



## Ford Model T – Classic Driving Impressions

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### 'T' TIME! CLASSIC DRIVING IMPRESSIONS – FORD MODEL T



Perfect to a 'T'.

Given the lucky opportunity to drive a 101 year old Ford Model T,



## Kim Henson grabbed the chance (and the wheel) with both hands...

The Ford Model T. It's one of the most memorable automobiles ever conceived, and in the history of motoring is certainly one of the most important.

While this article is primarily about driving a Model T, before I investigate that aspect it's worth looking at a few historical aspects of this amazing machine.

This model is famous for so many things, so, for the uninitiated, here are a just a few of them...

This amazing vehicle, often affectionately known as the 'Tin Lizzie', was the brainchild of Henry Ford, whose aim in building and selling it was to provide affordable motoring for the masses. Accordingly, the car was the first to be built in very large numbers on an assembly line, rather than each example being put together individually (a much more time-consuming and labour-intensive process). Therefore these Fords were assembled on a moving line, using sets of parts that were fully interchangeable between the cars being built, resulting in rapid production and lower costs.

For the record, it is appreciated that the first mass-produced car to be built on an assembly line was in fact the Curved Dash Oldsmobile, dating from 1901, but the approach was developed and applied on a much larger scale with the Model T.

Henry Ford's dream came true, with the Model T being produced and sold in huge numbers between 1908 and 1927; in fact approximately 15.5 million were built, with only the Volkswagen Beetle exceeding this figure (with 21.5 million), in terms of single model production.

The Ford was technically ingenious (more about this later), and from the outset, was deliberately constructed of durable, strong materials, to make it last.

## MODEL T LAYOUT AND DESIGN

Please note that the following notes are necessarily brief, but there is a wealth of detailed information available in full-length books and on the internet, for those wishing to learn more about this interesting Ford and how it works.

The Model T was typical of cars of its era in having a separate chassis frame on which the bodywork was mounted (a wide range of body styles was produced over the years).



The friendly Ford face seen by 15.5 million buyers!

It also featured a longitudinally-installed front engine/gearbox assembly and rear wheel



drive, via a differential unit with straight-cut gear teeth on the crownwheel and pinion.

The wheels were wooden spoked, 'artillery' types, and the suspension was taken care of by transversely-mounted leaf springs.



Large diameter (30 x 3 in. front, 30 x 3.5in. rear), wooden-spoked 'artillery' wheels.



Beam type front axle; note speedometer drive (which works a treat).



Taking no chances... twin spare tyres ('covers') on the left-hand running board.

ONLY the rear wheels of the vehicle were braked, using one or both of two separate systems. So when driving a Model T it is important to know that the foot-operated brake pedal acts on the transmission (by means of a brake band acting on a drum). In addition there is a lever-operated emergency/parking brake, acting on the rear wheels (the lever is floor-mounted on the left-side of the car).



It should be noted that using the brakes on a Model T to best effect is definitely an acquired art, and great care needs to be exercised when braking, especially when driving in slippery conditions...

Under the bonnet ('hood') was a simple and rugged low compression sidevalve ('flathead') four cylinder 2.9 litre (177 cu.in.) monobloc engine (that is to say, its cylinders were all cast within a single cylinder block), that, when the need arose, was capable of being run on a variety of available fuels (such as alcohol or kerosene) as well as petrol. This aspect was important in the early days of motoring, especially in remote country districts of the U.S.A. and elsewhere in the world, where fuel supplies were few and far between.

For its time (the car was introduced in 1908) the engine was advanced, since many production motors of this era had individually-cast cylinders and non-detachable cylinder heads. The monobloc construction of the Model T's engine meant easier and cheaper production, and the provision for removal of the cylinder head also helped in this respect. In addition, engine maintenance/repair operations were greatly aided by being able to unbolt and remove the cylinder head when required.

This motor developed approximately 20 bhp and drove the rear wheels via a two speed (plus reverse) epicyclic or planetary type gearbox, with which the engine oil was shared. Amazingly, although Model T vehicle production ceased in 1927, the car's proven engine continued to be built until 1941, being used in a variety of roles (including industrial, military and marine applications).

## DRIVING

It was quite by chance that I was given the opportunity to have an extended drive in one of these fascinating Fords, thanks to the kindness and sheer enthusiasm of Pat O' Donovan.



[Pat o'Donovan at the wheel of his magnificent Model T.](#)

Pat is an enthusiast of classic vehicles and each year brings his magnificent Model T, dating from 1914, from his home in Ireland to the Great Dorset Steam Fair, where I commentate on the ring parades of vintage and classic cars. (By the way, I first attended this event in 1971 and I still never tire of its wonderful atmosphere and superb exhibits, steam-related, vehicular and so many others!).

On the first day of the 2015 Steam Fair, I was commentating on the vehicles as they were driven round the display ring, and Pat brought his Ford in front of the commentary box, enabling me to talk a little about his Model T.



Within the display ring Pat then demonstrated the excellent turning circle of the car, also its ability to be 'shunted' alternately backwards and forwards using just the foot-operated forward and reverse ratio/'gearchange' control pedals - more of these shortly.

I happened to mention over the loudspeakers that a few years ago I had briefly driven a Model T, for perhaps a mile or so, courtesy of the Ford Motor Company, on a press driving day. The example that I drove then is one of their heritage fleet vehicles, and they had brought it along for motoring writers to drive, and to compare it with today's high tech models from the company.

In my commentary I also mentioned that getting used to the very different controls of a car which is around a century old takes a while, and much concentration, especially at first.

I thought nothing more about this until, when I left the commentary box, I found that Pat was waiting to talk to me. He said, "If you would like a 'proper' drive in a Model T, meet me after the Show closes for the day, and I'll let you have an extended run in my car". He thought that I might enjoy the experience, and of course it helped when next I talked about the Model T as it was driven around the display ring.

True to his word, as evening beckoned Pat collected me, plus my brother-in-law Andy, and off the three of us set through the Dorset by-ways on a beautiful late summer evening (truly, the scenery was beautiful, the light was perfect, the birds were singing, and the car was happily humming along in the way that only contented old cars can!).

## COMPLEX?

Before we drove away on the Model T, Pat gave me some basic instructions in the operation of the vehicle, as before attempting to drive one, it's essential to understand its controls and what they do. This all *sounds* complicated, and indeed some aspects of it are, but it only took a few minutes for Pat to describe each control and how to use it. My job was to very quickly assimilate and (crucially) remember all the information he imparted to me!



First, we needed to consider the already-mentioned long lever rising from the floor (please see our photograph). This lever, when pulled fully rearwards, applies the emergency/parking brake (by means of mechanically-activated drum brakes on the rear wheels) but additionally serves to hold the forward ratio/gearchange pedal (the one on the extreme left of the three pedals; note that there is no clutch pedal!) in its central/neutral position.

This 'neutral' situation still applies when the hand-operated lever is moved forwards to its central position, but if the lever is moved fully forwards (i.e. 'released'), the planetary transmission's second/top/high gear is engaged, and at the same time the floor-mounted ratio change/gearchange pedal rises to its rearmost/uppermost position.

This pedal has three positions: In its rearmost/uppermost position, high ratio ('top gear') is engaged. Conversely, when pressed fully forwards/down, it engages low ratio ('bottom gear'). In between is the central 'neutral', or 'no drive' position.

To engage low or first gear, the hand-operated lever is released and the forward ratio change lever is fully depressed until solid resistance is felt.

Pat advised me that the low ratio is only used for very low speeds, up to 6 mph, at which point, if accelerating, a change up into top gear is required! Of course the converse is true, when climbing steep gradients or negotiating slow-moving traffic, and a change down into low ratio is then needed.

Next, the centrally-positioned pedal of the three was discussed. This pedal is NOT the brake pedal, as in modern cars, but the reverse gear engagement pedal. To prevent the engine from stalling, it is necessary to select 'neutral' using the hand lever or the forward ratio/gearchange pedal, BEFORE attempting to engage the reverse gear, by pushing the pedal fully forwards/down.

Last, but not least, of the pedals, is the right-hand one, which IS the brake pedal, and which works to apply the band acting on the transmission's drum brake. This is positioned within





the engine oil, and to minimise wear on the band resulting from excessive friction-induced heat, except in an emergency it's wise to operate this brake in fairly short bursts, rather than continuously!



The Ford's controls; a steering wheel, two hand levers, three pedals and a floor-mounted parking brake lever (please see text).



Straightforward dashboard with effective speedometer/mileage recorder.



## HANDY

At the top of the steering column, just under the steering wheel and in handy proximity to it, are two additional controls, both hand-operated. The one on the left side is the ignition timing advance/retard lever. To advance the spark, the lever is moved downwards, conversely to retard it, the lever is moved upwards.

On the right-hand side of the column is the hand-operated throttle lever (there is no accelerator pedal), and to increase engine speed the lever is moved downwards from the upper (tickover) position.

When starting the engine (by means of the cranking handle at the front of the car), it's essential that the ignition timing is retarded, or the engine may kick backwards as it fires, with the real potential to cause injury to the operator.



Engine starting is by hand cranking, using the starting handle (care is required; please see text).

To avoid the possibility of a broken thumb or a broken wrist, the starting handle should not be fully gripped in one hand, but instead it should be cupped in the hand with your thumb on the same side as your fingers, so that in the event of the engine 'kicking back' your hand/wrist will not be injured. This is better witnessed than written about; I'd strongly recommend that it's best not to try starting a Model T until an experienced operator has shown you how to do it.

Incidentally, as soon as the engine is running smoothly, the spark lever can be moved downwards to advance the ignition, and this control is also used when driving to optimise



the available performance.

Before starting it's also essential to ensure that the hand-operated, floor-mounted 'brake' lever is positioned fully rearwards so that the rear wheel drum brakes are locked on and the transmission is in 'neutral'. As, sadly, some people have discovered over the years, if the car is in gear, and the engine starts when cranked, the car WILL drive forwards on its own and run you over!

In original form the Model T relies on magneto ignition, and there's a three-way switch to select between 'Off', 'Magneto', or 'Battery'. The 'Battery' position can be used when starting the car unless the vehicle's battery is discharged.

There is also a hand-operated choke control to bring into the equation if the engine is cold.

All these controls require careful co-ordination, and the technique required to start the car takes a little close study and practice in order to get it right. Luckily in my case Pat already had the engine running (so in that respect I cheated!). Otherwise I might still be in mid-Dorset now, trying to start the old Ford...

## ON THE ROAD

As we headed out of the huge Steam Fair site and onto the open road, Pat drove the Model T, talking me through the various operations he was performing with the hand controls and foot pedals, and giving me much useful and sound advice, while simultaneously steering a steady course.

The view from the car is terrific, as you have to climb up onto the vehicle, rather than into it, and the high seating position means that there's a great view of the road ahead, and also (over walls and hedgerows) of the surrounding scenery.

With the hood down we bowled along through the fresh air of the Dorset countryside, which was bathed in evening sunshine, and we were soon travelling at the car's happiest cruising



speed of between 35 and 40 miles per hour. In fact the Ford is quite capable of 45 mph or even a touch more, but, with mechanical sympathy and component longevity in mind, this is inadvisable for anything more than short bursts.

After about 10 miles Pat stopped the car in a lay-by and handed over the vehicle to me. I must confess to being a little nervous of being responsible for this wonderful old machine, and had visions of me performing a jig with my feet and another with the hand controls, while trying to steer the vehicle AND remember what Pat had told me.



Caution; driver under instruction!



'Get your motor running, head out on the



highway...’.

In fact, with verbal assistance from him, I managed to move off relatively smoothly, and soon we were up to the ‘magical’ gearchange point of 6 mph or so, and I was politely being urged to change up into top gear. To my surprise this was accomplished quite easily by letting the ratio change pedal move upwards to the ‘high ratio’ position, just easing back a bit on the hand throttle to slow the revs and easing the handbrake lever to its fully forward position, as the ratio change was effected. This changes the transmission from low to high or top gear.

The steady beat of the engine slowed very noticeably as the higher ratio was engaged (and, like most units of its time, the engine is a slow-revving unit anyway), but the car was still pulling strongly and its speed increased steadily until on the flat we were soon doing an effortless 40 mph.

As we proceeded, I started to worry less and enjoy more, but then we came to a long uphill gradient, I was concerned lest, due entirely to driver error (as the car was fine!) we came to a halt halfway up the hill, with a stream of modern cars trapped behind us. However, I needn’t have worried. There really was no problem, it just a question of juggling, under Pat’s watchful eye, the ignition advance and hand throttle controls.

In fact, with the throttle opened up and the ignition retarded a touch the old Model T pulled strongly up the hills and it wasn’t until we neared the showground on our return to the Steam Fair site, that I had to engage low ratio as we encountered heavy traffic. On coming to a halt in traffic I had to keep remembering to move the ratio change pedal to the ‘neutral’ position (halfway down).

I found that the brakes operated more effectively than I had imagined (although in any case I was leaving a large gap between our car and the one in front, just in case). In addition, the throttle lever can be moved upwards to provide fewer revs when required, also, for negotiating steep downhill sections, low ratio can be engaged to provide effective engine



braking.

The steering was also more positive than I had envisaged, but even so I endeavoured to keep clear of large potholes and dips at the edge of the road, as Pat warned me that they could 'distract' the very direct steering, encouraging the car to stray from my chosen course!

## WONDERFUL!

I thoroughly enjoyed my unexpected but much appreciated ride and drive in this beautiful, 101 year old Ford (impeccably maintained by its owner Pat) and for me personally it was a real highlight of this year's 'Great Dorset', which I always look forward to anyway.

I found the Model T far easier to drive than I had imagined, although of course there is much more to doing it properly than my efforts portrayed, and of course Pat is a master at controlling this machine. I was just thankful I had brought the car back in one piece (phew) and he didn't seem too nervous as my passenger (or at least didn't admit it)!

Pat, I am immensely grateful to you for putting your trust in me to drive your wonderful Model T; thanks again, it was a brilliant automotive experience, and one that I shall always remember.

Thanks also to brother-in-law Andy Kayes (who also enjoyed the journey) for taking the photographs while we were en route.



*Windswept but happy, after an enjoyable drive in a 101 year old Ford Model T.*

## EASY OWNERSHIP

For anyone contemplating the acquisition of a Model T, Pat mentioned that despite the great age of the surviving vehicles, components for these cars are still very easy to obtain, from a number of suppliers in the UK and America.

He also advised that the Model T Ford Register Great Britain helps UK owners to keep their Fords alive, and publishes a quarterly magazine entitled 'T Topics'. For further information please go to [www.modeltregister.co.uk/](http://www.modeltregister.co.uk/)





## WHEELS-ALIVE TECH. SPEC. IN BRIEF

Ford Model T (1908 to 1927; our test car dates from 1914)

Engine: 177 cu.in. (2897cc), in-line four cylinders (in monobloc), sidevalve ('flathead'), two valves per cylinder, trembler coil/magneto ignition

Power: 20+ bhp at 1,600 rpm (which equates to approximately 40 mph)

Torque: 82 lb.ft. @ 900 rpm

Transmission: Two forward speed plus reverse epicyclic (planetary) gearbox; torque tube, rear wheel drive

0-62 mph: Don't be silly.

Top speed: 45+ mph

Fuel consumption, overall: Approximately 25 miles per gallon