-visual system. If the front bearing is gone you will hear it. If the end play is excessive, the pump will clatter at lower engine speeds and you can see the fan move forward and aft. If the engine overheats and the radiator, ignition timing and oil level have been checked, see if the pump impeller blades are damaged. With the engine stopped, check to see if the fan blade is loose on the shaft.

Most water pump shafts seem to have more than .010 inch end play and if so, it is considered to be excessive. This is due to wear of the thrust bearing, the end of the shaft and/or



A typical fan assembly which went to pieces. It was evident that a small 1/4-inch fatigue crack started at (A). It progressed another 3/4-inch to (B) before the fan blade broke off. Examination of the shaft showed that the key and shaft had been damaged previously and the fan hub could not seat properly on the shaft. Note the wear on the impeller blades. If you have such a failure on a trip, break off the other half of the blade to reduce vibration, and continue driving at moderate speed until repairs can be made.

the boss inside of the cylinder head. The boss was designed to limit the rearward movement of the pump shaft by having the shaft ride against it.

While the pumps used on the Model "A" are similar, in the early '28 "A's" two differences are found: one — the impeller had four to six blades instead of three; two — the hole in the bottom of the casting is about $\frac{1}{2}$ " in diameter instead of $1\frac{1}{8}$ " x $2\frac{1}{4}$ " used in later castings. In addition, there were three methods of fastening the impeller to the shaft; press fit, tapered pin and peened pin.

Like so many other items used on the Model "A," independent manufacturers offered replacement pumps with some change calculated to appeal to the Model "A" owner. Some pumps were built with the shaft completely enclosed. Ford Service Bulletins mention a bushing type bearing at the front of the pump. In service these did not hold up. Small steel covers were made to snap over the pump casting openings. These serve well in keeping the engine compartment clean. Grease fittings were the same for all model years.

The two blade fan is original equipment. A four blade fan may be used as a replacement, but is NOT considered original for judging purposes. The four blade fan seen on many Model "A" engines was designed in 1932 for use on 1933 four cylinder commercial engines. It was part number 40-8600. It was made so it could fit all four cylinder engines 1928 through 1933.

RESTORING THE WATER PUMP

If you find that the water pump needs some attention, it

will be necessary to remove the assembly from the engine.

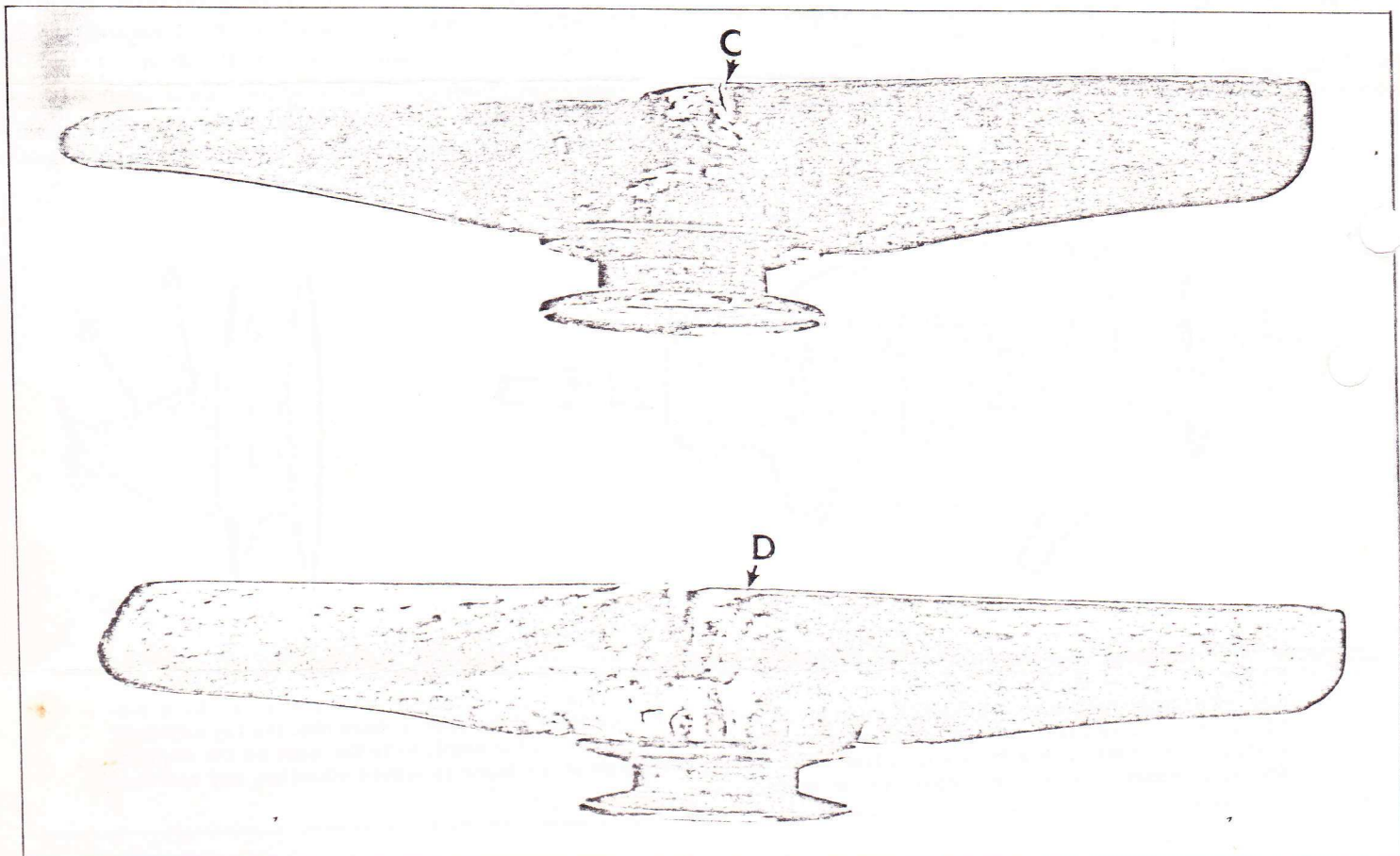
To remove the fan from the pump shaft, remove the cotter pin and turn out the nut until only half of its threads are left on the shaft. Then screw a bolt into the nut until it bottoms on the end of the shaft. Holding the back end of the pulley in one hand hit the head of the bolt with a hammer. This will separate the fan from the shaft without damage to the pulley or the end of the shaft. Remove the shaft key and pull out the shaft from the rear of the pump.

Examine all parts for wear. The front bearing is a roller type which rides in a roller bearing sleeve. Each end of the bearing is sealed with a metal cap and felt washer. The rear bearing is a bushing type made up of a shouldered bushing, bushing packing and bushing nut. After removing the nut, the bushing can be pressed out toward the rear of the pump housing.

If the parts are badly worn, it may be necessary to replace the shaft and impeller, the rear bushing and the front bearing. Clean and repaint the pump housing if necessary. Reassemble all parts by the following procedure.

At the roller bearing end, install one felt seal cup with the open flange toward the fan end. Add the felt washer, one flat steel felt retainer washer. Insert the roller bearing sleeve, the roller bearing, the second flat washer, the felt and the felt retainer. Tap these items in place with a wood dowel or a piece of copper.

Insert the pump shaft through the bearing from the front end. This will serve as an aligner for installing the bushing.



Comparison of two fan blades which appear to be usable. When the upper fan was sanded to bare metal, a crack appeared at (C). All paint was removed from the lower fan and it appeared to be in excellent condition and free of cracks. However, magnaflux revealed a fine crack at (D).

Install bushing onto shaft making certain bushing lubricant hole is aligned with grease rear fitting hole in casting. Press bushing into place using a block of wood to protect thrust face of the bushing. If a plastic faced hammer is used to drive bushing into place, strike lightly to prevent damage to bushing flange. Remove alignment shaft.

Next, examine the new shaft and impeller. Some of these new shafts have been found to be undersize and with score marks. If the impeller is held on the shaft by a tapered pin, check that the pin is tight. If the pin should come out in use, the shaft and fan will pull forward causing damage to the radiator core. We suggest peening the pin on both ends. The next step is to check the amount of play in the shaft.

Place the steel impeller washer on the shaft with the roughest side against the impeller, making certain that the drive tab is placed into one of the V's in the water pump impeller. On some replacements we have seen a brass washer — it should be steel. Wipe a little grease on the shaft and insert it into the water pump housing. Remove all parts of the old gasket from the engine head and with a new gasket put the pump housing in place. Tighten only two of the nuts;

opposite corners. Now, push the shaft back and forth to determine the amount of end play. End play should be .010 inches, but some have more. To correct, hold the shaft in and with a sharp pencil make a line on the shaft as close to the front felt retainer as possible. Pull the shaft forward and make a second line. Measure the distance between the two lines. This is the amount of braze that should be placed on the impeller end of the shaft to make up for the wear on the boss inside the head. Build up more braze than is needed and file the excess to fit.

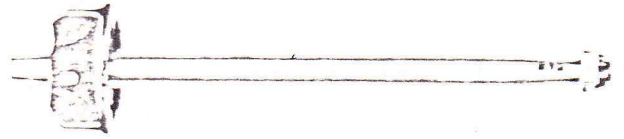
FAN BLADE CHECK

After the pump assembly has been properly fitted, the next item of importance is the fan blade. Remove all dirt and paint and examine the fan for nicks. Straighten both leading and trailing edges and file smooth any nicks, but do not alter the shape of the fan in anyway.

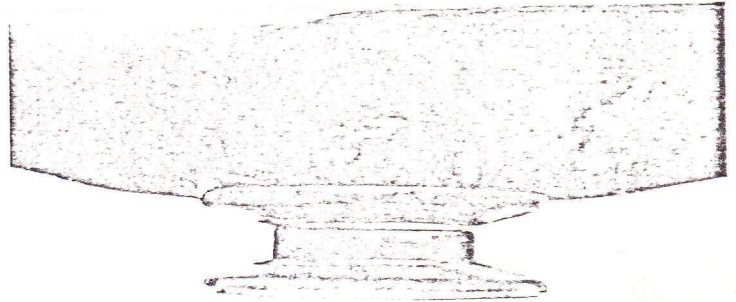
Many two blade fans have fine fatigue cracks near the hub. Some of these cracks cannot be seen by the naked eye. We recommend that the fan blades be taken to a precision engine rebuilding shop to have it magnafluxed. Any cracks which show up should be welded and filed smooth.

Before installing the woodruff key, check the fit of the with the pump shaft. Make sure that the shaft and fan hole are free of dirt, paint or burrs. Some shafts are not machined accurately and will not mate properly with the fan hub. The fan must fit tight on the hub. Any play may cause a fan blade to break. After proper fit, install the woodruff key, the nut and cotter pin. As an extra precaution, it is advisable to have the impeller shaft with fan, key, nut and pin balanced as an assembly before installing it on the water pump body. After balancing, disassemble the parts, paint the fan and reassemble all parts on the pump body. The pump body should be painted engine green and the fan blade and pulley should be black.

Caution — When installing the pump fan assembly on the engine head, care should be taken that the steel washer between the impeller and the bushing is in its proper place.

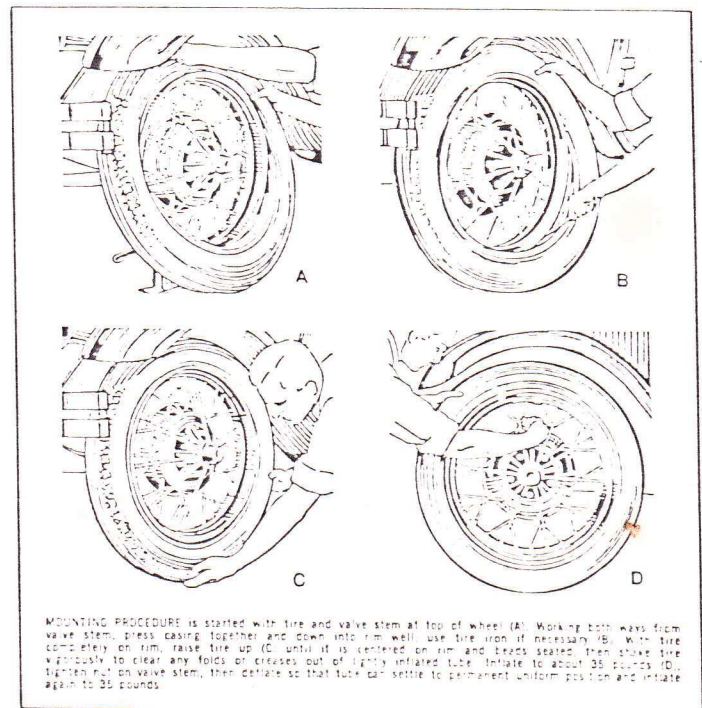


This new shaft, purchased as an assembly from a leading parts supplier in Chicago, was found to be .002 undersize. There were scratches and hammer marks at the area that fits the front bearing. The machining of the taper was poor, but usable. The pin holding the impeller had a poor fit and had to be peened at both ends.



The front half of the pulley on this original fan came loose, probably the result of poor manufacturing. Note that the pulley has cut into the fan blade indicating continued use after failure. With proper welding or brazing the fan can be repaired.

In conclusion, we want to add that even though some people can drive their "A's" at 60 or 65 M.P.H., we do not believe the car was built to exceed 50 M.P.H. for long periods. Keeping your "A" under 50 M.P.H. reduces the possibility of the fan blade coming apart.



MOUNTING PROCEDURE is started with tire and valve stem at top of wheel (A). Working both ways from valve stem, press casing together and down into rim well. Use tire iron if necessary (B). With tire completely on rim, raise tire up (C) until it is centered on rim and beads seated. Then shove tire vigorously to clear any folds or creases out of lightly inflated tube. Inflate to about 35 pounds (D). Tighten nut on valve stem, then deflate so that tube can settle to permanent uniform position and inflate again to 35 pounds.