

Aston
Workshop



Restoration Log

Jaguar E-Type Series I Roadster

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We have at the Aston Workshop, striven to restore your Jaguar to the best possible standard, keeping faithful to the originality of the car, while including a number of subtle improvements to aid reliability and general ease of use. The end result is a car, that so far as we are able, is a faithful restoration of an iconic model.

The restoration logbook is an illustrated record of its restoration which aims to provide a valuable insight to the many processes that go into a major restoration project.

A rare car, this 3.8 litre Series 1 E-type perfectly encapsulates the full beauty of the original car that launched the E-Type at the Geneva Motor Show in 1961.

Regarded by many as one of the all time iconic car designs, it heralded a radical departure for Jaguar and stunning value for money that no other manufacturer has before or since come close to emulating. The end result is an object, an artefact, that has a beauty and form no modern car can reproduce and a source of great pleasure for many years to come.

We hope that this restoration logbook will inform and give as much pleasure as this car sets out on a new chapter in its long and illustrious history.

Enjoy

Brief Model History

Overview



The E-Type was initially designed and shown to the public as a sports car in two seater coupé form (FHC or Fixed Head Coupé) and as a convertible (OTS or Open Two Seater, otherwise referred to as a roadster). When released Enzo Ferrari called it "The most beautiful car ever made".

The model was made in 3 distinct versions generally referred to as "Series 1", "Series 2" and "Series 3". A transitional series between Series 1 and Series 2 is known unofficially as "Series 1½" also has a distinct identity as a model.

The design of the E-Type owed much to the C-Type and D-Type Jaguars that were built to race at Le Mans and they proved to be very successful. The D-Type in particular, proved a robust exemplar of a light but strong monocoque design and its aerodynamic performance and minimal drag was also a key design cue for the E-Type that was to follow.

This car is the 40th production E-Type Series 1 3.8 litre E-Type roadster completed 20th June 1961. The car was first registered 1st September, 1961. It comes with a full Jaguar Daimler Heritage Trust Certificate. Engine and body numbers are original and correct. It is a very rare survivor. Very unusually, this car has been owned by one family since 1977 until finally being offered for sale on completion of its restoration in March of 2009.

All E-Types featured fully independent front and rear wheel suspension and four wheel disc brakes, in-board at the rear. Brakes were servo-assisted. The rear suspension design proved so successful that it was in modified form used by all Jaguar models right up to the emergence of the still in production X-Type, and the new aluminium bodied XJ and new XK8 models.

The Series 1 can be recognised by glass covered headlights (up to 1967), small "mouth" opening at the front, signal lights and tail-lights above bumpers and exhaust tips under the licence plate in the rear. The first 500 cars, of which this is one of only 91 RHD examples, were also characterised by the use of external bonnet catches which are covered by a chrome flash at the bottom rear of the bonnet on each side.



Series 1 3.8 litre cars are also identifiable by the "flat floor" that was another unique feature of an early Series 1 car.

3.8 litre cars have leather-upholstered bucket seats, an aluminium-trimmed centre instrument panel and console (changed to vinyl and leather in 1963), and a 4-speed gearbox that lacks synchromesh for 1st gear ("Moss box").



4.2 litre cars have more comfortable seats, improved brakes and electrical systems, and an all-synchromesh 4-speed gearbox. 4.2 litre cars also have a badge on the boot proclaiming "Jaguar 4.2 Litre E-Type" (3.8 cars have a simple "Jaguar" badge). Optional extras included Chrome Wire Wheels and a detachable hard top for the Open Two Seater was an optional but very rare extra.

Brief History of 433 TVT

433 TVT was the 40th production E-Type and an example of a very early Series 1 E-Type.

This car was originally dispatched to Byatts of Fenton, Stoke-on-Trent on the 14th July, 1961 and was one of the 69 cars that Jaguar supplied for demonstration and promotional purposes. It is thought that in common with nearly all the early production cars, they were supplied to selected customers only and we believe this car was no exception. It is apparent that the Jaguar failed its MOT test in 1967 and there is no evidence that it was put back into roadworthy condition until acquired in 1976 by its second owner Mr George Ritson of Newcastle. Having acquired the Jaguar in 1976/7 Mr Ritson kept her in the same family ownership until April 2009. By 1994, the E-Type was in need of serious work, to rectify the inevitable deterioration that accumulates after many years of use so

the car was taken off the road.

Mr Ritson therefore commenced a full restoration and commissioned the Aston Workshop to strip the car. In 1998 the body shell was dispatched to Martin Robey for a full body shell restoration. On its completion, Mr Ritson then requested the Aston Workshop to store the car, until such time as he was able to continue the restoration.



It was not until late in 2008, that Mr Ritson reluctantly concluded that he could no longer continue and agreed to sell the E-Type to the Aston Workshop to complete its restoration and to sell on completion. The restoration was finished in March 2009.

Monocoque and Body Restoration

While the Aston Workshop has not undertaken the monocoque and body restoration on this E-Type, it is possible to summarise the outline of the work required for the standard of restoration that has been achieved. The following is therefore an approximation of the work involved and a guide to what has been undertaken.

Structural reconstruction

An original RHD early Series 1 car, the body shell was entrusted to Martin Robey Ltd to be completely rebuilt. In common with many E-Types, they suffer more than their fair share of corrosion and this example was unlikely to have been an exception. To that end the work involved in restoring the body shell will have involved a complicated and extensive replacement of much of the original structure of the car, particularly the monocoque structure. The quality of the resulting body is second to none and a credit to all involved. Door, boot and bonnet have all been prepared to the same impeccable standard and panel gapping and alignment is without fault.

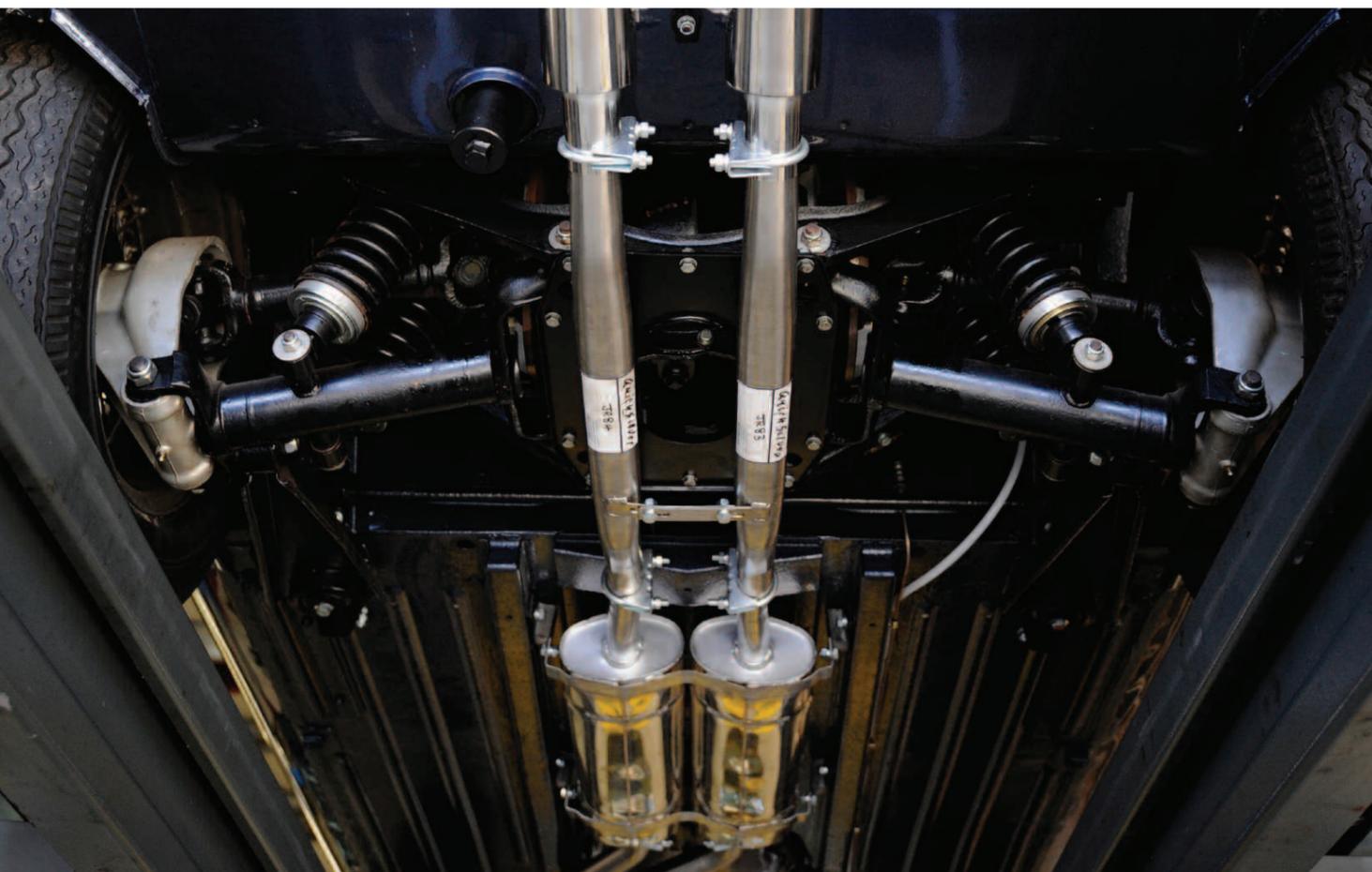
Painting the Body

Finished in Jaguar opalescent dark blue, the body shell was entrusted to a company called Spray Tec in Northamptonshire, who painted the car to the best possible standard. The scope of work covered all aspects in the preparation for and the painting of the body shell, bonnet, doors and boot. More usually associated with the restoration of Aston Martins, the resultant quality of the paintwork is exemplary and to a very high standard of finish.

The quality of paintwork is as good under the bonnet, under the car and inside the boot as the outside.



Chassis and Body Assembly



Suspension, Fuel and Brake Systems

The first steps in reassembling the car were to install the brake and fuel systems (exclusive of the fuel tank at this stage). Next the front and rear suspension was reassembled together with the overhauled final drive assembly and rear axle. Checks were made to ensure a close approximation of the correct front suspension settings, in particular caster and king pin inclination angles as these were set using shims on reassembly. The steering rack was refitted at this time with new mountings. New wheel bearings and hub assemblies were fitted with

overhauled brake callipers and new brake discs. The brake system was then connected up, ready for final bleeding.

Under Bonnet Assembly

The next stage was to start assembly of all the components installed within the under bonnet area. First to go in was the under bonnet heat insulation panel. Next the heater box were installed. An under bonnet wiring loom was fitted at this stage also.

A key part of this restoration was to ensure the highest possible standard of presentation in the care taken to ensure that it had that new car feel.

Electrical, Heating and Ventilation Systems

At this stage, the emphasis changed and attention was given to installing all of the behind the dashboard systems, including the electrical looms which also lead to the back of the car, heating and ventilation trunking, windscreen washer system and windscreen motor and rack assembly.

Steering

The next stage was the installation of the steering column and steering linkages. This was then wired in with the control switches, ready to fit to the under dash cover. The steering wheel assembly was fitted later.

Dashboard

The dashboard was carefully cleaned and refinished. The dashboard trim was renewed. All of the dashboard instruments save the speedometer, water and oil temperature gauges were pre-fitted into the dashboard together with all new switch assemblies and prepared for installation.

Engine and Gearbox Installation

The next big step was to mate gearbox, clutch and engine and install them into the car. At that stage the cooling system was also refitted and connected up complete with electric cooling fan. The fuel system installation was completed and the new stainless steel exhaust system fitted, hung with new hangers and connected. Electrical connections were

fitted and tested. Inside the car, the transmission tunnel assembly was reassembled and sound-deadening and heat insulation installed. The clutch was connected up and bled. The fuel tank and gauge were fitted and connected. All other outstanding items such as the washer bottle assembly, coil and starter connections were fitted.

Hood, Glass and Dashboard Assembly

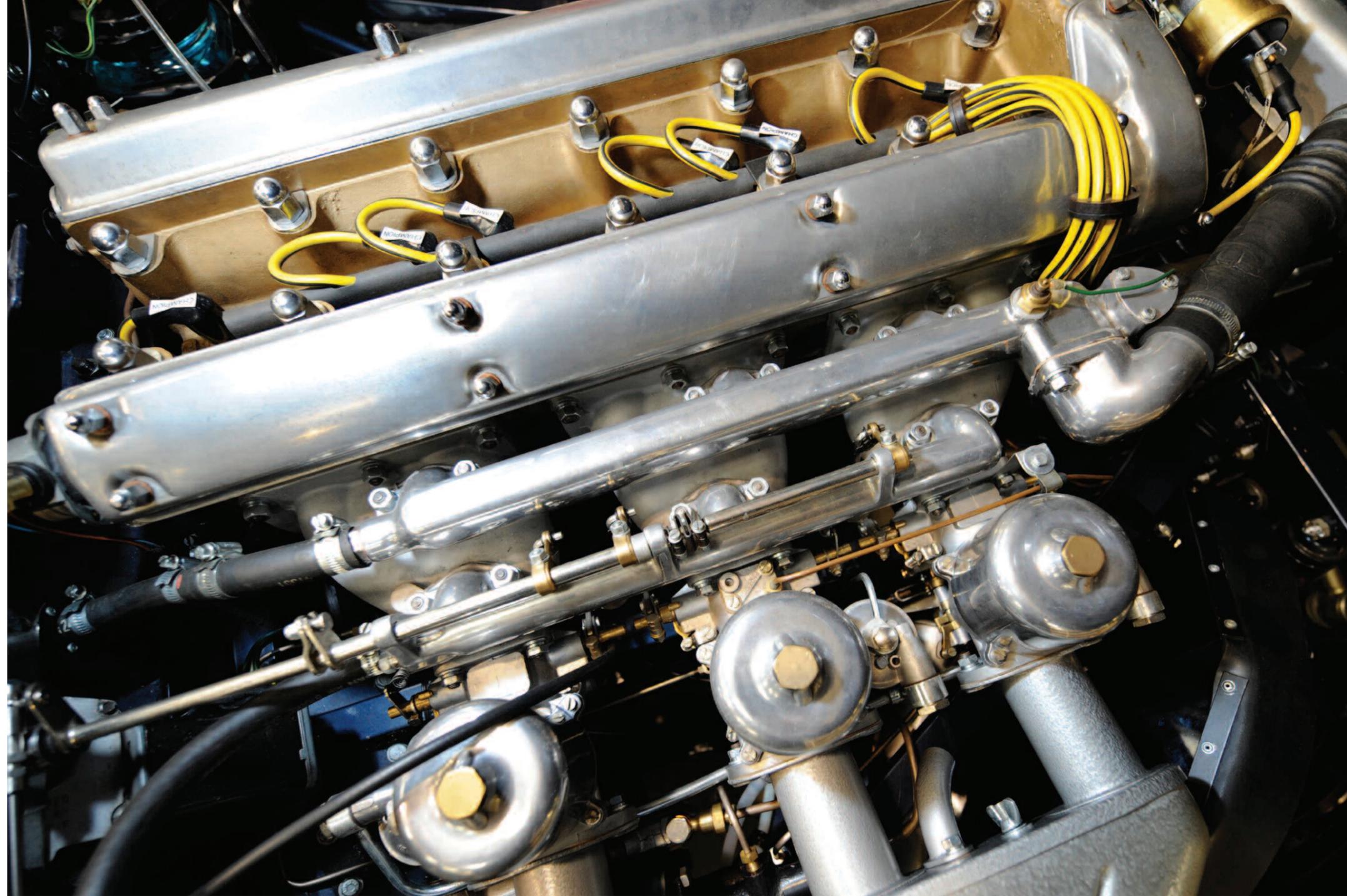
The next major step forward was the fitting of the new black mohair hood, and the installation of the front windscreen. With this completed and hood in place courtesy lights were fitted and wired in. After that the dashboard assembly was offered up, gauge and switch connections were installed and tested. The speedometer was then fitted and connected and the water and oil temperature gauges fitted. At this stage the battery was connected and basic function and continuity checks completed. The steering wheel and hub assembly was offered up and installed. Door window frames and glass were then fitted and functioned for ease of operation. Light fittings were also installed and connections made good and lights checked. Brakes were then bled. As a final step, fuel was added, leak checks completed and engine started to check for leaks, charging system operation and the electric fan thermostat was adjusted. Gauges were then checked for correct operation.

Mechanical Restoration

Engine Restoration

An original 3.8 litre XK engine, the engine restoration started with its complete dismantling, cleaning and checking the condition of every part. The engine block was repainted black. With very little evidence of any wear, the engine was totally rebuilt to the original 3.8 litre E-Type specification. The rebuild of the engine block will have involved the fitting of new pistons, rings, bearing shells, timing chains and new gaskets and seals throughout. The original crankshaft was refitted with new bearings. In addition the cylinder head would have been prepared for rebuild with unleaded valve seats, valves and guides. It is likely that the cylinder head would have been lightly refaced before refitting. The rebuild would also have included a new set of timing chains and tensioner. In all other respects, the engine has been kept close to its early production specification.

Ancillaries, including carburettors were totally restored, as also items such as the water pump, generator and distributor, which would have been reconditioned. An upgraded aluminium radiator was fitted and cooling was further improved with the installation of an electric fan.



Transmission

The original Moss type gearbox has been retained. The gearbox will have been stripped, checked and reassembled with new bearings and seals throughout.

The differential assembly was similarly checked and externally painted.

Finally all of the transmission Universal Joints have been replaced, together with new rear brake discs.

Trimming the Car

Carpeting

Carpeting was then undertaken using best quality red Wilton carpet. Each carpet was carefully leather bound and installed, save for foot-well mats, which were temporarily stored until final completion of all trim.

Leather Trim

All leather trim was renewed using best quality red leather. Seats were treated to new webbing throughout. The retrim included new door trim panels, as well as a comprehensive restoration of the centre console and transmission cover. New trim was made and fitted behind the seats and around the base of the hood. The final element was to fit out the boot with a complete set of new red trim panels.

Hood Cover

To go with the new mohair hood, a matching hood cover was made up and carefully fitted and stowed away.

Glazing and Bright-work Assembly

All bright trim was re-plated and new glass fitted, carefully installed with a complete new set of door and window seals. Front and Rear bumpers were fitted as also a new set of chromed exhaust trims.

Lights, Wheels and other Miscellaneous items

A complete set of new front and rear light assemblies were fitted with new glass cowls for the headlights. A new tool roll and set of original tools was found and stowed.

Five new Borrani 6J wire wheels were procured and fitted with a set of new 205/70ZR15 Radial Pirelli tyres.



Test, Defect Rectification and Detailing

Test and Defect Rectification



It is Aston Workshop policy that after a total restoration, any car being prepared must have undertaken at least 500 miles to shakedown, reveal any defects and undertake final testing and tuning. Such was undertaken with this car. No major problems were encountered and only minor adjustment to idling speed and final tune was required to create a smooth and tractable driving experience.

Final steering geometry checks were made and minor adjustments implemented. Full brake function tests were made and assessed as serviceable. Finally the car was given a full MOT, which was passed with flying colours (as it should).

Final Paint Rectification

Post the shakedown, the car was then returned to the paint shop for final paint rectification. During a long process of assembly and final testing, it was inevitable that minor paint marls and minor scratches occurred. Every single paint finish flaw, no matter how minor and inconsequential was attended to. The result was a flawless paint finish.

Cleaning and Final Detailing

The final stage of the restoration was a complete clean to a concours standard. All wheel arch areas were subject to a thorough clean as also under the bonnet. All the paintwork received a full wax polish and glass carefully polished inside and out. Finally all of the hidden panels were also carefully cleaned. The interior was then fully vacuumed, new number plates fitted, Handbook and all other manuals and instructions carefully checked and put in the car. A new tool roll with a complete set of tools and wheel hammer added and a complete inventory check completed. The spare wheel was carefully checked over and tyre pressures and all levels carefully checked. Finally but by no means least, a restoration log book has been prepared with a full photographic record of all aspects of the car restoration process, together with a final invoice and a full specification.



Car Specification

Car Details		Suspension Settings			Body Specifications		
Model	Jaguar E-Type Series I	Front Suspension	Independent double wishbone, co-axial dampers, torsion bar, disc brakes		Body Colour	Colour Opalescent dark blue	Glasurit MB 422.50.
Chassis No		Rear Suspension	Independent double wishbone, coil over co-axial dampers inboard disc brakes		Trim Specification	Carpet Type Wilton	Carpet Colour Red
Engine No					Seat Trim: Red Leather	Type of Leather Bridge of Wear	Best Soft
Body No							
Engine Specification		Gearbox			List of Upgrades fitted to this Car		
Engine Capacity	3.8 Litre	Gear	Gear Ratio	Axle Ratio 3.07:1	<ul style="list-style-type: none"> ● Engine - Original Specification ● Brakes - 3 Pot Calipers ● Steering wheel- original ● Gearbox - Standard ● Wheels - Stainless Steel Polished Wire Wheels ● Tyres- Pirelli P 4000 Tyres 		
Max Torque	260lb/ft	Top	1:1				
Max Power	265 bhp (net)	Third	1.389:1				
Carburation	3 SU HD8	Second	1.905:1				
Main Jet	125	First	2.933:1				
Needle	UJm	Reverse	3.378:1				
Ignition Timing	Static 5° B.T.D.C.						
Inlet Cam-Shaft	STD						
Exhaust Cam-Shaft	STD						
Fuel Pump	Lucas 2FP						
Fuel Tank Capacity	14 IMP Gals						
Valve Clearances	In 0.004" Ex 0.006"						
Cooling and Ventilation		Brakes					
Cooling System Capacity	32 IMP Pints (18.18L)	Make	Dunlop / Lockheed				
Operating Temperature	70 - 74°C	Type of System	Vacuum servo				
Belt Sizes		Brake Size					
Fan Belt	QBB100	Disc Diameter					
		Front	11inch				
		Rear	10inch				
		Servo Unit	Dunlop bellows type				





