WESTERN "A" MODEL NEWS

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

NEXT MEETING: Date: SATURDAY, MARCH 6TH 1982
Place: KEANES POINT RESERVE
Keane Street, Peppermint Grove
Time: 12:30 p.m. - Meeting 2:30 p.m.

TURN OFF the Highway at Keane Street. The reserve is right on the river front. Suggest you bring cut lunch as Barbecues are uncertain. There is plenty of shallow water for the kids and plenty of shade and lawn areas for the Mums and Dads.

LAST MEETING: Sunday, February 7th 1982 at Eric and Nene Richards was well attended by all regular members plus several new members and families.

CLUB NEWS: Ray Mahoney will gradually put together the necessary regulations relating to concessional licencing requirements. These will be circulated to members when complete. Printing of Concessional Licence examination forms are now in hand.
All Concessionally licenced cars MUST have a yellow and black plate mounted on top of the licence plate showing the word "VINTAGE". If your car is a 1931 model it will require a plate showing "POST VINTAGE".
Concessional licencing is available to country members providing all examination conditions are met. More details will be printed in a later news letter.

RESTORATIONS: If you are on to your engine and have to pour new metal bearings, rebore cylinders, reseat and face valves and all the other expensive things you must do to have a good engine, you would be well advised to check Ranch Automotive Engineers, 43 Sarich St, Osborne Park. Ph: 445 1311.

To really put the finishing touch onto your road runner, it is worth spending a further $78 (current price) to have the moving parts of the engine balanced ie: flywheel, crankshaft, pistons, conrods and clutch plate. Try Veem Eng. Services, 14 Whyalla Street, Willeton Ph: 457 1255.

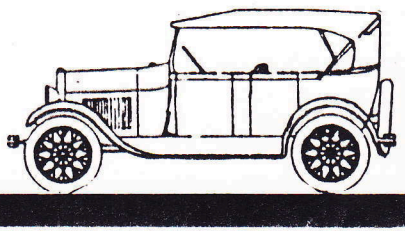
Both of these firms are sympathetic towards old engines, they have the equipment and know how and don't rip you off.

The Wood article this month will, I hope, give a few clues to the basic renewal of your wood framing.
There are a variety of the best types of wood to use and all are available in Western Australia.

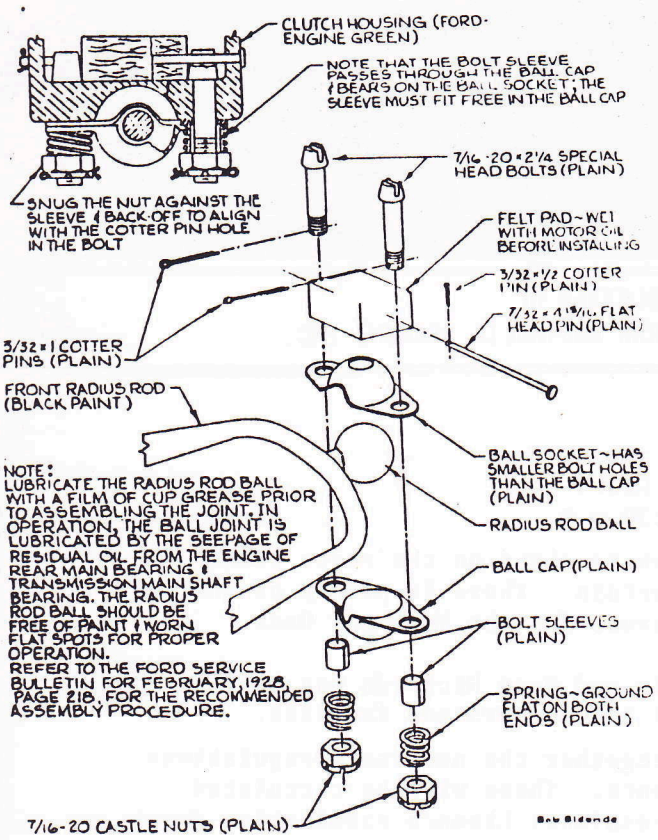
1. NYATOH - Good, light, easy to work, but make sure you get straight, close grain hard wood. There are softish types that are not strong enough.
2. KAPUR - Excellent, fine close grain, stringy - easy to work - recommended.
3. KARRI - Stringy, tough, a bit heavy but makes a strong frame.
4. JARRAH - Probably one of the strongest woods available but heavy.
5. PINE - Various types available - okay for internal seat frames etc.
6. OREGON - Same as Pine - avoid.

FOR SALE: 12' x 6' Car trailer Tandem axle fully licenced, O/ride brakes and vacuum spare wheel concealed ramps $850 or near offer.
Phone: Jim Hearn [redacted]

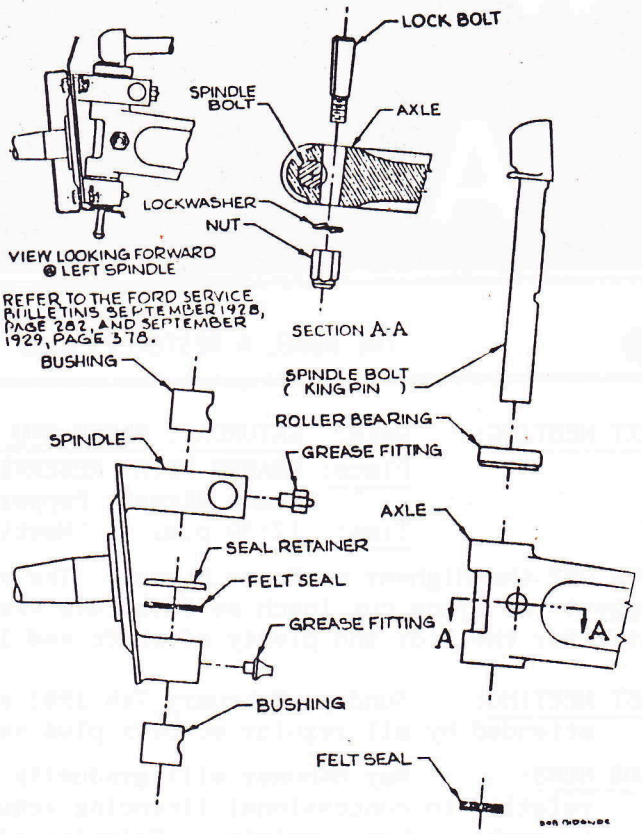
FOR SALE: 1 quart stainless steel Thermos Flasks
$45 each (½ normal price) Ph: [redacted]



FRONT RADIUS ROD BALL JOINT ASSEMBLY

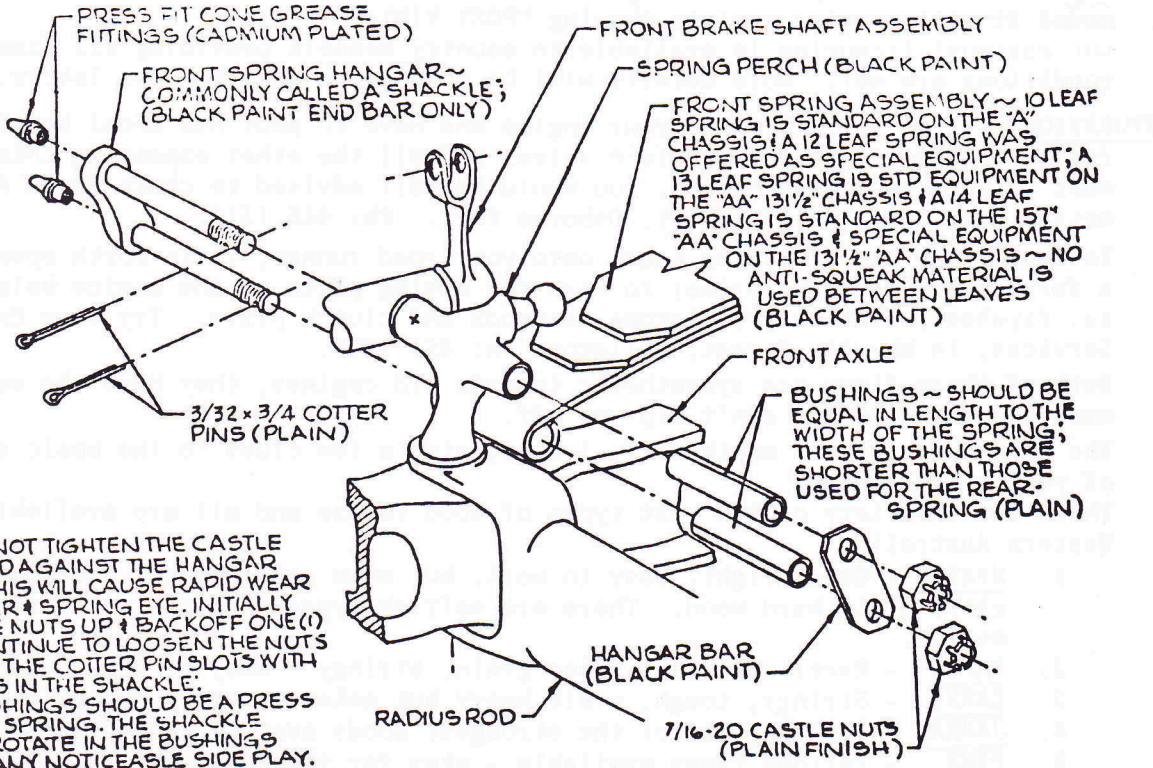


SPINDLE ASSEMBLY



FRONT SPRING TO FRONT AXLE ASSEMBLY

LEFT SIDE — VIEWED FROM BEHIND AXLE



NOTE: DO NOT TIGHTEN THE CASTLE NUTS HARD AGAINST THE HANGAR BAR, AS THIS WILL CAUSE RAPID WEAR OF THE BAR & SPRING EYE. INITIALLY SNUG THE NUTS UP & BACKOFF ONE (1) TURN. CONTINUE TO LOOSEN THE NUTS TO ALIGN THE COTTER PIN SLOTS WITH THE HOLES IN THE SHACKLE.

THE BUSHINGS SHOULD BE A PRESS FIT IN THE SPRING. THE SHACKLE SHOULD ROTATE IN THE BUSHINGS WITHOUT ANY NOTICEABLE SIDE PLAY.

FINISH THE ASSEMBLY BY GREASING THE SHACKLES!

Bob Bidonde

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THE WOOD IN MODEL A'S

by Phil Allin

All Model A's were not created equal! Many an amateur restorer, fresh from successfully rebuilding a Coupe or Tudor, tackles a Cabriolet or Town Sedan only to find it's a "different animal." They find that some Model A body types have wood structured bodies.

Actually, about one third of the Model A's produced have extensive wood in their structures. This means the body sill structure, door posts, belt and roof rails are made of wood. On some, even the door structures are wood. These include some of the most interesting, low production body types. As the number of well-preserved surviving cars diminishes, restorers are forced to work with vehicles which have extensively damaged or missing wood. For the hobbyist with the right equipment and woodworking experience, it can be a satisfying challenge.

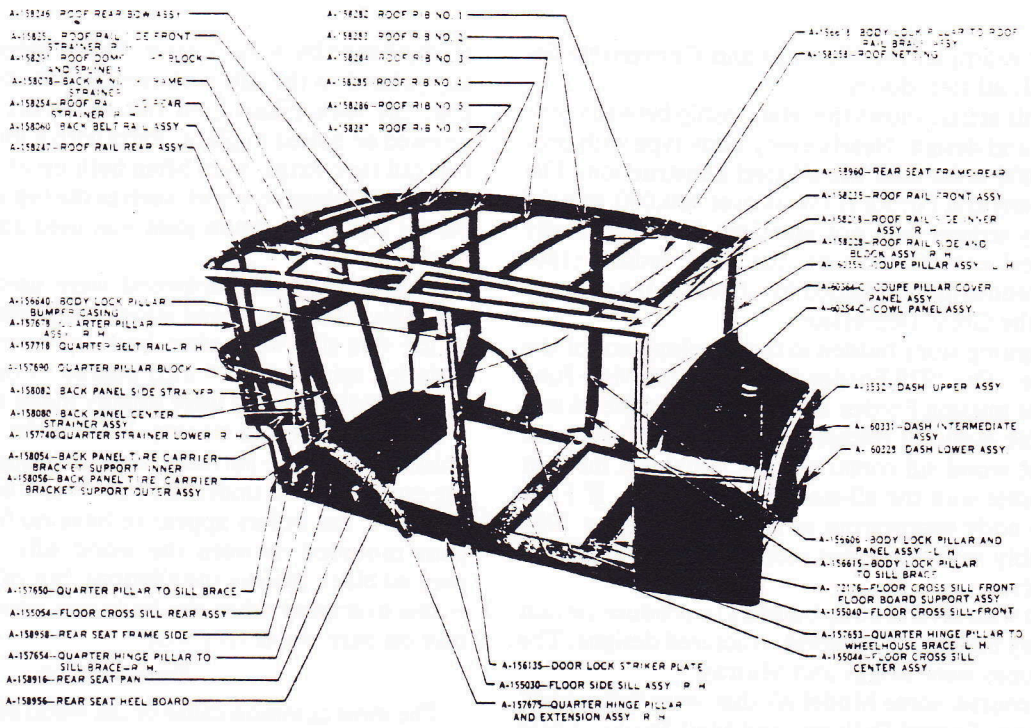
History

The earliest automobiles were motorized carriages. Many were made of wood and were manufactured one-by-one. Even the mass produced Model T's were mostly wood structures with metal panels attached. In the 1920's Ford developed some welded steel structures. The Tudor, introduced in 1923, was possibly the most advanced example of body engineering in that era. The cowl, doors, sill structure, quarters, and back had very little structural wood. The roof structure, door posts, etc. were wood because the top and trim fabrics had to be tacked to something. This concept was carried into many of the Model A designs.

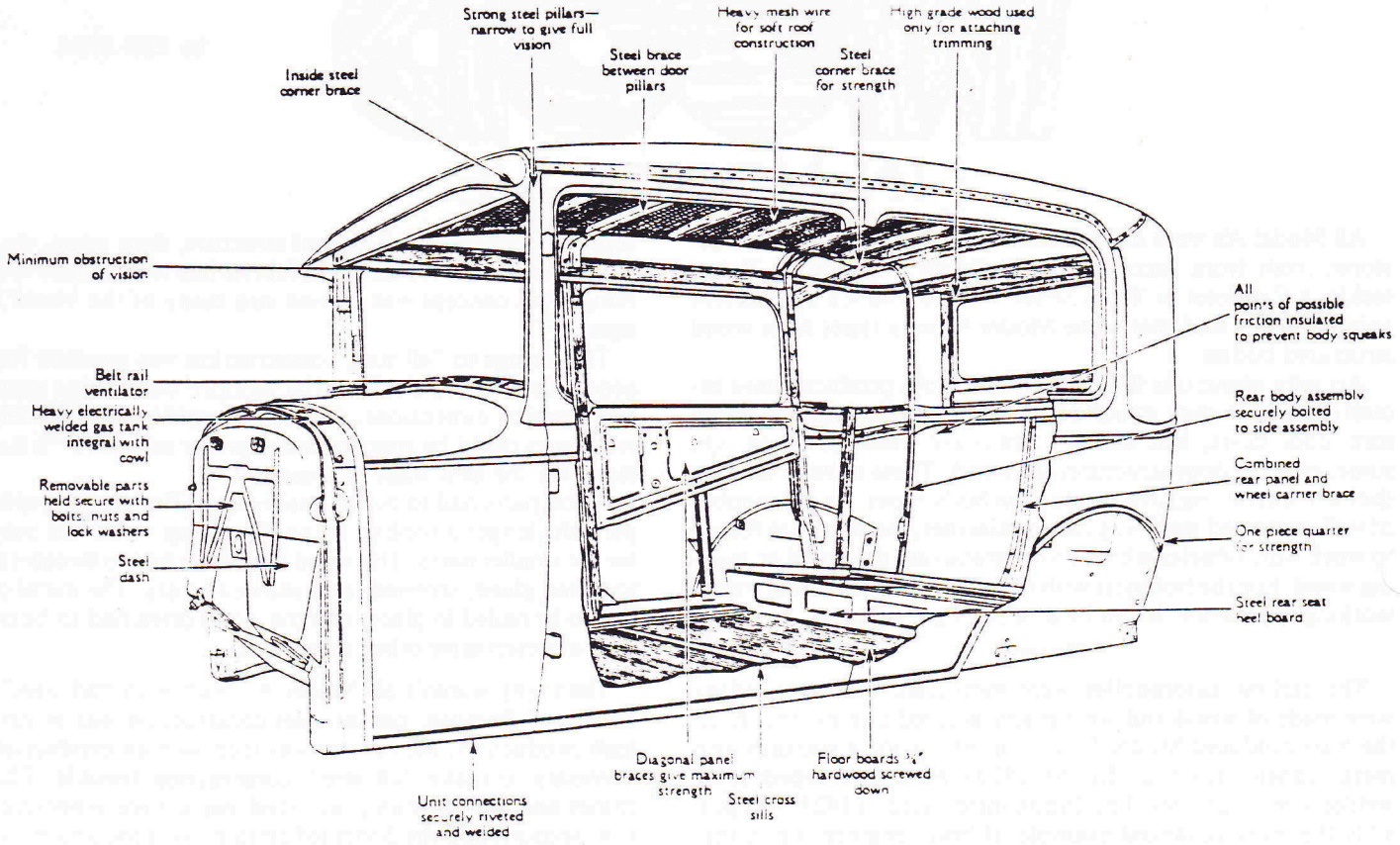
The change to "all steel" construction was essential for high production. Steel parts could be stamped out in large quantities and identical dimensions. Any scrap could be reprocessed. The steel parts could be spot welded together and were "instantly" ready for the next stage of assembly.

Wood parts had to be cut one-by-one. The more complex the part, the longer it took to shape. The scrap wood was only usable for smaller parts. The wood structures had to be carefully fit together, glued, screwed, and allowed to dry. The metal panels had to be nailed in place, and the wood often had to be treated with a preservative other than paint.

Then why weren't all Model A's built with "all steel" construction? Because, just as steel construction was essential to high production, the reverse was true — high production was necessary to make "all steel" construction feasible. The machines and dies to stamp out steel parts were expensive. The cowl sections and the doors (of certain low-production models) were steel assemblies because the combined production made



The 1929 Town Sedan body is a good example of the wood-structured bodies which are found on about one-third of the Model A's produced.



This 1930-31 Tudor body is typical of the "all steel" body types. The wood used in this body is mostly tack strips for the top and interior trim.

them feasible. For example, the Victorias and Convertible Sedans used identical, all steel doors.

The table with this article shows the relationship between production and structural design. Nearly every body type with production over 100,000 units used the all steel construction. The total for Town Sedans and Fordors (3W) is over 400,000, but the Briggs and Murray sedans were not identical. Ford eventually changed to all-steel construction on the 1931 sedans (160-A,B,C) but their production remained low because the country was heading into the Great Depression.

There is an intriguing story hidden in the development of the Fordor sedan. [See "The 1929 Fordor (60-A)" in the May-June 1978 *Restorer*.] The missing Fordor at the time the Model A was introduced, and the eventual release of the Taxi (135-A) with all-steel doors (but wood sill construction), convinces me that Ford ran into trouble with the all-steel Fordor design. If Ford had perfected the body engineering of the three window 1928 Fordor, we probably wouldn't have seen nine variations over the next three years.

Ford contracted with several body builders to produce certain models. These body builders used wood structured designs. The major two companies were Briggs and Murray.

There were, of course, some Model A's that were "all wood" — the station wagon, Special Delivery, and Mail Trucks. These are another story, which we will cover in some special issues coming later.

Construction

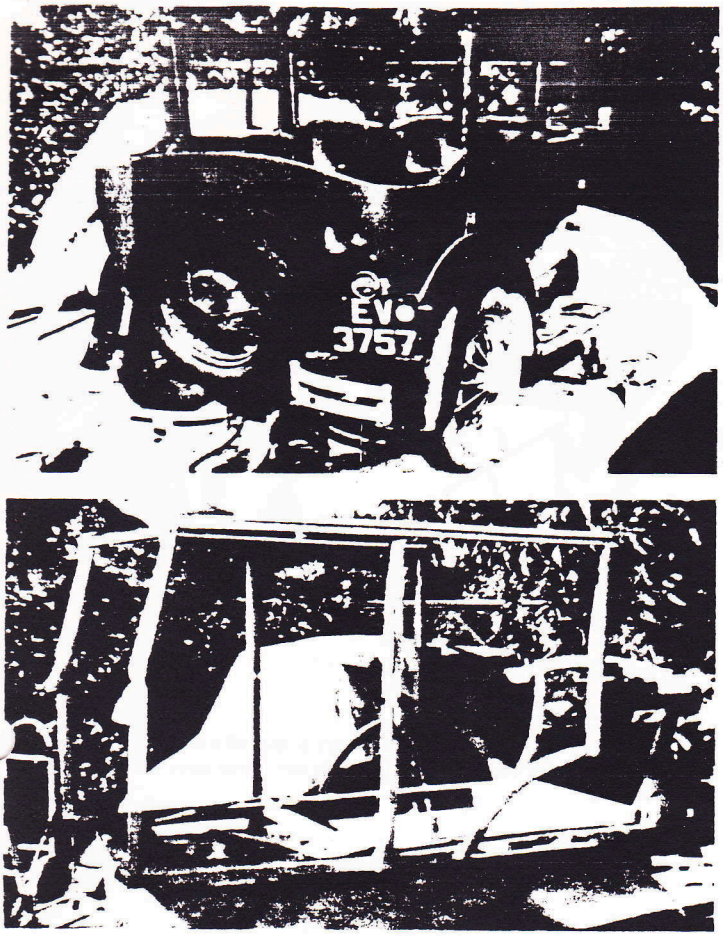
The side sills are the major structural members of these bodies. Typically, these are 1½ inches thick and 4 to 9 inches wide. They are joined by wood crossmembers of similar thickness, usually with mortise and tenon joints that are strengthened by wood screws. The wooden lock pillars are usually jointed to the sills with metal brackets. Likewise at the top end, the lock pillars join the roof rails with metal brackets screwed or bolted in place. Parts with a lot of curve, such as the belt rail tack strips, were often built up of several pieces. Where wood was joined to wood, such as the top ribs to the roof rails, a partial lap or lap tenon joint was used and secured by a wood screw.

Various types of hardwood were used, although oak was probably the cheapest and strongest. Large structural parts such as the side sills were often built up from several pieces. This included using two 3/4 inch boards to build up the thickness. Splices in long pieces were usually made with finger joints.

Since there would be very little of the wood exposed in the finished car, some surfaces were left rough. On some models, the exposed wood under the body was treated with a wood preservative, but others appear to have no finish. The metal floor pans mounted between the wood sills appear to have been painted black (before installation), but often picked up considerable overspray when the body was painted. Lacquer doesn't stay on bare wood very well.

Deterioration

The most common cause of the wood breaking down is water. Probably the most frequent form of deterioration on closed Model A's is a rotten front roof rail (header). It is easy to imagine the cause and effect: a worn out top and leaks up under the visor allow water to soak the wood of the header. The process may destroy the whole header and rust through the metal facing. As the old car stood outdoors for years, the water got to other important areas: the front ends of the sills (where they join the cowl section), the crossmember behind the rear seat. As



To remove all the body panels and rebuild the wood structure from scratch is extremely challenging — but worth it on a Model A as rare as this English built 1931 four-door Saloon (Convertible Sedan) restored by Harry Hocker in 1964.

MODEL A FORD BODY TYPES
(ranked in order of total production)

	Production (in thousands)		Structure	
	1928-29	1930-31	Sills	Doors
TUDOR (Std,Dlx)	790	595	Steel	Steel
COUPE (Std,Spl,Dlx)	250	365	Steel	Steel
COUPE (Sport,Bus)	295	94	Steel	Steel
ROADSTER (Std,Dlx)	110	200	Steel	Steel
TOWN SEDAN	91	187	Wood	Wood
CLOSED CABS	43	198	Steel	Steel
PHAETON (Std)	159	51	Steel	Steel
FORDOR (3W)	55	78	Wood	Wood
FORDOR (2W)	105	19	Wood	Wood
OPEN CABS	60	12	Steel	Steel
CABRIOLET	18	43	Wood	Wood*
VICTORIA	—	43	Wood	Steel
STATION WAGON	5	7	Wood	Wood
SLANT W/S SEDANS	—	10	Steel	Steel
PHAETON (Dlx)	—	7	Wood	Wood
TAXI	5	—	Wood	Steel
CONVERTIBLE SEDAN	—	5	Wood	Steel
TOWN CAR	1	—	Wood	Wood
DELUXE DELIVERY	?	14	Wood	Steel**
PANEL DELIVERY	?	15?	Wood	Steel**
SPECIAL DELIVERY	—	1	Wood	Wood
TOWN CAR DELIVERY	—	.2	Wood	Wood

*Steel in 1931
**Rear door(s) wood
Production figures were compiled from *Henry's Fabulous Model A Ford* by Leslie R. Henry and *The Ford Model A — As Henry Built It* by DeAngelis, Francis & Henry.

the important structures lost their strength, added stress was put on other joints. Wood parts cracked, and some pieces fell out.

The holes for bolts, screws, and tacks help the water attack the wood. If the top has been replaced a time or two, the tack strips are probably riddled with old tack holes. On the 1931 Convertible Sedan, for example, the rear bow had about twelve layers tacked into a strip 1 2 inch wide.

Water was not the only villain. Model A's have been attacked by termites, fire, and everything else destructive to wood. In the fortunate cases, the damage is minor and the piece can be repaired or at least used as a pattern. Some restorers, however, start with an empty shell — no wood, no patterns.

Repair vs. Replacement

It is sometimes possible to repair the wood you have. Check the condition by probing the surface with a sharp pointed tool or knife. Probe all along each piece, especially near the ends. If it is soft, spongy, or crumbling you will have to replace it. If it seems to be sound, but has cracks, loose joints, or slight warping, you may want to repair it — especially if it is very difficult to remove and replace. Consider the function of the piece. If it has to carry significant loads and maintain the shape of the body, don't take chances by piecing in a repair. If it is only a hidden tack strip, perhaps you can fill the old nail holes with wood filler.

If you are replacing the wood parts, check the position dimensions before taking anything apart. You may be able to duplicate the door post perfectly, but unless you have recorded its position on the sill, etc., you may have trouble fitting all the new pieces together. Try to keep the pieces intact and label them as to where they came from. The top ribs are not all the same. You will not remember all the pieces when you get around to sawing the replacements in six months or a year.

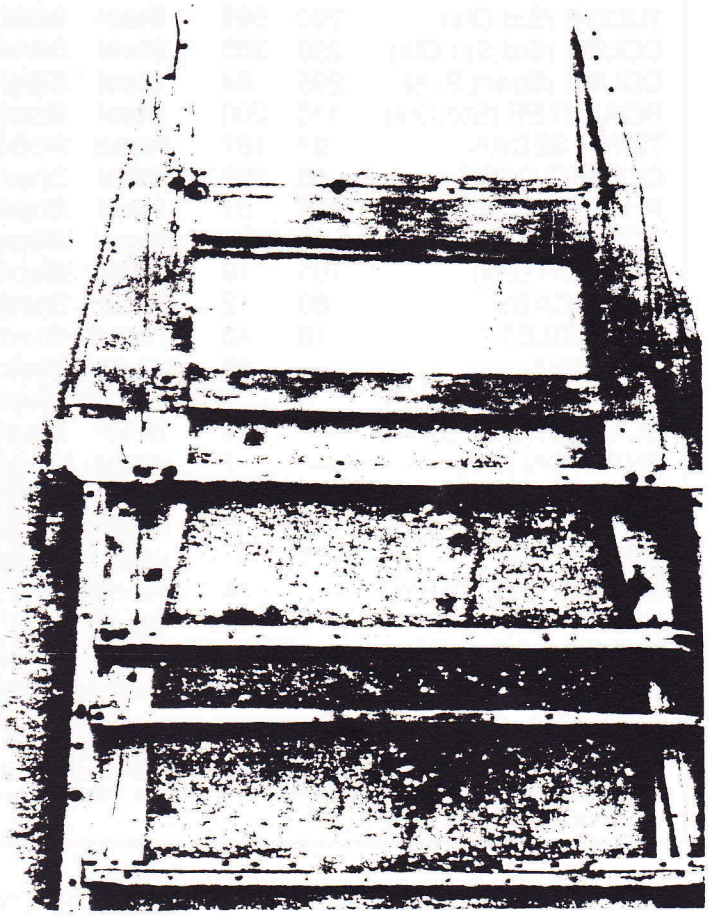
In most cases, use the old piece as the pattern for the new part. Carefully consider whether or not the new part will be made identical to the old. For example, it may be easier to build a new header from a single piece rather than an assembly. It may be easier and stronger to use doweled joints than to duplicate an original joint.

If you are fitting the wood into a portion of the body, cut it slightly larger than the pattern. Hold it in the position it will eventually occupy and carefully mark where wood needs to be removed. Repeat the process as you gradually shape it to fit.

If you are building part of the body structure in preparation for attaching the body panels, check the fit of the panels repeatedly to see that the alignment will be correct. The original body builders had elaborate jigs to assure the alignment as the body was assembled.

Finish

Most of the structural wood in Model A bodies was unfinished or treated with a dark preservative. The exposed wood in commercial body types (Pickups, Deliveries, and Trucks) was usually painted the body color, except for the Special Delivery and Station Wagon. There is, of course, a strong

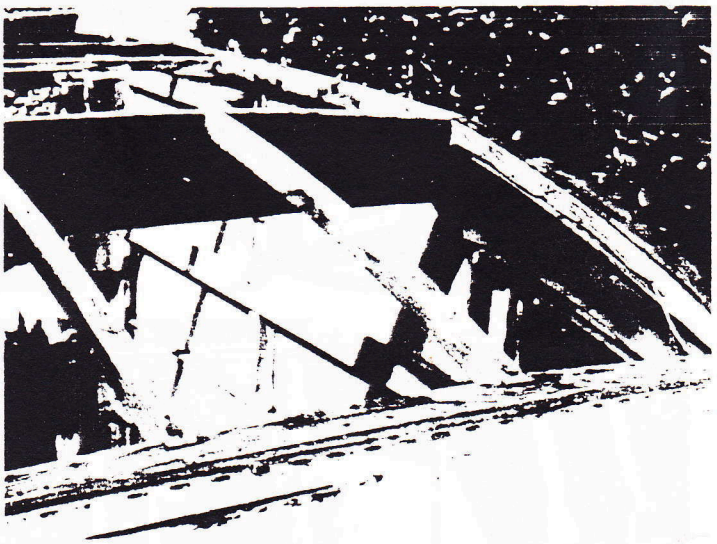


This is the still structure of my 1931 Drop Floor Panel Delivery. The side sills are built up of several pieces, both in thickness and width. The cross members in the bottom half of the photo support the body.

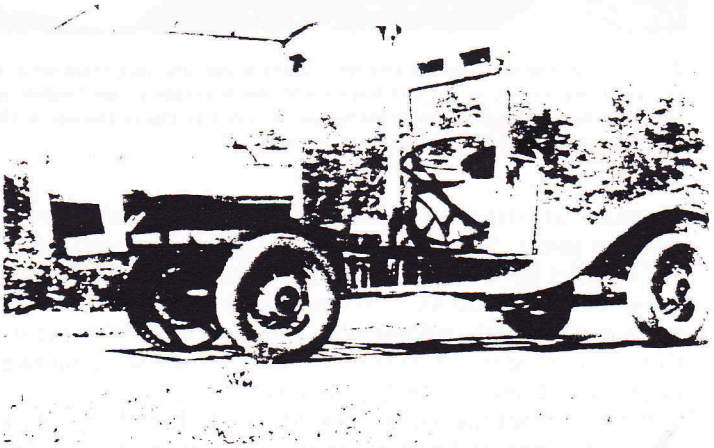
temptation to finish any exposed wood like a piece of furniture. The choice is up to the owner, but natural wood finishes would be downgraded in Model A judging as over-restoration.

Conclusion

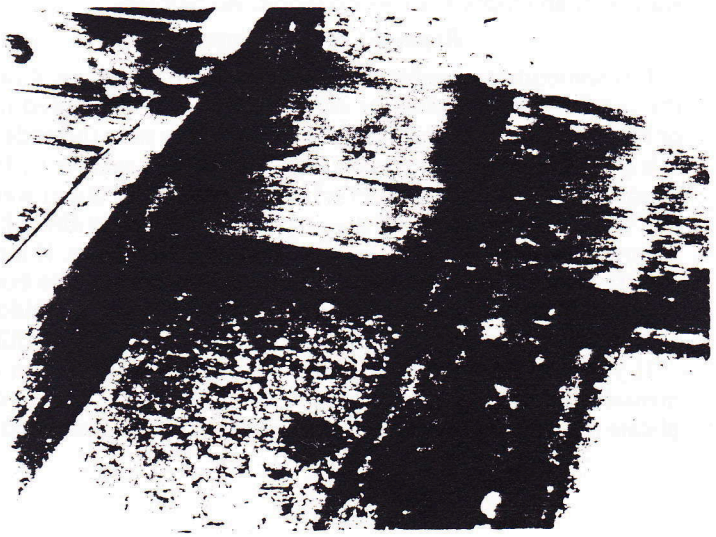
There is something very satisfying about working with wood. The feel and fragrance blend pleasantly with the rich tones and interesting grain patterns. This quality of wood probably had something to do with the use of simulated wood trim in the deluxe models. For the restorer who loves to tackle every phase of Model A rebuilding, the restoration of the wood can be most rewarding.



The upper structure of the Panel Delivery is also all wood, including a six post window header, heavy door headers, four cab ribs, three piece rear cab header, and on, and on.



The 1930-31 Panel Delivery is also a wood-structured body. This one was rebuilt by Larry Campbell of Manson, Washington.



This detail of the side sill shows how the first cross sill is mortise and tenoned in place. Probing with a sharp tool showed most of this wood was dry rotted.