

ASHLEY CLEAVE'S MORRIS

Some Notes on a Remarkable Car which has had a Varied and Successful Competition Career Extending Over More Than 35 Years.

AT THE very wet VSCC Shelsley Walsh hill-climb last year W. Ashley Cleave's Morris won its class and I was reminded that this remarkable car and its 70-year-old driver had been competing pretty consistently since the pre-war trials days. Indeed, the Morris first took part in such events in 1937/38, before the RAC ban on "knobbly" tyres in January 1939, which spoilt this form of sport, because with ordinary treads on the back wheels the cars could get no grip in wet weather unless they were rebuilt as freaks with most of the weight concentrated over the back axle, which made them impractical, even dangerous, for road use, resulting in trials hills concentrated in one area so that the special mud-storming cars could be conveyed to and from on trailers.

That day was some way away when W. Ashley Cleave built his Morris Special to be both a comfortable road-going car and a potent competitor in the 1,100 c.c. class. He was Works Manager and eventually became a Director of Callington Motors Ltd. in Cornwall, a company which had been Morris dealers since 1926. So it was natural that in planning a competition car he should use Morris components. A badly-crashed 1937 Morris Eight Series One saloon provided the basis. The engine was carefully assembled and supercharged with a Centric blower, arranged to give a boost of 6 lb./sq. in. for trials and 15 lb./sq. in. for speed trials and hill-climbs. Separate drop exhaust pipes were made up for Nos. 1 and 2 and Nos. 3 and 4 exhaust ports, and it was found that, by carefully maintaining the contact-breaker, a sports coil coped with the rev. range. A four-speed gearbox from a 1934 Morris

Minor was used, modified to mate up with the Morris Eight engine. The clutch was altered to transmit the extra power and the differential carrier machined out slightly so that a heavier unit could be fitted.

It is interesting that the modern ploy of using components from various models of the same make was exactly the way in which Ashley Cleave evolved his very successful Morris. As he would have to drive long distances out and back to the events he proposed to enter, and as trials in those days were quite long-distance road events in themselves, a sensible body was required. So a light two-seater was constructed, not unlike that on the current open Morris Eight, and proper mudguards, hood, side-screens and upholstery were provided.

In the days of which I am writing all manner of potent trials cars went out to do battle up the slimy hills of England. Yet this little Morris proved capable of doing well against opposition from such as the blown MG Musketeer Magnettes and their successors, the Cream Cracker and Musketeer MG Midgets. Here again one sees the mingling of parts from different models of one make, the Magnettes being virtually P-type MG Midgets with overbored and supercharged N-type MG Magnette power-units and the Cream Crackers based on the T-type MG Midget with superchargers added.

Apart from trials, in which, shared by the builder and C. S. L. Burleigh the Morris had won some two dozen trophies by the time the ban on Comp.-tyres came into being. Ashley Cleave decided that the road-holding was good enough for the car to participate in speed trials and at Brooklands. So this versatile car, the body of which weighed about 95 lb. after the 75 lb. or so of steel mudguards and stays had been removed, became a racer. There just isn't room to detail all its outings and successes but it had rather a field-day at Brooklands in 1938. This was in the MCC High Speed Trial and supporting races. Running road-equipped, I am told that the astonishing Morris out-accelerated the Ford V8 opposition in the sprints and in the one-hour blind it, although not quite so fit beneath the bonnet as when it had left Callington, was timed to do a flying-lap at 73.46 m.p.h. This implies a maximum of around 80 m.p.h. which wasn't bad for an under-one-litre car thirty-five years ago. After this the Morris was driven all the way back to Cornwall without attention. Incidentally, it was registered CCV 952 and its chassis was never shortened, which is why I refuse to dub it a Special.

Encouraged, Ashley Cleave fitted one of the new Series E Morris Eight engines and gearboxes



The Morris with its 1937/38 awards.

when this was introduced in 1939. The former supercharger installation was fitted to it. This proved equally successful in keeping up with the increasing opposition. Then Hitler intervened, so the blower was taken off and the Morris used for hack work until 1943. The pause for hostilities to be concluded enabled Ashley to think out the next mode of attack. What he did was to obtain a Morris Ten engine and gearbox, which he lined down to 62 mm. so as to remain in the 1,100 c.c. class. The crankshaft was unaltered, although carefully balanced. The capacity of the new engine was 1,086 c.c. Martlett pistons from the Brooklands Engineering Company with specially shaped crowns were obtained, which Ashley machined himself to their final shape. He took the standard Morris Ten camshaft in hand, contriving to change somewhat the valve lift and timing overlap. Twin carburettors, triple valve springs, and special push-rods were the only other changes made to the engine, which says much for its rugged construction. By changing from one set of pistons to another, Ashley Cleave had available two different compression-ratios, the normal cr being 9.0 to 1. But by using dope fuel - in a Morris Ten! - he was able to go to a cr of 12.5 to 1, when the engine would produce peak output at an astonishing 6,400 r.p.m. and was safe, for short bursts, above that crankshaft speed.

For the 1951 season more performance was obtained from this now hoary Morris by making



for it a lighter body. This still had the outward appearance of a road-going two-seater but it was composed of aluminium panelling over wooden formers. This saved some 50 lb as the new "coachwork" weighed a mere 45 lb. A separate bulkhead was used, stayed to the body shell by light-gauge triangulated tubes. The bonnet sat on this, on rubber sealing, and the result was a rigid construction well able to stand the racking it underwent on trials sections, yet usefully light when it came to acceleration in speed-trials and speed hill-climbs.

It is significant, to owners of pre-war Morris Eights, that standard road springs were retained, but reset as flatter leaves and that the chassis, although strengthened here and there to avoid lozengeing tendencies, was otherwise not tampered with, although as twin rear wheels were needed for trials a rear extension was made to support this extra tail-end weight. The shock-absorbers were piston-pattern Armstrongs, suitably set up. A longer steering drop-arm was a simple means of obtaining higher-geared or, rather, quicker steering response and the turning circle was still in the order of approximately 28 feet.

The former steel mudguards, strong for long-distance driving, were at last replaced by alloy ones, as were their stays, which saved some 63½ lb. The complete car now turned the scales at 13 cwt. 80 lb., but note that this was in ready-to-go-to-a-trial, which meant with two spare wheels, hood and side curtains, all equipment and the petrol tank filled with 14½ gallons of fuel, to give a range of over 400 miles. When it was stripped for speed work this Morris Eight/Ten weighed a mere 10½ cwt. or thereabouts.

The new 62 x 90 mm. engine with its lightened flywheel, twin 1½" SU carburettors and the afore-described modifications would turn at 7,000 r.p.m. and the propeller shaft was, wisely,



In some thirty-five years of competition work the remarkable Morris has done well in trials – it is seen here on Wool Heath during a W. Hants & Dorset MC Knott Cup Trial – and also –

balanced as was the clutch unit in company with the crankshaft.

Normally a standard Morris Ten gearbox was used but another with closer ratios was available for sprint work, these being 1, 1.3, 1.85 and 2.98 to 1. By making good use of three different crown wheels and pinions for different types of event, Ashley Cleave had a choice of final-drive ratios of 4.8, 5.0 and 5.7 to 1. No doubt Morris experts will recognise what components were

used. The differential was a four-star unit as used in the then current Series III Morris Twelve. The front wheels were usually fitted with 4.50 x 17 tyres and the back ones with 6.00 x 16 covers for trials driving and with 5.00 x 17 on the road. There could be variants on this theme, of course.

Engine power output has never been measured. But in 1951/52 guise the Morris was taken to an aerodrome and carefully timed. I am assured that in sprint trim on dope fuel it achieved a 0-60 m.p.h. time as the mean of several runs of 13.7 sec. 0-50 m.p.h. through the gears occupying a time of 10.17 seconds. In this guise the top speed was over 90 m.p.h. and even with the lower compression-ratio the Morris would reach 90 m.p.h. if sufficient space was available.

Valve bounce would restrict crankshaft speed to 7,000 r.p.m. and the safe limit was regarded as 6,500 r.p.m. On the l.c. pistons pump petrol plus 15% benzole was the brew, and checked over 1,000 miles of "fast touring", which to Ashley Cleave on pre-war roads meant averaging 50 m.p.h. and more, the petrol consumption worked out at a surprisingly useful 33 m.p.g. So there was a full-tank fuel range of nearly 480 miles!

It would be impossible after all the successful motoring that CCV 952 has done to list its enormous number of prize-winning outings, for Ashley Cleave must have some 400 trophies to his credit. Apart from Brooklands the Morris has run in an MCC Land's End Trial, at Lulsgate, Castle Combe and Ibsley race meetings, Naish and Trengwainton hill-climbs to quote but two of these, at Weston-Super-Mare only this autumn, and in scores of the important pre-war and post-war mud trials. In 1951, competing on unknown territory against the pick of the leading trials exponents driving cars like V8 and V12 Allards and the like, the irrepressible little Morris made the best performance of the day. At Trengwainton that year it climbed in a time of 27.58 seconds, which was only 1.62 sec. slower than the new course record established by a



... in Sprints and ...



— in speed hill climbs and even at —

4.4-litre Allard. That was on the 9.0 to 1-compression pistons.

After 1952 further mods were carried out. The wheels and tyres were changed to 185 x 13 rear, and 165 x 13 front. The shock-absorbers were changed to Woodhead Monroe telescopic type with special made-up brackets, front and rear, with anti-roll bar at the front only. Torque arms were fitted to the rear axle, to stop tramp. Ashley-Cleave found the angle between axle and chassis runners to be very critical.

The brakes have been modified, the wheel cylinders being bored-out to one inch and the master cylinder modified. The springs are now progressive, to further improve the ride, also the spring shackles were modified. Spring eyes have been ground out and bushes fitted and pins from the Series-E drilled for greasers, and modified. The back axle now has a Series-Z van diff carrier, drilled to fit the Series-II rear axle beam and modified to take all Timken bearings instead of the ball races, to take the extra load. The only part of the car which is not of Morris or BL manufacture is the crown wheel and pinion, this is another manufacturer's product which is machined to fit the Morris diff and housing. (Ford? — ED) This meant a lot of work but was well worth the effort and, says the owner, "I also needed a 4:4 to 1 ratio for the 13" wheels.

The gearbox now has a choice of two sets of ratios:-

3.04	1.76	1.232
2.6	1.52	1.237

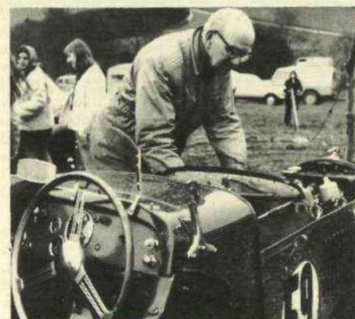
The first one quoted is the set most frequently used. All these ratios were made by Ashley-Cleave by using Morris and BL parts, building up the standard layshaft and mainshaft by grinding off the gears and fitting necessary gears and welding in position.

All waterways where possible were cleaned out and made larger. The water-pump impeller was modified to increase flow. All oilways in cylinder

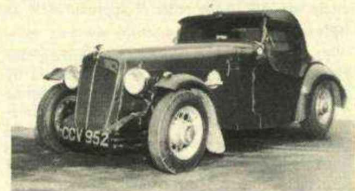
block were enlarged, also the oil-pump suction pipe. Oil-pump capacity increased, crankshaft oil supply pipe redrilled to supply oil to the lowest pressure point of the crank pins. Head shape and ports were redesigned in an effort to get a very turbulent charge. The compression-ratio is now 11½ to 1. The engine will run perfectly on 5-star fuel, which is always used nowadays.

The carburettors now fitted are 1½" SUs, with the bottom of the pistons radiused to match the main carburettor bodies.

The camshaft gives the following timing: — Inlet opens 20, before top dead centre, closes 62, after bottom dead centre, Exhaust opens 54, and closes 27, after. The camshaft was reprofiled by Callington Motors. Distributor unit advance curve modified to fit the above oil timing. (After much trial and error, Mr Ashley-Cleave has succeeded in getting it about right.)



Above: The constructor/driver inspects the machinery. Below: The Morris is driven to and from competition events, for which purpose a hood and side screens are fitted.



For 1975 he is thinking about increasing the engine capacity to either 1250 cc or 1500 cc. He remarks "As you well know, the very popular 1100 cc class does not seem to exist any more and I am usually running in anything from 1300 cc to 2000 cc and still getting a very credible performance".

The list of splendid performances by this now 36 years-young Morris driven by its driver/builder who is in his seventies, is truly creditable. Moreover, the thought occurs that any reasonably competent member of the Morris Register could build himself something of much the same sort — but using components from crashed cars, because these days the original Morris Eights, Tens and Twelves are of sufficient interest to make deliberate cannibalisation a crime.

W. B.



— Brooklands, where this versatile Morris is seen, directly beneath the "V" of Vickers, in a mass-start of one of the MCC One Hour High-Speed Trials.