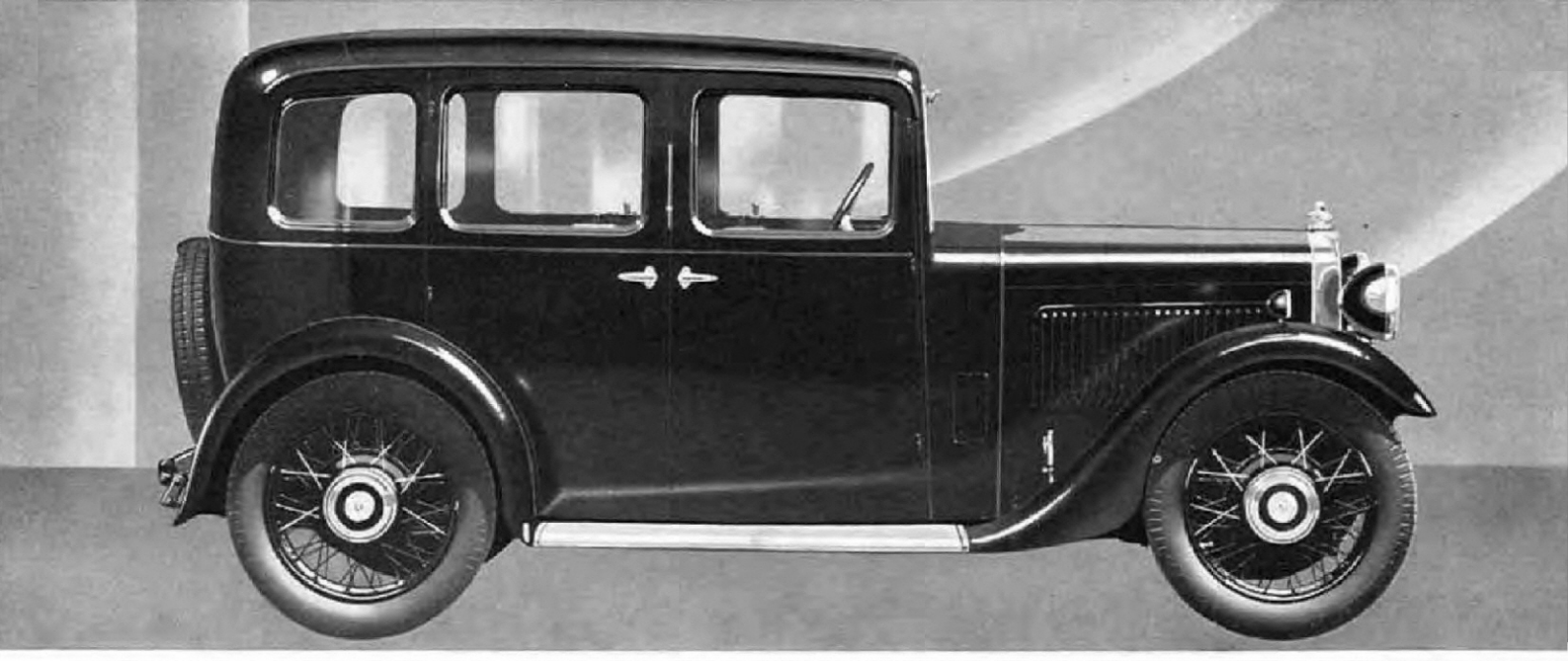

THE MORRIS TEN FOUR TRAVELLER'S SALOON

£185

Coachwork. Black cellulose with brown leather upholstery.
Interior Woodwork. Polished mahogany, metal facia board.
Additional Equipment. Parcel net, single-panel adjustable windscreen, winding door-windows, interior driving mirror, rear blind, private locks on doors, adjustable bucket type front seats, detachable rear seat and squab, special rear door with private lock, roof-lamp, interior visor.

THE MORRIS TEN FOUR

FOUR-CYLINDER MODELS FOR 1934

Last season proved that the roomy willing Morris "Ten" was a firm favourite with the motoring public, and in response to very definite indications we are introducing this season a new and entirely attractive Ten Six. Also the looks and the performance of the original Ten have been graded up for 1934. Definitely these "Tens" are cars that will impress on sight and will be found equally convincing in action.

The new frame with generous X-shaped reinforcement—a frame within a frame—combines lower body lines with increased road-holding stability. A new 4-speed synchronised gearbox adds a fine ease to driving—you simply cannot "crash" a change. And any trace of vibration, even at full throttle, is damped out by the exclusive equipoise mounting—another new Morris feature—which completely insulates the engine from the frame.

General Equipment. Triplex glass throughout; finger-tip controls for ignition, lamps and horn; direction indicators; Lockheed hydraulic brakes; pile carpets; pedal rubbers; gearbox draught excluders; pedal draught excluders; speedometer; oil gauge; S.U. electric Petrolift; dash-reading electric petrol gauge; electric windscreen wiper; licence holder; pressure chassis lubricating pump; calormeter and wings; high-frequency electric horn; electric lighting and starting; stop and tail-light; headlamps with dip and switch mechanism; sidelamps; battery master switch; scuttle side ventilators; hydraulic shock absorbers; door pockets; five detachable Magna type wire wheels; five Dunlop cord tyres; spare wheel carrier; jack; tyre pump; kit of tools; spare tin of oil.

WWW.MORRIS-ARCHIVE.CO.UK

THE MORRIS TEN FOUR

General. The design consists of a four-cylinder water-cooled engine built in unit construction with a four-speed synchromesh gearbox and single-plate clutch with cork inserts. This power unit is mounted on a deep sectioned downswept frame with generous "X" stiffening member on a resilient equipoise mounting which reduces engine vibrations. The frame is supported front and rear on long semi-elliptic springs efficiently controlled by Armstrong hydraulic shock absorbers. The track is 4 ft. 0 in. (1.22 m.) and the wheelbase 8 ft. 0 in. (2.43 m.).

Engine. The four-cylinder engine has a bore of 63.5 m. (2.5 in.), a stroke of 102 mm. (4.0 in.) and a cubic capacity of 1292 c.c. (78.84 cu. in.). Treasury rating 10 h.p. Tax £10. The cylinders are cast in one with the skirt of the crankcase which is extended well below the crankshaft centre, and liberally reinforced with internal webs to provide a structure of great strength and rigidity. The crankshaft is of the three-bearing type, with bearings of large diameter and generous length. Every crankshaft is carefully balanced to very close limits.

The main bearings are die-cast white metal. The steel connecting rods are equipped with white metal big-end bearings of the full-ring type, and are individually balanced to a very high degree of accuracy. The aluminium pistons are fitted with four rings, individually balanced, and the complete assemblies of rods and pistons are equalised in weight to within .2 oz. (best aero engine practice). The side-by-side valves are operated by a large diameter three-bearing camshaft through adjustable tappets carried in removable guides. The combustion chambers are completely machined to ensure equality of compression and the minimum of carbon deposits, the cylinder head being detachable. The camshaft is driven by duplex roller chain from the crankshaft. The induction and exhaust manifolds are cast integral and provided with adequate hot spots. An important feature of the induction system is the combined air pre-heating cover and cleaner, which also collects and consumes all fumes discharged from the crankcase breather, so that they are prevented from finding their way into the car interior.

Synchromesh Gearbox. The four-speed gearbox is provided with synchromesh mechanism for top and third gears, which are, in addition, of the silent constant mesh type. The gearbox is provided with an accessible filling orifice and dipstick oil level indicator.

Lubrication. A spur gear pump, mounted externally on the side of the crankcase and driven from the camshaft by a diagonal shaft and helical gearing, supplies oil under pressure to all main and big-end bearings, camshaft bearings and clutch. The oil is filtered before re-circulation by a generous tray type filter covering the full area of the sump. Chassis lubrication is by Enots high-pressure oilgun in conjunction with accessible nipples.

Cooling System. The cooling water circulates by thermo-syphon action. It is passed from the cylinder head through two carefully positioned ports which ensure an even temperature distribution and absence of water pockets. The radiator is fan assisted.

Electrical Equipment. The distributor for the coil and battery ignition is driven from the upper end of the diagonal oil pump drive shaft, and has automatic advance and retard. The dynamo is belt driven. The starter motor is of the sliding pinion type and located on the side of the gearbox. Full five-lamp equipment is provided, including headlamps with dip and switch mechanism, sidelamps, and tail-light with stop light. All switches are accessibly mounted on the instrument panel with the exception of the head-light dipping switch and horn push, which are conveniently mounted in the centre of the steering wheel, and the battery master switch which is close to the driver's seat. An easily controlled electric screen wiper ensures clear vision in bad weather, and concealed type traffic indicators are fitted.

Carburation. An S.U. automatic piston-type carburetter with adequate control over mixture strength supplies the mixture. The controls are conveniently situated at the facia board.

Petrol Tank. The petrol tank is mounted at the rear of the chassis and has a capacity of 6½ gallons (29½ litres). Its contents are clearly indicated to the driver by an electrically-operated dial gauge on the instrument panel. The petrol feed is by S.U. automatic Petrolift, which provides a gravity feed to the carburetter.

Transmission. A single-plate clutch, with cork inserts, automatically fed with oil from the engine, ensures a smooth clutch action and the minimum of attention. An open tubular propeller shaft, carefully balanced and of large diameter, transmits the drive to the rear axle through fabric disc universal joints with centring steadies. The final drive is by silent spiral bevel gears and differential housed in a pressed-steel axle casing. The axle shafts are three-quarter floating.

The Four-wheel Brakes. Fully compensated four-wheel brakes of the internally expanding type operated by the Lockheed hydraulic system ensure the maximum braking efficiency. Their certainty of action is maintained under all conditions as there are no bearings to wear or need lubrication. The hand brake operates on the rear wheels by independent mechanism.

Steering. The steering gear is of the Bishop cam type, providing extremely light and safe operation with a high degree of accurate controllability. Road shocks on the steering wheel are particularly absent.

Tool Kit. A kit of tools is provided with every car and housed in an accessible toolbox on the dash under the bonnet.

www.morrisregister.co.uk

GENERAL DATA

	Morris Minor	Morris Minor 4-Door Saloon & Special Coupé	Morris Ten Four	Morris Ten Six	Morris Cowley Four	Morris Cowley Six	Morris Oxford Six	Morris Isis Six	Morris "25"
Number of Cylinders ...	Four	Four	Four	Six	Four	Six	Six	Six	Six
Bore	2.24 in. (57 mm.)	2.24 in. (57 mm.)	2.5 in. (63.5 mm.)	2.24 in. (57 mm.)	2.73 in. (69.5 mm.)	2.5 in. (63.5 mm.)	2.58 in. (65.5 mm.)	2.72 in. (69 mm.)	3.23 in. (82 mm.)
Stroke	3.27 in. (83 mm.)	3.27 in. (83 mm.)	4.01 in. (102 mm.)	3.54 in. (90 mm.)	4.01 in. (102 mm.)	4.01 in. (102 mm.)	4.01 in. (102 mm.)	4.33 in. (110 mm.)	4.33 in. (110 mm.)
Cubic Capacity	51.69 cu.in. (847 c.c.)	51.69 cu.in. (847 c.c.)	78.84 cu.in. (1292 c.c.)	84.1 cu.in. (1378 c.c.)	94.59 cu.in. (1550 c.c.)	117.27 cu.in. (1938 c.c.)	125.84 cu.in. (2062 c.c.)	150.61 cu.in. (2468 c.c.)	209.5 cu.in. (3485 c.c.)
Valve Position	Side	Side	Side	Side	Side	Side	Side	Overhead	Side
R.A.C. Rating	8.05	8.05	10	12	11.9	15	16	17.7	25
Tax	£8	£8	£10	£12	£12	£15	£16	£18	£25
Number of Gears ...	Four and Reverse	Four and Reverse	Four and Reverse	Four and Reverse	Four and Reverse	Four and Reverse	Four and Reverse	Four and Reverse	Four and Reverse
Gear Ratios Synchro-mesh First ...	22.467	22.467	20.88	22.2	20.88	21.08	21.08	19.6	18.56
Second ...	12.47	12.47	12.32	13.09	12.32	12.0	12.0	11.17	10.458
Third ...	8.546	8.546	7.986	8.49	7.986	7.79	7.79	7.252	6.586
Fourth ...	5.375	5.375	5.22	5.55	5.22	5.27	5.27	4.9	4.45
Reverse ...	22.467	22.467	26.845	28.54	26.845	26.35	26.35	24.5	23.85
Clutch	Single dry plate	Single dry plate	Single plate (cork inserts)	Single plate (cork inserts)	Single plate (cork inserts)	Single plate (cork inserts)	Single plate (cork inserts)	Single plate (cork inserts)	Single plate (cork inserts)
Steering Gear	Bishop cam	Bishop cam	Bishop cam	Bishop cam	Bishop cam	Bishop cam	Bishop cam	Bishop cam	Bishop cam
Turning Circle	31 ft. 0 in. (9.47 m.)	35 ft. 8 in. (10.87 m.)	38 ft. 4 in. (11.68 m.)	39 ft. 9 in. (12.12 m.)	39 ft. 6 in. (12.04 m.)	40 ft. 8 in. (12.39 m.)	44 ft. 5 in. (13.23 m.)	46 ft. 1 in. (14.17 m.)	46 ft. 1 in. (14.17 m.)
Wheel Type	Magna Wire	Magna Wire	Magna Wire	Magna Wire	Magna Wire	Magna Wire	Magna Wire	Magna Wire	Magna Wire
Wheel Size	2.15×18	2.15×18	2.5×19	2.5×19	3×19	3×19	3.25×18	3.25×19	3.75×19
Tyre Size	4.00—18	4.00—18	4.50—19	4.50—19	5.0—19	5.0—19	5.25—18	5.50—19	6.00—19
Wheelbase	6 ft. 6 in. (1.997 m.)	7 ft. 7 in. (2.303 m.)	8 ft. 0 in. (2.435 m.)	8 ft. 6 in. (2.59 m.)	8 ft. 6 in. (2.59 m.)	8 ft. 10 in. (2.692 m.)	9 ft. 6 in. (2.896 m.)	10 ft. 0 in. (3.048 m.)	10 ft. 0 in. (3.048 m.)
Track	3 ft. 6 in. (1.067 m.)	3 ft. 6 in. (1.067 m.)	4 ft. 0 in. (1.219 m.)	4 ft. 0 in. (1.219 m.)	4 ft. 0 in. (1.219 m.)	4 ft. 4 in. (1.321 m.)	4 ft. 8 in. (1.422 m.)	4 ft. 8 in. (1.422 m.)	4 ft. 8 in. (1.422 m.)
F.W.B. Brake Actuation ...	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic
Hand Brake Actuation ...	On rear wheels	On rear wheels	On rear wheels	On rear wheels	On rear wheels	On rear wheels	On rear wheels	On rear wheels	On rear wheels
Brake-drum Diameter ...	8 in. (203 mm.)	8 in. reinforced (203 mm.)	10 in. reinforced (254 mm.)	10 in. reinforced (254 mm.)	10 in. reinforced (254 mm.)	10 in. reinforced (254 mm.)	12 in. reinforced (305 mm.)	14 in. reinforced (356 mm.)	14 in. reinforced (356 mm.)
Ignition	Coil	Coil	Coil	Coil	Coil	Coil	Coil	Coil	Coil
Final Drive	Spiral Bevel	Spiral Bevel	Spiral Bevel	Spiral Bevel	Spiral Bevel	Spiral Bevel	Spiral Bevel	Spiral Bevel	Spiral Bevel
Front Springs	Half Elliptic	Half Elliptic	Half Elliptic	Half Elliptic	Half Elliptic	Half Elliptic	Half Elliptic	Half Elliptic	Half Elliptic
Rear Springs...	Half Elliptic	Half Elliptic	Half Elliptic	Half Elliptic	Half Elliptic	Half Elliptic	Half Elliptic	Half Elliptic	Half Elliptic
Shock Absorbers	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic
Tank Capacity	5 gallons (22 litres)	5 gallons (22 litres)	6½ gallons (29½ litres)	6½ gallons (29½ litres)	7½ gallons (34 litres)	10 gallons (45 litres)	14 gallons (63½ litres)	17 gallons (77 litres)	17 gallons (77 litres)
Petrol Feed	S.U. Petrolift	S.U. Petrolift	S.U. Petrolift	S.U. Petrolift	S.U. Electric Pump	S.U. Electric Pump	S.U. Electric Pump	S.U. Electric Pump	Autovac

www.morris-archive.co.uk