

## *Model A's in WA*

### *1928 SPECIAL COUPE*

*Engine Number: B5253325*

*Registration Number: 28A 40A*

*Chassis Number: CJ9P0100012P00093*

*Colour: Black*

*Owned and restored by David Bussard*

*1995—*

*Previously with a Roadster body*

*Featured in Western Model A News*

*September 2012*



### **The Transformation from Roadster to Special Coupe**

The change from one body style to the other took place over 1995-1997. My first task when I got the car in 1993 was to examine all the different systems to make sure they were reliable and in good working order. Because of the unusual body modifications an authentic restoration was never considered.

#### **Brakes**

The most obvious problem with the car was the brakes. I knew they were mechanical and never going to be as efficient as hydraulic brakes but they were just poor. I bought a few books on restoration and started pulling the brake system apart. I was going to replace every worn brake component with a new one. While dismantling the rear brakes I discovered one reason that the brakes were so poor. Someone, when assembling the rear brakes had placed the heads of the roller pins of the upper brake shoes on the wrong side of the shoe. This meant that the rear brakes did absolutely nothing. Then I discovered some of the brake pull rods had been cut and re-welded, so that as I replaced all the worn components the rods no longer fit. Many similar problems were encountered. I also had trouble with the front brake equalization mechanisms on the multi-disc clutch so located all the components to convert the car to single disc clutch. Another major undertaking requiring changing the transmission, brake pedals, cross shafts and clutch. Finally a set of cast iron drums was purchased and the whole system then worked.

#### **Engine**

The engine as purchased ran reasonably well but the block was in poor condition. The back of the water jacket had obviously been patched with some sort of external sealer. It didn't leak but indicated internal problems. Another leak appeared one day while working on another problem. I observed what looked like a drop of coolant on the left side of the water jacket between number 1 and 2 cylinders. I wiped it off, only to have it reappear so I poked at it with the screwdriver I was holding; out came a stream of green coolant. After draining the block and enlarging the hole to about a centimeter I was able to fashion a plug using a couple of washers and a nut and bolt, then covered it with araldite. This worked and held water for years but indicated a new block was needed.

About this time I purchased a 1932 Ford roadster and got with it my choice of any two 4 cylinder engines from a large pile. I eventually identified one as a 1935 casting, diamond block Model B. These were replacement engines cast at Ford foundries. I took it to Steve Read for rebuilding and after we got it out of

the hot tank we were able to determine that it had never been run. There was no heat colour change evident in the exhaust runners, and no wear in any of the cylinders, camshaft or elsewhere. The engine was rebuilt with full pressurization, slipper bearings, modern oil seals, oil filter and a high compression Lion head. Sealing the rear main with no leaks involved considerable experimentation and included removing the engine from the car six times before a leakless seal was achieved.

The original solid front engine mount was replaced with the later fork, and the rear mounts were replaced with a float-a-motor kit.



### **Steering**

The original car came with the seven-tooth steering box. I rebuilt this and changed all the wearing surfaces in the steering system, this helped but the steering was never easy. Eventually I located a two-tooth steering box. None of the original shock absorbers were working so I dismantled all of them and replaced the internals with replacement parts. I also put new shackle bushings on the springs.

### **Transmission**

When I replaced the multi-disc clutch I also exchanged the Model A transmission with a 1932-34 four cylinder transmission. This is a direct bolt-on as long as you have a 1932 flywheel shield. The reason for doing this is that the 1932-34 transmission will accept all the Ford V8 transmission gears and synchromesh parts. Using 1940 V8 gears this raises the transmission gear ratios in first and second gears, which makes driving around town easier and eliminates the need to double-clutch when shifting. At a later stage I installed a Mitchell overdrive. This is another bolt-in that can be done in a day. For long distance travelling this provides a 33% reduction in engine RMP relative to the standard gearing. It saves fuel, enables higher speeds and is much quieter.

### **Rear Axle**

By this time I had pulled everything else apart so I dismantled the rear axle and disassembled the differential. Everything was in good condition so I replaced the bearings and reassembled it. One of the bearings was still an original Model A bearing marked with a Ford part number, which caused the Timken dealer some consternation as it didn't appear in his parts book. The only repairs needed were the races on the axle housings, which were turned down and fitted with sleeves.

### **Body**

By this stage all the mechanical parts had been rebuilt. I found a notice in the Sunday Times Vintage advertisements for a left hand drive 1928 Model A Special Coupe body. The seller turned out to be Nick Ferreira, who had a body shop in Midland. I went to see him and in the course of the discussion mentioned I had a 1928 Roadster that had been used, then subsequently fitted with 1932 Roadster rear panels. Nick was a 1932 collector and builder so was very interested. He came out and looked at the car, then we did the deal. He got the Roadster body from the windscreen back (I needed the RHD cowl) and I got the complete coupe body. Some money changed hands but not a lot, maybe a few hundred dollars.

I left the Roadster body on the frame while I repaired the Coupe body. The body frame was straight, the doors had a bit of rust on the bottoms that I had repaired, the sub-frame that mounts on the main frame (only in Roadsters, Coupes and Tudors) was straight and the rear quarter panels were good. The interior of the boot was very battered and entirely replaced with new parts. The top wood was non-existent and replaced using a kit, as was the body wood. Nick also had a Special Coupe interior trim kit from LeBaron Bonney that I purchased and installed. Glass was cut locally.

During the reconstruction process I attended the Vintage Auto Restoration course held at the Carlyle Tech. This was run by David May, also a restorer. The students had full use of all the painting equipment and ovens as part of the course plus the advice of an expert. Body parts were restored at home and then taken to the class where they were primed and sanded before painting. This process took about 18 months and included everything except the sub-frame and large body panels. Final painting was done in my shed with the assistance of club member Bill Cowlin.

## Other

Once this body restoration was done I removed the Roadster body, thinking I only had to install the Coupe body to finish the car. Once the body was off it was apparent that I had to remove and repaint the running gear and engine/driveline parts so the finish of these parts matched the new body. Once all the running gear was removed, I had the bare frame sandblasted, which meant the running board supports on both sides were the only parts not removed from the frame during the restoration.



## Recent



I continue to experiment with the car.

The idea is to create a totally reliable touring vehicle, which so far it has proved to be. As well as the modifications previously mentioned I have added a thermostatically controlled water pump that pushes coolant from the bottom of the radiator, a 180 degree F thermostat to keep the engine temperature constant in all ambient temperatures, an Aussie Desert Cooler radiator, electric fuel pump with pressure regulator and a collision shutoff switch, full instrumentation of engine functions, electronic ignition, Optima battery, telescopic front and rear shock absorbers, six-blade plastic fan, Weber 32-36 carburetor,

alternator and small diameter crankshaft pulley.

## The UK Incident

In 2012 I ordered a Powerlite starter from a supplier in the UK. These starters are offered as replacements for many types of collector cars. They consist of a 12v electric motor, used for all models, attached to a mounting plate that is particular to the model of car. The motors are very powerful, and engage the flywheel ring gear from the front, pushing towards the rear of the car when engaging the flywheel. This is a good feature, for sometimes a Model A 12v starter, which pushes forward, can displace a slightly loose ring gear from the flywheel. The part arrived so I pulled the existing starter and tried to attach the new one; the ring on the new mounting plate fit the A mounting hole but none of the bolts could be screwed in. Trying the new starter into a spare flywheel showed the holes were all displaced about 1/8 inch toward the engine. I emailed all this information to the supplier who assured me they had sold several of these units without having any trouble. I persisted, so he sent a starter back to the manufacturer, who discovered that yes, there was a problem but they would fix it. Eventually a new mounting plate arrived, which I installed, which allowed the starter to be mounted. Attempting to start the engine then produced a high speed grinding noise but no rotation of the starter. I then took a spare block, with crankshaft and flywheel shield and attached the new starter to it. This enabled me to see that although the starter rotated, the pinion gear would not engage the ring gear. I sent a few photographs of this problem back to the supplier, who sent them to the manufacturer, who then produced a pinion gear that worked. With it came this astounding statement:

“Having spoken to the production manager, the whole problem seems to have been caused by the fact that the original unit they used to do the original drawings from had been unknowingly cobbled up from parts.

Amazingly enough we have sold many of these first series of units without any problems!”

Maybe their English customers were too polite to complain?

## Touring

National tours driven include Adelaide in 1994 as a roadster, Adelaide to Albury-Wodonga and back to Perth in 2000, Adelaide to Perth 2006, and Adelaide to Bathurst and back to Adelaide in 2008 and in 2010 the Victorian Club - Tasmanian Tour - National Tour was added.

The vehicle regularly attends the monthly runs of the MARC of WA. Our residence is approximately 50 km south of Perth which can mean a lengthy drive to get to the start of a run. With the modifications done to the car it will easily travel at 60 mph (95 kph) which means it still gets passed by everything on the freeway except little old ladies.

David Bussard

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