

# DURABLE CAR OWNERSHIP

A new approach to low cost motoring



Morris Minor Centre

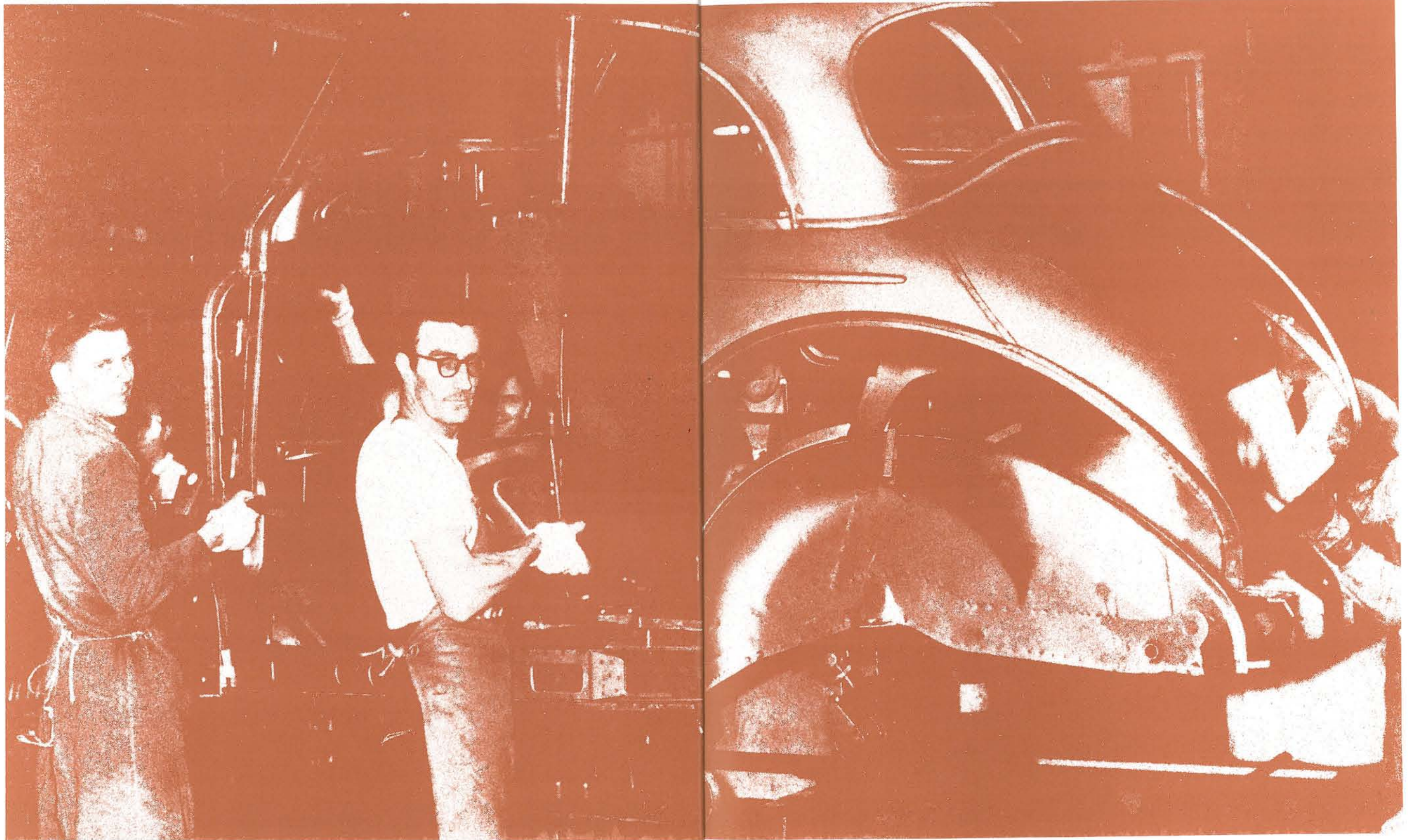




# DURABLE CAR OWNERSHIP

A new approach  
to low cost motoring

by Charles Ware



Morris Minor Centre



Published in 1982 by  
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## DEDICATION

To the staff of the Morris Minor Centre and in particular TIM BRENNAN for his tenacity in translating my concept into a working reality.

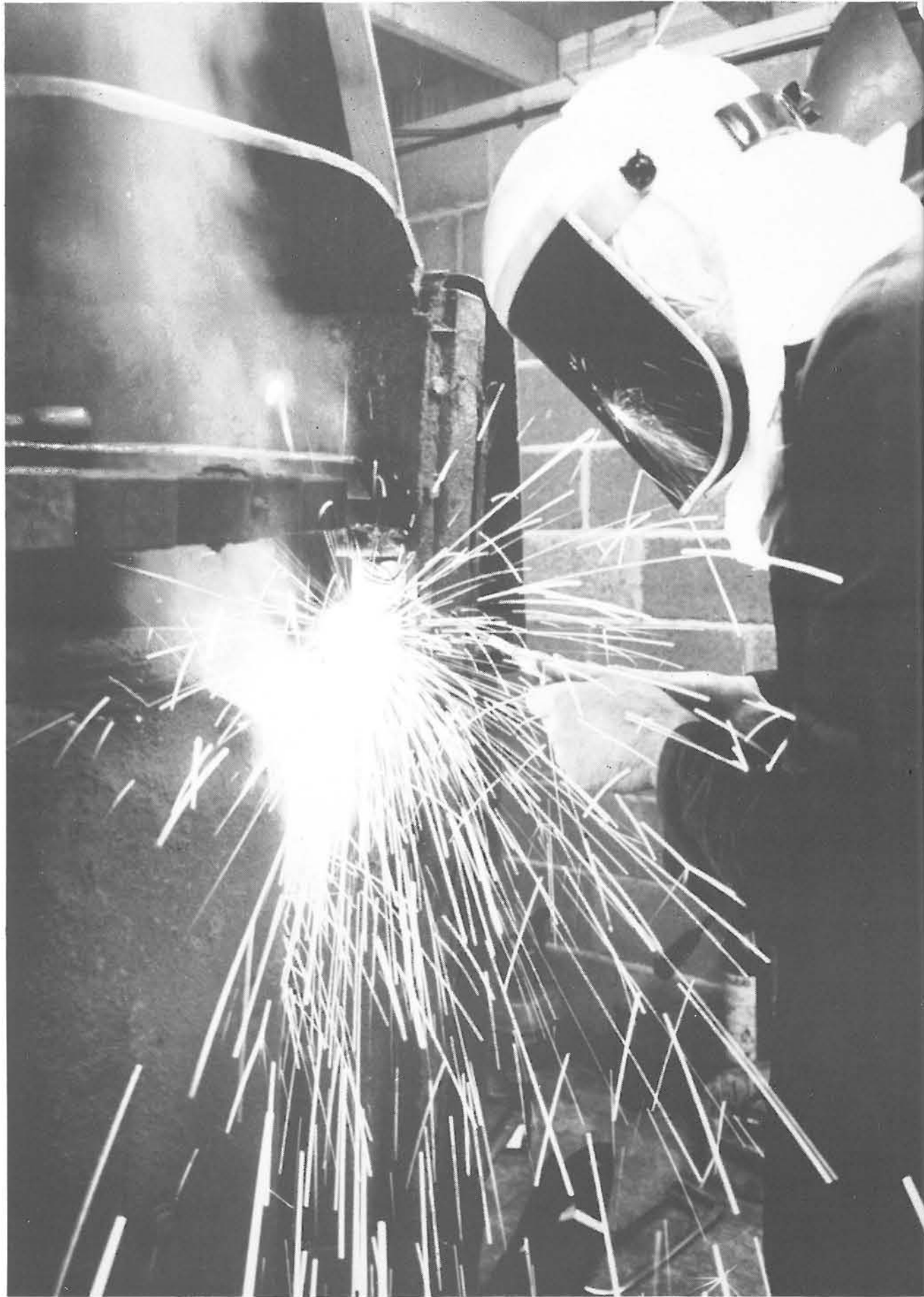
During the writing of this book I had enormous help from SAM FIELD, KEN BULL, and of course the contributors: PAUL SKILLETER, MIKE MULLOY IAN NAIRN, JOHN VENNERS-PACK and PETER MITCHELL

Finally, I would thank NORMAN HIGGINS and ROBIN BUCHANAN for their faith in backing me in the first place.

Charles Ware  
Bath 1982

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One of our craftsmen at work.

## Home and Car Ownership

It is generally agreed that the two most important financial commitments that anyone is likely to get involved in during their lives are home and car ownership. Both can swallow up an equally large part of their owner's taxed income, and yet society attaches such very different financial values to them that buying a house is a recognized way to *save* money whilst owning a mass produced modern car is an unavoidable way of *losing* it. It is worth examining the reasons for this state of affairs in greater detail.

### Home Ownership

A house is a true durable: provided it has been built to a generally recognized 'long life' standard and regularly maintained, it will last well over a hundred years without becoming obsolete and undesirable. It is, therefore, a 'bankable security'—in other words, a first-class asset to borrow money against. This has been proved conclusively by the way property values have risen against inflation since the Second World War, providing owners with the dual advantage of not only being able to *own* a home but also to recover all the money put into its purchase and maintenance when it is eventually sold at profit.

House purchase is further encouraged by the State through tax concessions on interest, allowing owners to make a tax-free capital gain when the house is sold, and letting them borrow money at a low interest rate. It is therefore clearly a sensible thing for any individual to save as much money as possible and borrow the maximum a building society or bank will allow them.

Because the granting of a mortgage commits its recipient to a long term financial repayment scheme, usually in excess of 20 years, the building society or bank lending the money, make very detailed inquiries into the applicant's job status and financial stability. Assuming these are sound and they have saved the large deposit which is usually needed, a surveyor is then appointed to examine the house in detail, note down any structural faults discovered, assess the cost of putting these right (to long term standards), and make a detailed comparison of recent prices paid for similar houses in the district. The size of the loan offered will be a computation of all these factors.

As a condition of the mortgage structural faults will have to be put right and part of the loan will usually be held back until the building society's surveyor is satisfied that

the house is once again in first-class structural order. It is after all the lender's principal security in the unlikely event that the borrower defaults on the repayments.

It can clearly be seen that home ownership is surrounded by a series of disciplined financial constraints which ensure that owners not only don't overstretch themselves financially but are clearly aware of the amount of money that they will have to set aside each month to pay the mortgage and other statutory outgoings. *Houseowners are therefore fully in control of this important part of their monthly budget.*

### Car Ownership

The same cannot be said for owning a modern mass-produced car because it is a 'consumer durable'—in other words, *planned* to last a maximum of seven to ten years before it becomes uneconomical to maintain or falls apart.

The reality of owning a 'throwaway' car is illustrated clearly in the way it is valued.

Glass's Guide, the motor trade and insurance companies' 'bible' on car values, shows that a new car costing £4,000 drops in value to about £2,000 in its first three years of life and to around £800 in six years.

This rapid drop in value is because of:-

- 1 steeply climbing mechanical and maintenance costs as it clocks up the miles,
- 2 the structural deterioration of the bodywork and internal trim which becomes tatty and undesirable the longer it is on the road,
- 3 fashion considerations—a desire for the new—which is the principal motivation behind the consumer durable cycle and the way *planned obsolescent* goods are marketed.

Because the banks and finance companies know that rapidly depreciating modern cars are an extremely poor security against purchase loans, interest rates charged are considerably higher than for house buying and the period of repayment is on average 2½ years rather than 20 years.

Car purchasers, by either using their old car as a deposit or by saving a few hundred pounds, can enter into the car owning merry-go-round without necessarily understanding the true costs per mile of running a private motor car. Financial disciplines and controls are rudimentary provided the intended



## Summary

purchasers have cash to pay for the car, there are none, and in the case of finance house loans, as long as the customer has a good credit rating and doesn't appear to be over-borrowing, the loan will be forthcoming. No third party is required to 'survey' the structural and mechanical condition of the car because the purchase loan is primarily made against the applicant's status and not the car's detailed structural and mechanical condition.

Before the car is actually driven on the road its owner can reasonably budget for the annual costs of:-

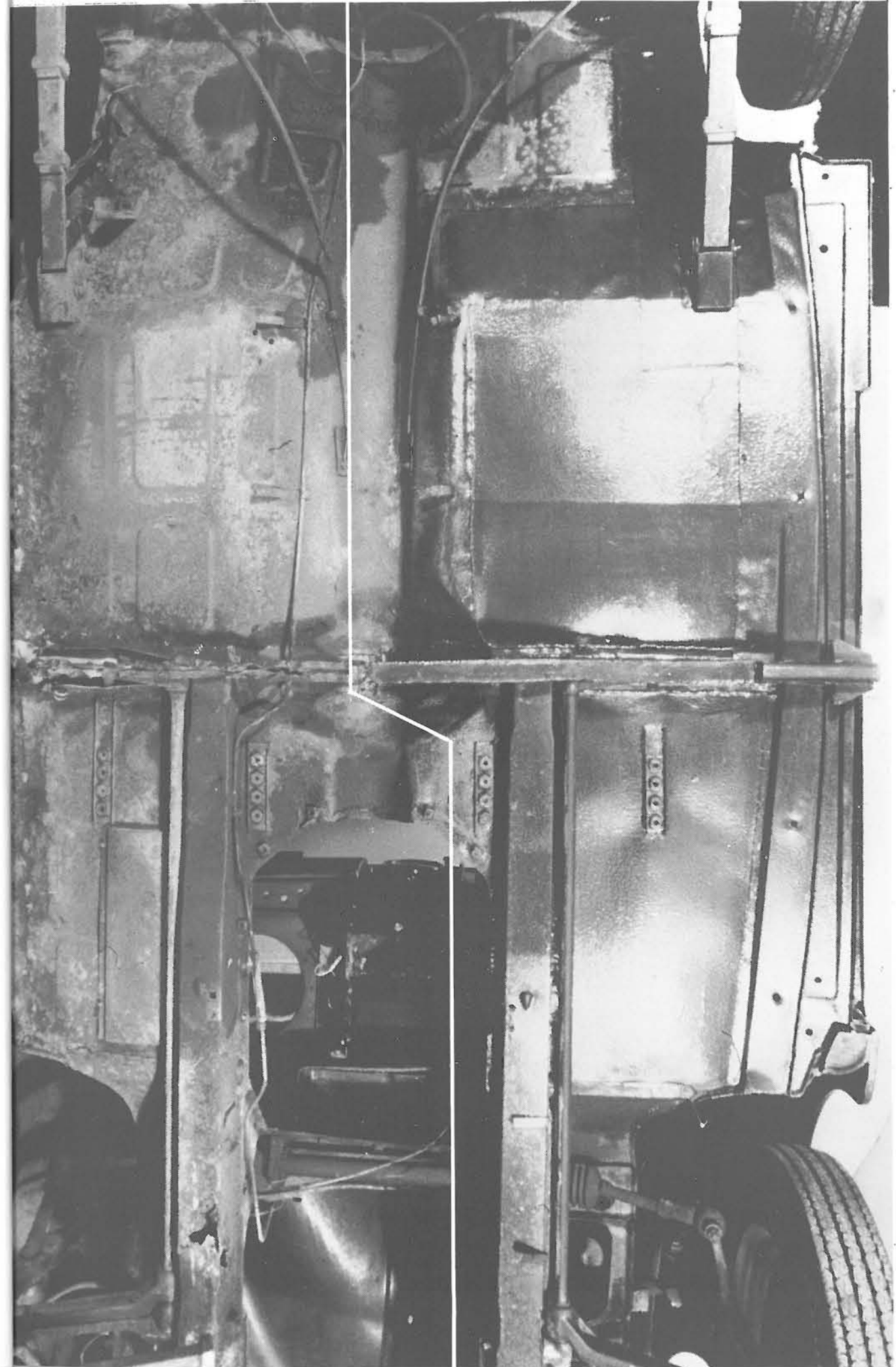
- 1 Finance
- 2 Insurance and Road Tax
- 3 The amount of petrol and oil likely to be used
- 4 An approximate idea of basic servicing costs.

Beyond this, however, it is extremely difficult to assess maintenance costs, particularly if the car is over 3 to 4 years old. As the miles clock up, major expensive component failure is inevitable because this is planned into the design of the mechanical specification. In the case of durable cars their owners replace these parts, knowing they will get good use out of them over the years. This isn't possible with a consumer durable because the value is depreciating rapidly and the structure deteriorating. So when disaster strikes, the sensible owner trades it in for another car thereby losing large sums through having to trade upwards again, but at least in with a chance of not losing additional money on replacing a costly engine or gearbox which will inevitably be shown to be a waste of money when the next major component fails and the car has to be traded in.

1 A house is a *durable* and for this reason the following benefits accrue to its owner:-  
a) all purchase and maintenance costs can be budgeted for  
b) all capital invested in the property can be recovered on sale  
c) a tax-free capital gain is inevitably made if the house is kept for a few years.

2 A modern planned-obsolescent car is a *direct overhead* for the following reasons:-  
a) rapid built-in capital depreciation means that any money put into its purchase can never be recovered when it is sold  
b) maintenance costs can never be accurately assessed unless it is under three years old  
c) individual or family budgets cannot be planned with any accuracy—'bad luck' can wipe out the life savings of lower paid 'survival' motorists and take them out of the car market, *in spite of their real need for private transport.*

Before and after. A demonstration car showing our structural replacement panels fitted to half the underside of the car.





# Long and Short Life Cars

The financial advantages of owning and running a durable car are obvious. Before looking in closer detail at the second-hand durable cars available on the market, let us first examine the differences between long and short life cars and the motor trade's practical treatment of them.

## Long Life Cars

Built from heavy gauge steel box sections and floor pressings which can be replaced without distorting or weakening the overall strength of the structural frame.

In damp climates like Great Britain pressed steel body shells suffer from internal and external structural rust. The causes of rust are set out below in order of their importance in contributing to terminal rust:-

### Internal Corrosion

This starts inside the closed structural underbody sections as a result of regular air temperature changes, causing condensation to form on the untreated inner faces. Rust develops in the damp atmosphere and eats its way unseen *from the inside outwards*, weakening the structure until it is paper thin and dangerous.

### Drain Holes

Built into the underbody to allow the worst of the condensation damp to escape get blocked by road dirt and are never cleaned. (Indeed, garages when they re-underseal cars often block them with underseal!)

### Salt and Other Impurities on the Road

Saturating the under body during rain and snow. When this dries out it leaves a lethal coating of salt-contaminated mud which eats through the protective body shell finishes from the back and attacks the bare metal of the bolt-on panels.

## Maintenance

The following regular maintenance programme ensures that the sound existing structure and any reinstated replica structural sections and body panels will not deteriorate significantly over a long period of time.

- 1 steam cleaning of the underbody and behind the wings at least twice a year, followed by the spraying on of a water-resistant protective coat of old engine oil
- 2 regular washing down of paintwork and a wax polish twice a year.
- 3 bi-annual injection of the closed structural sections and double skinned panels with an anti-rust protective spray.

- 4 touching in of all chipped paintwork before rust is allowed to set in.

If proper reinstatement technology and regular maintenance programmes are applied, the owner of a long life car will benefit in the same way as a houseowner:-

- a) capital invested in buying the car will always be recovered if it is sold after a few years
- b) all major mechanical components exchanged as the mileage clocks up will be fully used
- c) depreciation does not exist— and an individual car budget can be accurately planned.

## Short Life Planned Obsolescent Cars

These are non-durable depreciating assets. A new popular small car goes down in capital value by about 50% in three years and 80% over six years. The principle causes of this rapid depreciation are:-

### Fashion

(Used by manufacturers to create an artificial demand for new cars.) The cost of designing, tooling up and building a new assembly line to produce a bodyshell is very high (for instance, the Metro start-up costs were in the region of £350 million).

Demand for new cars remains constant, and the market is saturated at its high volume lower end. This means that all manufacturers are locked in direct combat to retain their current position and penetrate their rivals' share of the market. Manufacturers aim to design a dynamic new model which will capture the popular imagination to such an extent that they can recoup all their start-up costs and make a profit before one of their rivals comes up with a newer and more popular shape. In practice, however, this rarely happens and manufacturers tend to play safe rather than risk the massive investment involved in producing a truly original car which then fails to sell. As a result 'new' shapes are more likely to be variations on current world automobile design. (Most small European hatchback cars for instance, look more or less the same in basic profile and have more or less the same mechanical and performance specifications.)

What therefore happens is that the investment costs are recouped over a number of years by regularly changing superficial details; such as light clusters, bumper designs, chrome trim, front grill

designs and interior trim finishes. Microchip digital print-out gadgetry transforms the instrument panel, and the latest developments in electronic fuel control and engine capacities are shown in a multiplicity of chrome letters and digits set on the rear apron or bootlid of the car. The latest model can be readily identified by this display of 'up to the minute' modifications which, together with the all-important registration letter, proclaim the relative age of the car and differentiates between this year and last year's model.

*The First Three Years Manufacturing Policy*  
About 80% of all new cars sold annually in the U.K. are bought by commercial users.

These range from a self-employed businessman to large companies owning fleets of cars for the use of their executives and representatives. Over the years it has

become the custom for commercial users to trade in their cars every two-and-a-half to three years, because there are distinct financial and practical advantages which can be summarized as follows:-

- 1 Company tax relief on capital depreciation which is based on the annual fall in the car's value—the maximum benefit accrues during the first three years.
- 2 Mechanical efficiency. All new cars are covered by manufacturers' comprehensive 'blanket' guarantees, which means that mechanical failures cost companies very little during the first three years.
- 3 Hire Purchase agreements and finance company loans are usually completed within two-and-a-half years, and the trade-in value offered against the 'old' car always provides the deposit for the new one. (This applies more to small businessmen and private car owners with travel allowances.) see illustration on page 8

A demonstration car showing our long-term bodywork techniques.





## Summary

*The commercial user is therefore primarily interested in low day-to-day running costs which can logically be 'budgeted' for in advance.*

Their priorities are:-

- a) Maximum fuel economy.
- b) Low servicing costs with long service intervals.
- c) High quality manufacturer's warranties.
- d) Average capital depreciation over three years.
- e) Minimum inconvenience from mechanical failure.

In response to the needs of commercial users and in order to attract their custom, the manufacturer concentrates on:-

- 1 Designing light 'thin skinned' bodyshells, which help to increase fuel economy through weight savings, but have the long term disadvantage of being usually unrepairable in a few years, when the inevitable rust takes its toll.
- 2 Developing fuel efficient engines which have long service intervals.
- 3 The increasing use of disposable sealed units which need no servicing and have to be changed after three to four years. A good idea for the first owner, but very expensive for the second or third, who has to buy an expensive replacement unit rather than a cheap component.

*Clearly the depreciation curve is accelerated by this short term manufacturing philosophy, because it creates a continual demand for new cars, which, after three years, become rapidly less efficient mechanically and uneconomical to repair.*

The advantages of owning and running a durable car are of particular benefit to private 'survival' motorists who are unable to claim tax relief on depreciation or claim travelling allowances.

Out of approximately sixteen million cars on our roads at any one time only about five million are 'new' in the sense that they have any sort of real manufacturer's warranty, and are bought and sold by officially appointed manufacturer's agents. A further five million are usually bought and sold by second hand car dealers who are generally not prepared to personally guarantee the cars but will sell as an 'extra' one of the rather limited 'warranty' schemes available on the market.

The rest of the stock of about six million are bought and sold in the twilight world of the under-a-thousand-pound 'banger' market where the blind lead the blind and luck plays a major part in the decision making process of the average car buyer (or 'punter' as he is known in the trade).

As most of the truly durable cars in existence (and there are probably anywhere up to a million) are bought and sold in the 'banger' market they are available to 'survival' motorists who have limited funds available for car ownership. In fact most of them are, of course, being driven by these very motorists, but because of the lack of knowledge in the motor trade and amongst their owners of durable car technology, they are treated as 'short-life' cars and scrapped when the MOT welding bills get too high.

## Practical Knowledge of Long Life Structural Technology in the Motor Trade

All well established builders practice long life technology as a matter of course because owners, building societies and surveyors demand it and are prepared to pay for it.

With a few notable exceptions, well established garages do not practice long life car technology because for many years owners have not been prepared to pay for it. They know that their cars are depreciating so fast that there is no point in spending more than a minimum on keeping them looking presentable.

Any sensible householder knows that to hang wallpaper over dry rot or rising damp would be a complete waste of time and money. The motor trade on the other hand practices 'wallpapering' all the time: it's called respraying and costs two hundred pounds. The same exercise, when it's called 'restoration', costs two or three times as much and, because £500 or £600 is a lot of money to most people, their expectations become higher and their disappointment correspondingly greater when the rust bleeds through blistered bodywork after only a year to eighteen months.

*The reality of long life car technology is that to carry out the work to durable standards can cost well over twice as much again. This means that nearly all cars are merely 'tarted up' on their downward journey to the scrapyard, even when they are in fact durables worthy of conservation.*

In the motor trade there are only a handful of top car restoration specialists, who have anything like the same practical knowledge of long term conservation techniques as most decent builders.

The main reasons for this lack of knowledge are:-

- a) Over the last twenty years demand for traditional coachbuilding has virtually dried up, because of the high labour content absolutely necessary if any re-instatement job is to be carried out correctly.
- b) Bodyshops are generally involved in either repairing crashed cars on very tight labour times, or 'freshening up' older cars with competitively priced 'resprays'.

This means that apprentices and younger tradesmen never get a chance to practice proper craft standards.

Garages are A.A. or R.A.C. appointed for

their efficiency and reliability in dealing with mechanical and not structural problems.

A well respected garage will therefore generally be without any practical experience in taking apart and putting together old cars and, if a customer comes to them for restoration work, will naturally recommend that the priorities should be mechanical leaving enough money for an above average respray.

c) There are no generally agreed structural restoration standards in the motor trade.

The only area where there is any experience and general agreement, is on whether a car has been well painted or not—particularly the glossy top coats.

This is an unreliable way of judging a restoration job because a good painter can make rusty body panels 'look like new' (for at least 6 months) and give the impression that the car is 'coach built', when in reality it's 'Mutton dressed up as Lamb'.

The motor trade's obsession with paint finishes is a direct result of modern car selling philosophy, which works on the principle that the only good car is a bright, clean and shiny one. Many garages which specialise in buying and selling Mercedes, Rolls Royces, B.M.W.'s, Porsches etc., have offered us 'immaculate' Morris Minors which have turned out to be very disappointing rusty cars underneath the paint job and newly applied underseal.

We must emphasise that this is not an essay in 'putting down' the Motor Trade. The present abysmal lack of knowledge is historical and most garages are not involved in misleading the public deliberately, they are much more guilty of seriously deceiving themselves.

### Tradesmen's Attitudes to Short and Long Term Conservation Techniques

#### a) Short Term

The annual M.O.T. requirement is the criterion on which virtually all safety standards are based, and M.O.T. structural panels come in many shapes and sizes.

The quality of these vary, depending on the reputation of the garage. At worst, we have found the following non-structural materials used to repair vital safety anchorage points:- Chinese 'take away' food cans, Oxo tins,



plaster, clay and concrete in the chassis legs, and of course, fibreglass galore.

All these items were carefully disguised by underseal or similar black finishers. These cars carried M.O.T.'s which had been issued less than four months before we saw them. Because the M.O.T. in the U.K. is still operating well below the current Common Market standard, even a decent conscientious garage is only required to 'cover' holes in weak areas within six inches of a vital anchorage point. THIS MEANS THAT PROPER STRUCTURAL CHASSIS WELDING HAS JUST ABOUT CEASED TO EXIST IN THE U.K.

This makeshift, essentially depressing daily work experience encourages bad work habits and compounds the lowering of standards.

b) *Long Term Work*  
Practical conservation techniques are labour intensive rather than uniquely skilled.

We have found from our experience that if a trained welder is allowed the right time for replacing a panel and knows that it will be part of the car for the next ten to twenty years, he will carry out the work meticulously and with a craftsman's pride.

A badly rotted out and much repaired chassis leg. Even old MOT patches had been repatched.



## Durable Cars On Our Roads

### 1 New Cars

A few very expensive and low volume production cars, like Mercedes, Rolls Royce, Porsche, other exotica—and probably Volvo Estate cars.

### 2 Vintage and Veteran Cars

Not generally used as daily transport because they are rare and expensive to maintain and parts have to be specially hand-made.

### 3 Classic Cars

Usually 'fifties sports cars and saloons, like the Riley, Ford Popular or MG Magnette. Parts availability tends to be poor or expensive.

### 4 Practical Classics

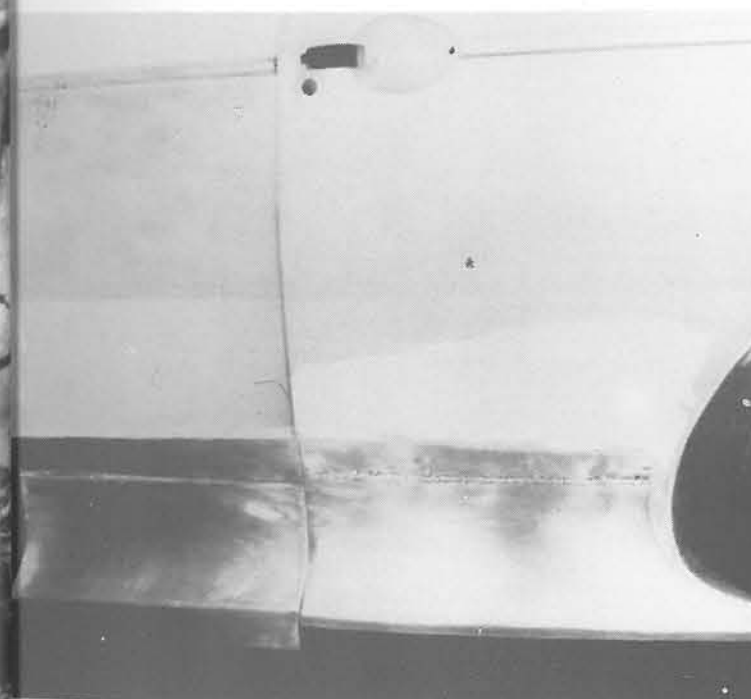
With quite long production runs starting in the late 'fifties or early 'sixties. Large numbers survive, mechanical parts availability is good for the moment, and body panels could be economical to re-manufacture if demand was sufficient.

Triumph Heralds, A40s, Jaguars, Rovers, Oxfords and Cambridges, Ford Escorts, and Cortinas come readily to mind. Also, of course, most of the classic British sports cars, like TRs and MGs and, last but not least, the two great practical classics from the past—the pre-War VW Beetle and the post-War Morris Minor which (because of its total parts availability and remarkably timeless handling characteristics) is the model that has been the basis of our practical study of long life car technology during the last seven years.

Before we go further into its practical application to the Morris Minor it might be helpful to know a bit more about the history of this remarkable small car. Paul Skilleter, Managing Editor of Practical Classics car magazine and author of a new prize-winning definitive book on the Minor "Morris Minor: The World's Supreme Small Car", has contributed the following short history.

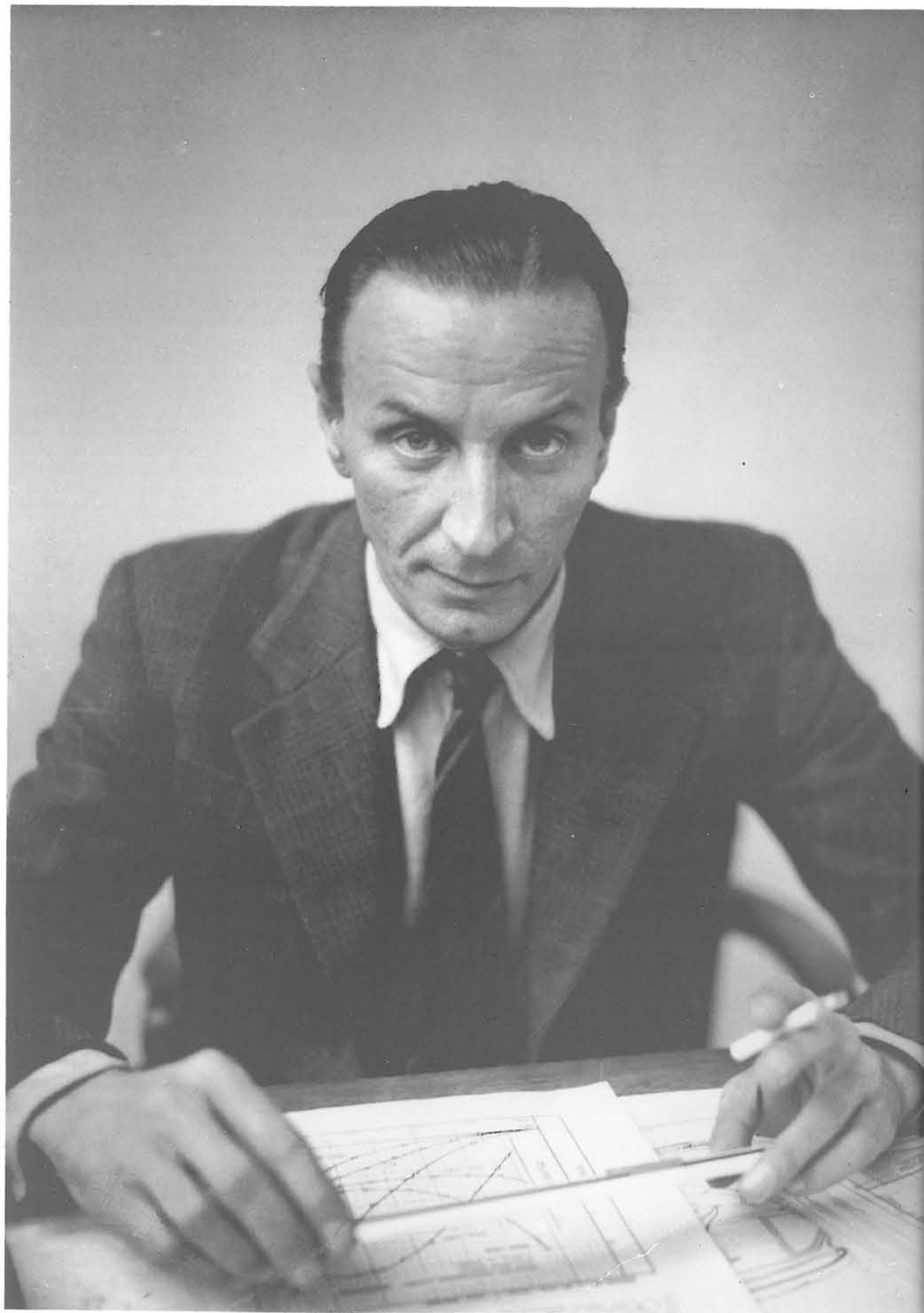


A rusty door which had been 'filled' again and again and painted at least 3 times after the first rust appeared.



The correct way to rebuild a door is to fit a complete new replica section to the bottom 12" of the door.





Sir Alec Issigonis at his drawing board 1946.

## The Morris Minor—A Technical and Historical Analysis

By Paul Skilleter

There is only one other car on British roads today which is as familiar as the Morris Minor, and that's the Mini. That both were designed by the same man is no coincidence, and indeed Sir Alec Issigonis is one of the very few car designers whose name is recognised by the man or woman in the street—not just by enthusiasts or fellow engineers. The products of Sir Alec's genius have had a profound and highly beneficial influence on the British motor industry, so it is hardly surprising that it is his first car, the Morris Minor of 1948, which has become the subject of this proposal for a long-life car.

The beginnings of the Morris Minor can be traced back to 1942, with the first prototype appearing in the experimental workshops at Cowley early in 1943—by which time it could be determined that the war would eventually be won, and that a new small car for the peace would be needed, to replace the Series E Morris. Its design had been placed in the hands of the young Alec Issigonis by Nuffield Organisation Vice-Chairman Miles Thomas, who had been quick to perceive an exceptional talent.

The car which gradually emerged from Issigonis's sketch-pad and from engineering drawings prepared by his two right-hand men Jack Daniels and Reg Job, was by the standards of the nineteen-forties unconventional to say the least. Gone were separate running-boards and wings, replaced by a highly modern unitary bodyshell which dispensed with a chassis frame and which displayed advanced Transatlantic styling features never seen before on British cars. Additionally, Issigonis had specified uniquely small wheels for the new car, two or even three inches less in diameter than the average, giving it more of a 'big-car' look and doing much to enhance its proportions generally.

Underneath the skin, the new Morris was similarly up to the minute. First and foremost, Issigonis sited the engine right over the front wheels instead of well behind them, much investigation and experimentation having proved that the weight of the engine in this position dramatically improved the stability and controllability of a car. The front wheels themselves were given an advanced torsion-bar independent suspension, which combined with the rigidity of the unitary-construction body, gave a standard of ride comfort such as had never been experienced in a small British car before.

About the only dated aspect of the Minor when it was announced at the 1948 London Motor Show was the engine, a very orthodox 917cc side-valve unit derived from the Series E Morris Eight and first seen in 1934. Issigonis had hoped to use an all-new 'flat-four' engine but this didn't prove practical, within the deadlines and budget set by Morris Motors, for production use. Maybe it was as well, because the well-proven Morris Eight engine served to give the new Minor an immense degree of reliability from the very start, lacking teething-troubles as it did.

The Minor was certainly a 'new generation' of small car. Not very fast (the side-valve Series MM could just about manage 62 mph), everyone who drove the new Morris quickly discovered that its sure-footedness and light, rack-and-pinion steering (another innovation for a small car) made it a delight to drive. Other cars felt clumsy and unresponsive by comparison, and Minor owners were soon having fun leaving far more powerful (and ostensibly sporting) cars behind on twisty roads.

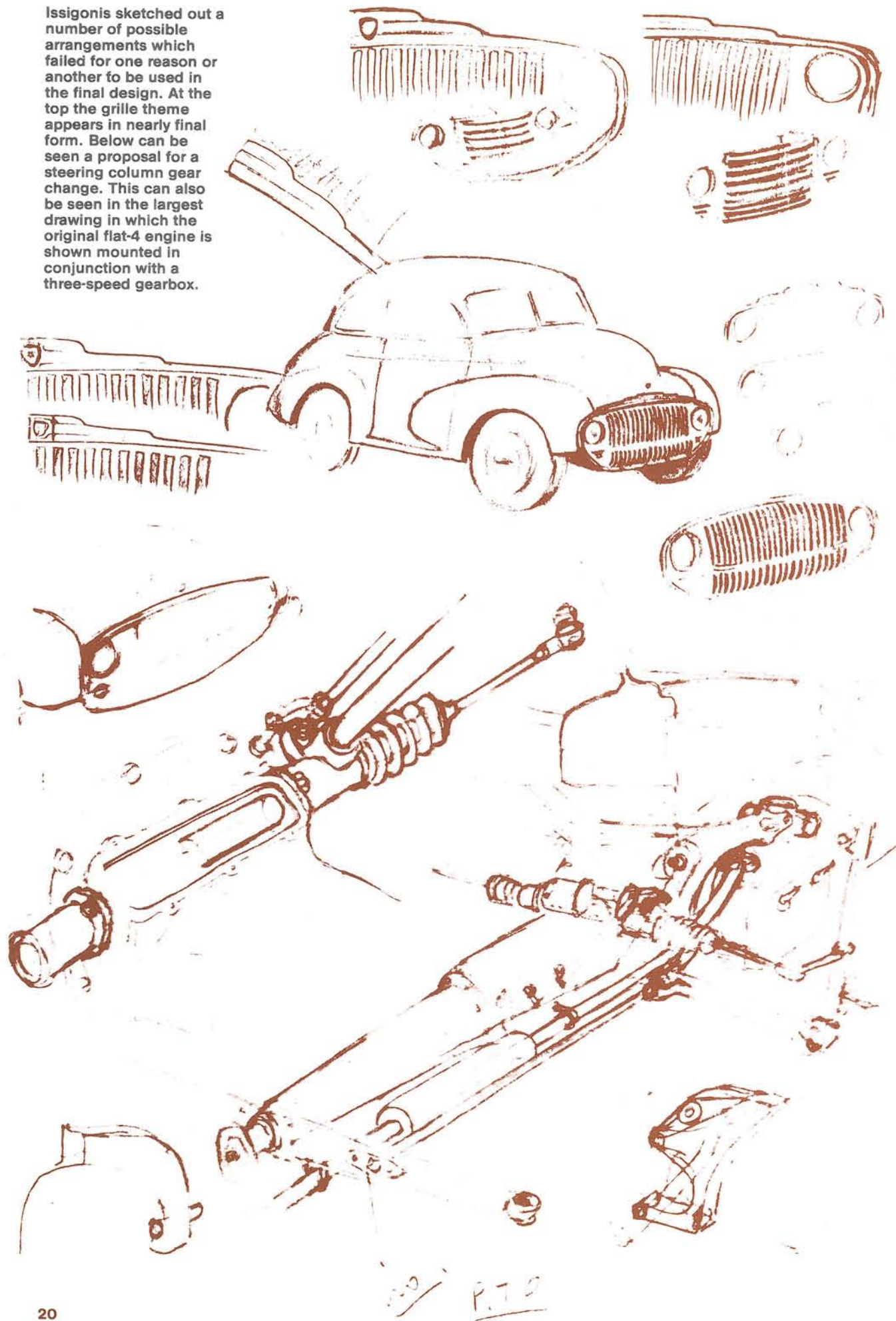
Eventually, the old engine was pensioned off, replaced during 1952 by the famous 'A' series engine, initially in 803cc form—its use being made possible by the merger of Austin and Morris to form the British Motor Corporation at the end of 1951. The 'Series 11' Minor was announced in July 1952; apart from the power unit, little else was changed.

Then, after a face-lift for 1955, when a slatted grille replaced the mesh-type and the speedometer took up its position in the middle of the dash, the beloved Minor 1000 arrived in October 1956. Gone was the split screen, but much more important was the new 948cc version of the A-series engine. This 'made' the car, which up until then had definitely suffered from a lack of pep, only its nimble handling allowing it to maintain high average speeds. The extra power was even more appreciated abroad, particularly the United States where the additional urge made entering freeways that much less hazardous. In fact, U.S.A. sales peaked in 1959 with a total for that year of 14,991.

A further landmark came as 1961 approached—the millionth Morris Minor was completed, becoming the first British car ever to achieve this production figure. A commemorative batch of 349 replicas were produced, finished in a strangely garish shade of purple and with white upholstery.



Issigonis sketched out a number of possible arrangements which failed for one reason or another to be used in the final design. At the top the grille theme appears in nearly final form. Below can be seen a proposal for a steering column gear change. This can also be seen in the largest drawing in which the original flat-4 engine is shown mounted in conjunction with a three-speed gearbox.



Quite a few of these special models (which were otherwise standard) still survive.

The final large-scale technical improvement for the Minor came in October 1962 when the 1098cc car was announced, the extra capacity being accompanied by a new baulking gearbox and a much-needed higher final drive ratio. This more than enabled the Minor to keep its place in the small/medium car performance tables and it continued to be a firm favourite with both fleet managers and families.

But the Minor was not immune from fashion and progress. Inevitably, its market share attacked by such as the new Austin/Morris 1100 (also from Issigonis's drawing board) and later the Ford Escort, sales declined and although not axed when British Leyland was formed in 1968, the convertible was phased out in 1969, the two and four door saloons in 1970, and finally, the popular Traveller version in 1971. The 'light commercial' variants (van and pick-up) met the same fate, and the end of an era in British motoring had come.

The body assembly line in 1949 showing how the different parts of the bodyshell are put together.

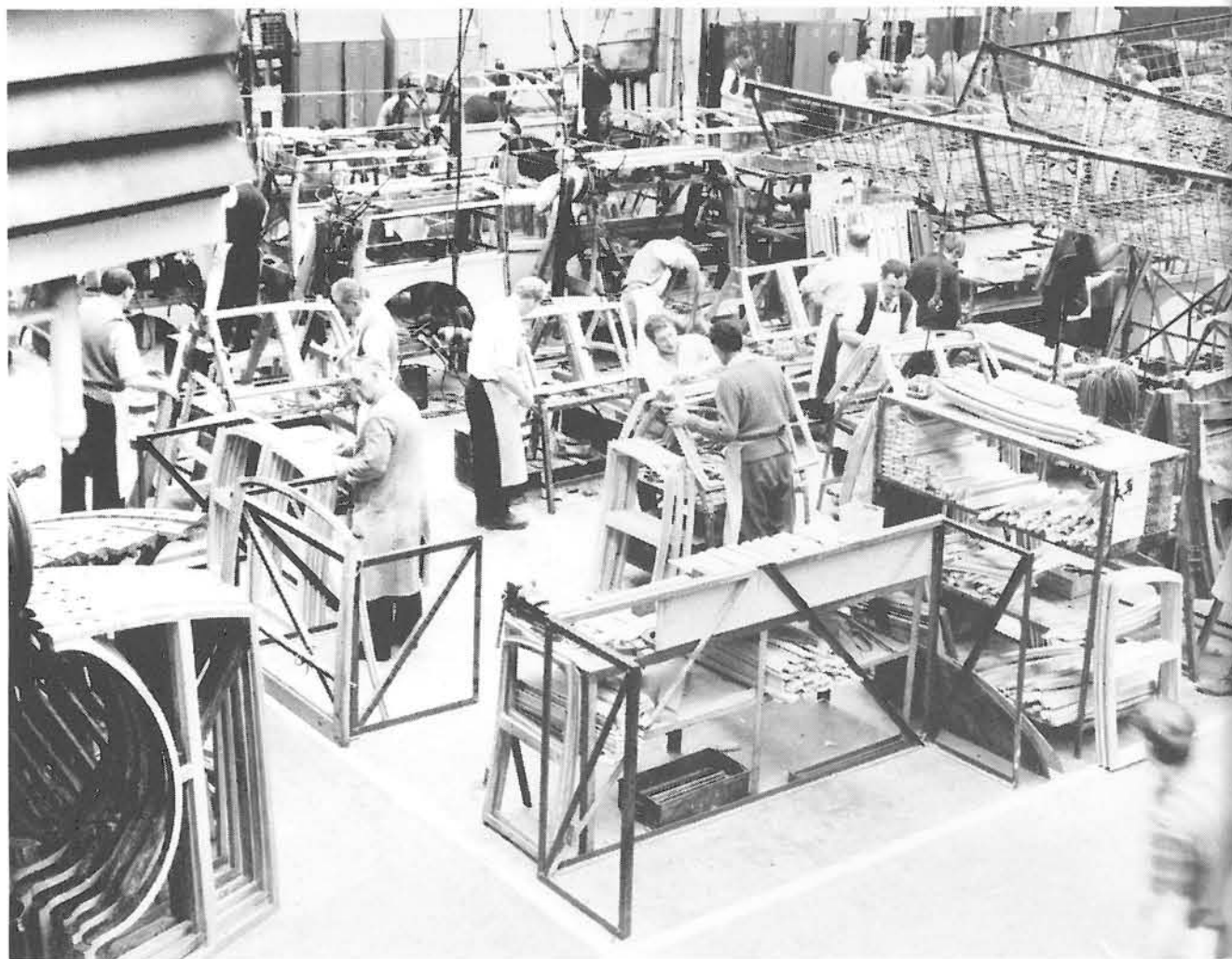




A publicity photograph for the new Morris Minor taken in 1949.



Skilled craftsmen at work in the Traveller Wood assembly shop.



These are the facts behind the Morris Minor; but they hardly explain all of the car's appeal to so many people, an appeal which if anything is growing. To many owners, the Morris Minor is more than a car—it is a familiar, dependable friend that does everything asked of it, and for astonishingly little in return by way of running costs. It is very simple, so there is not much to go wrong; the components used in its construction have been tried and tested over many years of production, so there are few known weaknesses; and because the car pre-dates the sealed-for-life approach, most of these components can be lubricated and thus have extended lives. And when something finally does wear out, the chances are that just a bush or a bearing can be replaced, and not the whole unit as with many modern vehicles.

Of course, some people drive old cars for fun, and treat the obvious deficiencies of the machinery as being all part of the game. But apart from the owners of the very early Minors, the slow old side-valve MMs, those with Morris 1000s particularly do not regard their cars as being mobile museum pieces, but consider them to be entirely practical for the 1980s. This is another factor which sets the Minor apart from other old cars designed in the 'forties—thanks to the perception of Sir Alec Issigonis, the Morris Minor has few of the draw-backs of cars dating back to this period. Unlike many of its contemporaries, it has light steering and still-pleasant road manners, it has well-planned accommodation inside, and lacks the thick, ugly door and windscreen pillars that were all too often a hall-mark of the early 'fifties.

Add to this the economy of running, an excellent parts situation, and the inherent reliability of the car, and you can see why the Morris Minor remains a favourite with both old and young—from the retired couple with the last car they'll ever buy, or the 17-year-old with her first car. For them, it does everything that is required of it. The Morris Minor is a phenomenon, and it deserves to continue its useful role, consuming little in the way of fuel or materials, and giving a great deal in return.

Issigonis trying out an 'amphibious motor barrow' in 1944 — just one of his many war-time projects!

# Practical Conservation—The Morris Minor

## Short Life Cars

Modern pressed steel cars are built from thin gauge metal in order to reduce weight and cost. The engineering strength is in the total design. All sections and panels are integral and must be in very sound structural order for the *whole* bodyshell to be safe enough to survive serious impact in an accident.

When severe rust gets a hold, economic repair is impossible and the car has to be scrapped.

## Long Life Cars

The Morris Minor is a good example; its heavy gauge metal pressings and sections are individually strong and the overall strength of the bodyshell is 'over-engineered' or greater than it need be for basic safety reasons.

This means that individual rotted areas can be cut out and replaced with new replica sections without any distortion or weakening of the bodyshell. A re-instatement programme can be planned on a priority basis over a number of years, without endangering the overall strength and function of the car.

Our long term philosophy is that, provided a structural panel has enough strength in it to protect the driver and passenger's safety, no temporary repair work should be carried out by 'professionals' because this is an expensive waste of time, and will not prolong the basic strength of the panel. If owners want their cars to 'look nice' they should fill and touch in the paintwork themselves until the rusty panel needs changing.

As illustrations of short and long term solutions and their cost effectiveness, we will look at 2 panels.

An upper body panel—the front wing 1, and an underbody panel the front chassis leg 2.

### 1 Front Wing

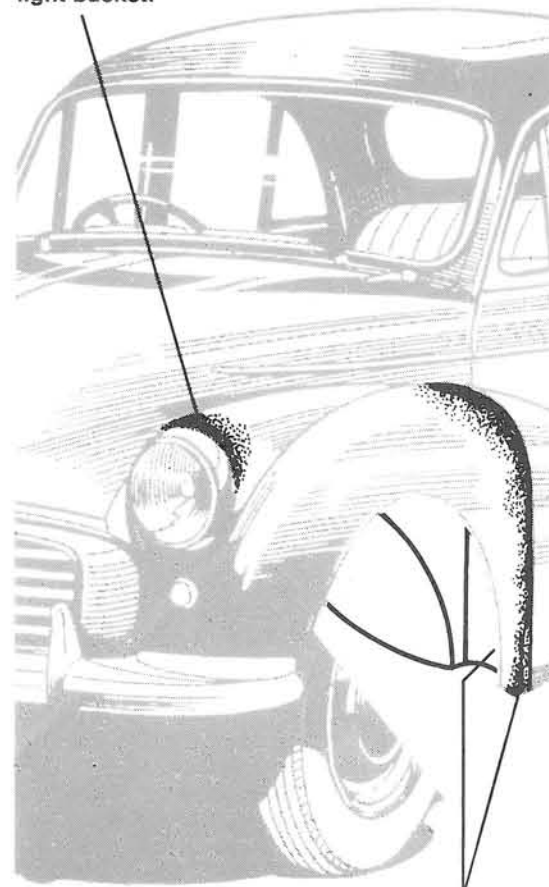
The majority of Minor owners ignore simple body maintenance, and over the years salt-impregnated road dirt and mud thrown up by the tyres, collects behind the rear end of the wing and around the headlight bucket at the front. This gradually eats its way through the protective finishes until it 'bubbles' through the surface paint, and eventually causes unsightly rusty holes.

The standard treatment for this is for a garage to either cut out the rusty areas and weld in a patch, or use fibre glass and body filler to build up the surface again.

This is then given a couple of paint coats and looks 'like new' for about 12 months until the damp gets through again from the back and the whole process repeats itself from the point that rust first appeared. This painting process will go on until the wing finally collapses around its light bucket and rots away at the bottom rear end to become an M.O.T. hazard. It is not uncommon to find that a terminally rusty wing may have had as much as £60 spent on keeping it looking nice during this period. This is a complete waste of time and money.

*A new long life wing which will last over 15 years costs under £130 to supply, fit and paint.*

Rust from inside around light bucket.

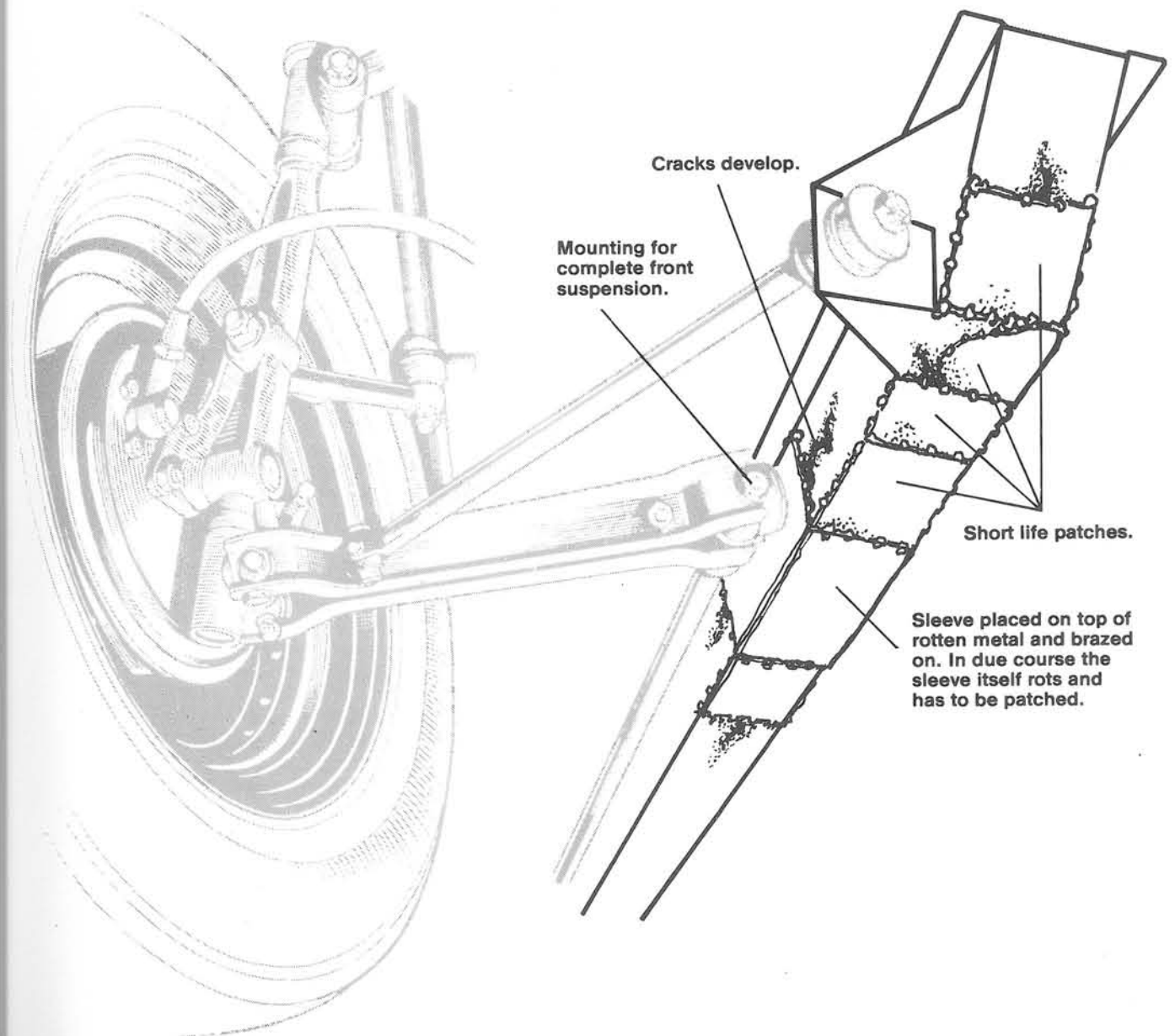


Rust develops from the inside out.

### 2 Front Chassis Leg

As this vitally important structural box section develops serious internal rust, it expresses itself in structural cracks and holes in the outer surface. Over five years from the first hole showing, it is common for as many as 4 patches to have been welded on top of the rotting member without making it stronger. Cost on average over this period £110.

*A new long life replica replacement section which will last indefinitely, costs under £100 to supply and fit.*





# The Financial Implications of Durable Car Ownership

## Comparative Statistics

The following statistics show the enormous savings that running durable cars can have over modern 'throwaway' cars for private owners without tax concessions. In this comparison no allowance has been made for price increases over the 20 year period, but it has been assumed that any increases would equally affect both vehicles for maintenance and running costs.

### Capital Outlay and Interest

Both vehicles are subject to hire purchase over a period of 30 months. The Morris Minor is purchased for £6,500 over the first 30 months. The competitive is purchased for £5,500 and changed every 3 years with a trade-in value of £2,500.

Interest charged is 15% flat rate.

From time to time manufacturers and importers offer attractive low interest rates on hire purchase to boost sales. If you consider that 15% is too low, it should be realised that this low rate must therefore be in favour of the competitive car, changed every 3 years.

### Maintenance

A car that is to be on the road for 20 years will require regular maintenance, with 'high cost' components needing replacement from time to time.

In the case of the competitive car, only two years in three will not be covered by warranty for major failures. As new technology is introduced, the modern cars get more and more complex in their engineering, and it is possible that a failure of a major component in the years out of warranty could prove to be very expensive. For the purposes of this analysis it has been assumed that no such failure takes place. No magic formulae have been used to arrive at maintenance charges; they are based on current prices!

### Running Costs

Both vehicles have been allocated the same running costs, with the exception of the M.o.T. for the Morris Minor. Any price increases would equally affect both vehicles.

### Capital Value

At the end of the 20 year period there is still the capital value of each vehicle. The Morris Minor would, at current prices, be worth £5,000, and the competitive vehicle £2,500 (being the trade-in value at the start of the 21st year).

## Summary

To summarise, the cost in pence per mile for both vehicles over 20 years, assuming an average of 10,000 miles per year is shown below, together with the percentage of the total cost for each type of expenditure.

	Pence per mile	% of total cost
<b>Competitive Car</b>		
Capital and Interest	14.85	68.79
Maintenance	1.24	5.73
Running Costs	5.50	25.48
	21.59	100.00
Less: Capital value at end of 20 years	1.25	5.79
<b>Total</b>	<b>20.34</b>	<b>94.21</b>
<b>Morris Minor</b>		
Capital and Interest	3.89	31.03
Maintenance	3.07	24.51
Running Costs	5.57	44.46
	12.53	100.00
Less: Capital value at end of 20 years	2.50	19.95
<b>Total</b>	<b>10.03</b>	<b>80.05</b>

Taking the pence per mile column, it will be seen that the Morris Minor costs per mile are roughly half those of the competitive car, which over 20 years, at 10,000 miles per year, represents a saving of £20,620, or over £1,000 per year.

The percentage of total cost shows a considerable saving on capital outlay for the Morris Minor, and a similar saving on maintenance for the competitive car.

The most significant result from this column is that the competitive car is worth 5.79% of your total outlay at the end of 20 years, but the Morris Minor resale value represents 19.95%—or almost one fifth—of the total outlay.

It must also be remembered that these figures have assumed that the price of the competitive car will remain constant over 20 years, which we are sure you will agree is not likely, and they certainly will not reduce in price.

This would mean even greater savings to own a Morris Minor.

It may seem strange to you that we should err in favour of the competition, but this reinforces our belief in our claims for the MORRIS MINOR.

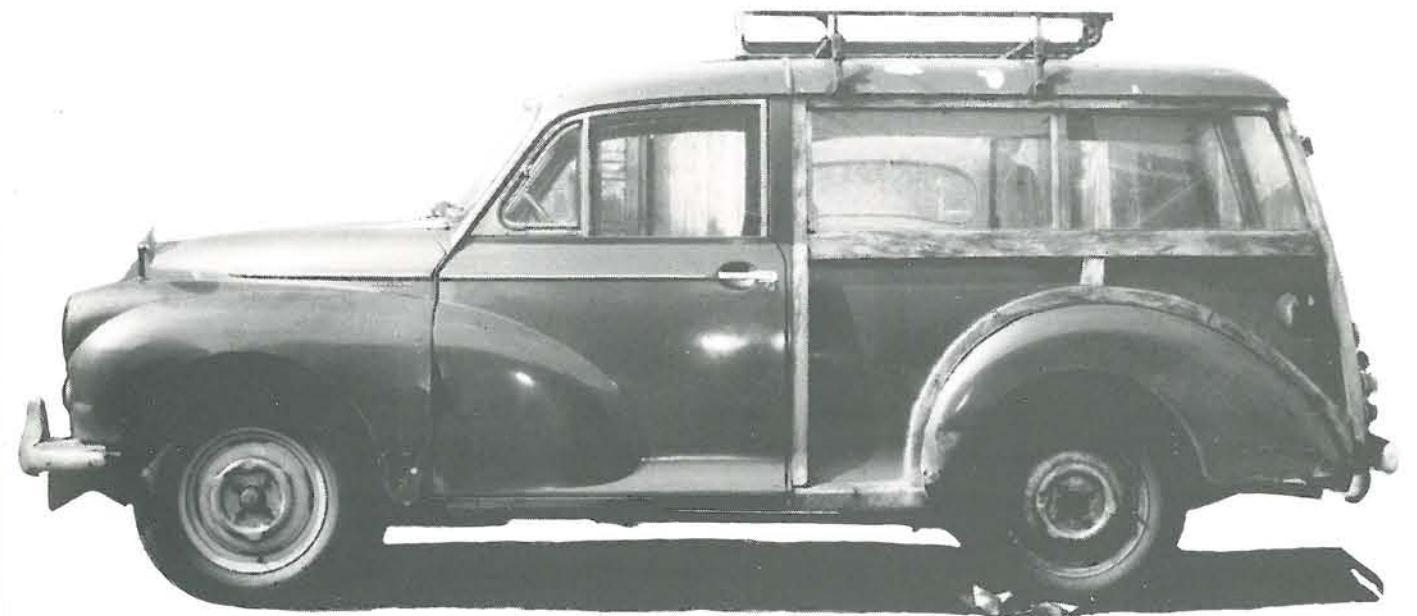
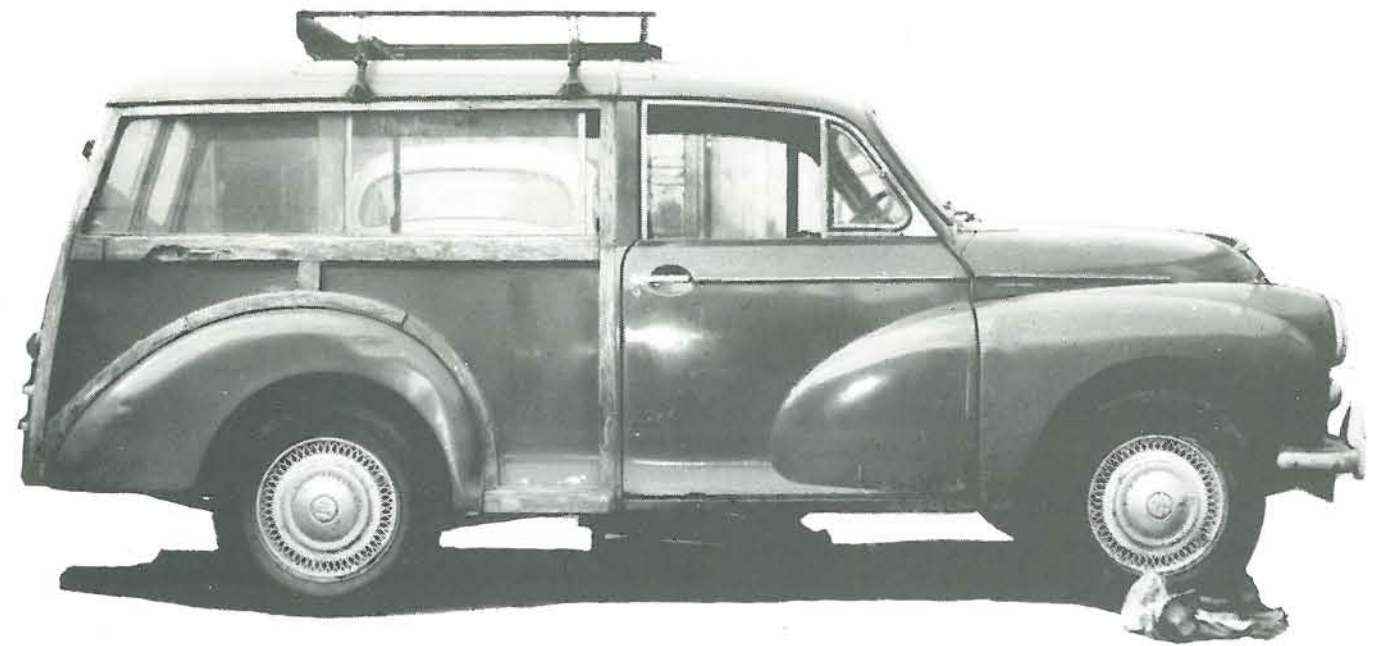
EXPENDITURE	Year Miles ('000's)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total 20 years	Average per year (£)	% of total Expenditure
<b>Morris-Minor Traveller Purchased in fully reconditioned condition for £6,500 (with £5000 trade-in value at end of twenty years)</b>																								
Capital Outlay for Car		3900	1733	867	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6500	325.00	3.25
Interest (over 30 months)		511	511	256	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1278	63.90	0.64
<b>TOTAL CAPITAL &amp; INTEREST</b>		<b>4411</b>	<b>2244</b>	<b>1123</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<b>7778</b>	<b>388.90</b>	<b>3.89</b>
Service—3000 miles		28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	560	28.00	0.28
—6000 miles		45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	900	45.00	0.45
Engine		-	-	-	65	-	-	-	65	-	-	-	65	-	-	-	65	-	-	-	-	250	31.50	0.32
Clutch		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	65	32.5	0.16	
Brakes		-	25	-	25	-	100	-	100	-	100	-	100	-	100	-	100	-	100	-	100	25	23.75	0.24
Gears		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	390	19.50	0.19	
Suspension—Front		-	15	-	65	-	65	-	100	15	-	80	-	20	-	30	-	50	-	100	15	550	27.50	0.28
—Rear		-	-	-	30	20	-	25	20	-	30	-	30	-	30	-	30	-	30	-	20	245	12.25	0.12
Axle & Differential		-	-	-	-	-	-	-	70	-	110	-	-	-	-	-	-	-	70	-	250	12.50	0.13	
Exhaust		-	-	-	-	50	-	-	-	-	50	-	-	-	-	50	-	-	-	-	50	200	10.00	0.10
Fuel System		-	-	-	25	-	-	-	-	25	-	-	-	-	-	-	-	-	-	-	25	165	8.25	0.08
Tyres		-	-	-	-	75	-	-	-	-	75	-	-	-	-	75	-	-	-	-	75	300	15.00	0.15
Bodywork		50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	1000	50.00	0.50
Trim		-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	-	-	-	-	150	7.50	0.09	
<b>TOTAL MAINTENANCE</b>		<b>123</b>	<b>163</b>	<b>153</b>	<b>323</b>	<b>248</b>	<b>493</b>	<b>198</b>	<b>403</b>	<b>163</b>	<b>603</b>	<b>313</b>	<b>453</b>	<b>123</b>	<b>313</b>	<b>248</b>	<b>373</b>	<b>123</b>	<b>123</b>	<b>123</b>	<b>123</b>	<b>6140</b>	<b>307.00</b>	<b>3.07</b>
Tax & Insurance		170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	3400	170.00	1.70
Petrol		380	380	380	380	380	380	380	380	380	380	380	380	380	380	380	380	380	380	380	380	7600	380.00	3.80
Mot		7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	140	7.00	0.07
<b>TOTAL RUNNING COSTS</b>		<b>557</b>	<b>557</b>	<b>557</b>	<b>557</b>	<b>557</b>	<b>557</b>	<b>557</b>	<b>557</b>	<b>557</b>	<b>557</b>	<b>557</b>	<b>557</b>	<b>557</b>	<b>557</b>	<b>557</b>	<b>557</b>	<b>557</b>	<b>557</b>	<b>557</b>	<b>557</b>	<b>11140</b>	<b>557.00</b>	<b>5.57</b>
<b>GRAND TOTAL</b>		<b>5091</b>	<b>2964</b>	<b>1833</b>	<b>880</b>	<b>805</b>	<b>1050</b>	<b>755</b>	<b>960</b>	<b>720</b>	<b>1160</b>	<b>870</b>	<b>1010</b>	<b>680</b>	<b>870</b>	<b>805</b>	<b>930</b>	<b>680</b>	<b>1110</b>	<b>695</b>	<b>1190</b>	<b>25058</b>	<b>1252.90</b>	<b>12.53</b>
<b>Competitive Car Purchased New at £5,500 and Changed Every Three Years (with £2,500 trade-in value)</b>																								
Capital Outlay for Car		3302	1466	732	1200	1200	600	1200	1200	600	1200	1200	600	1200	1200	600	1200	1200	600	1200	1200	22900	1145.00	11.45
Interest (over 30 months)		354	354	177	408	408	204	408	408	204	408	408	204	408	408	204	408	408	204	408	408	8801	340.05	3.40
<b>TOTAL CAPITAL &amp; INTEREST</b>		<b>3656</b>	<b>1820</b>	<b>909</b>	<b>1608</b>	<b>1608</b>	<b>804</b>	<b>1608</b>	<b>1608</b>	<b>804</b>	<b>1608</b>	<b>1608</b>	<b>804</b>	<b>1608</b>	<b>1608</b>	<b>804</b>	<b>1608</b>	<b>1608</b>	<b>804</b>	<b>1608</b>	<b>1608</b>	<b>29701</b>	<b>1485.05</b>	<b>14.85</b>
Service—6 months		32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	640	32.00	0.32
—12 months		55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	1100	55.00	0.55
Brakes		-	60	-	60	-	60	-	60	-	60	-	60	-	60	-	60	-	60	-	60	420	21.00	0.21
Exhaust		-	45	-	45	-	45	-	45	-	45	-	45	-	45	-	45	-	45	-	45	315	15.75	0.16
<b>TOTAL MAINTENANCE</b>		<b>87</b>	<b>192</b>	<b>87</b>	<b>192</b>	<b>87</b>	<b>192</b>	<b>87</b>	<b>192</b>	<b>87</b>	<b>192</b>	<b>87</b>	<b>192</b>	<b>87</b>	<b>192</b>	<b>87</b>	<b>192</b>	<b>87</b>	<b>192</b>	<b>87</b>	<b>192</b>	<b>2475</b>	<b>123.75</b>	<b>1.24</b>
Tax & Insurance		170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	3400	170.00	1.70
Petrol		380	380	380	380	380	380	380	380	380	380	380	380	380	380	380	380	380	380	380	380	7600	380.00	3.80
<b>TOTAL RUNNING COSTS</b>		<b>550</b>	<b>550</b>	<b>550</b>	<b>550</b>	<b>550</b>	<b>550</b>	<b>550</b>	<b>550</b>	<b>550</b>	<b>550</b>	<b>550</b>	<b>550</b>	<b>550</b>	<b>550</b>	<b>550</b>	<b>550</b>	<b>550</b>	<b>550</b>	<b>550</b>	<b>550</b>	<b>11000</b>	<b>550.00</b>	<b>5.50</b>
<b>GRAND TOTAL</b>		<b>4293</b>	<b>2562</b>	<b>1546</b>	<b>2245</b>	<b>2350</b>	<b>1441</b>	<b>2245</b>	<b>2350</b>	<b>1441</b>	<b>2245</b>	<b>2350</b>	<b>1441</b>	<b>2245</b>	<b>2350</b>	<b>1441</b>	<b>2245</b>	<b>2350</b>	<b>1441</b>	<b>2290</b>	<b>2305</b>	<b>43176</b>	<b>2158.00</b>	<b>21.59</b>
<b>GRAND TOTAL</b>																								



**A practical and statistical analysis of Morris Traveller Reg. No. WAH 793H.**  
This very run-down Traveller, similar to the thousands that are unnecessarily scrapped each year, has a fair mechanical specification, a rusted-out chassis, and generally poor timber and bodywork. Its market value without a current M.O.T. was between £50 and £100 when we bought it.

The following pages show how we analysed its structural condition and worked out a year-by-year priority programme for its rehabilitation and maintenance.

As an exercise we rebuilt its chassis stage by stage and some of the photographs taken during the work are shown on pages 3 and 35. The statistical analysis which follows show that even a very "low level" Minor is commercially viable to rebuild, and that over a long period it will deliver a cost effective 9½p per mile.







Avon House  
Lower Bristol Road  
Bath Avon England  
Tel (0225) 315449  
Telex 444585 MORCAR G  
Parts department:  
Tel 0225 334444

## How to use the Questionnaire

1. Be as *accurate* in your reply as possible. Morris Minor owners are naturally very proud of their cars and are inclined to put on rose coloured spectacles when looking at them!

2. If in doubt get experienced advice when filling it in.

3. When indicating weak areas on the car use a coloured pen or pencil.

4. If you need extra room for comments, particularly on the general appearance of the paintwork and interior trim, attach your own notes, with your name and address on top please.

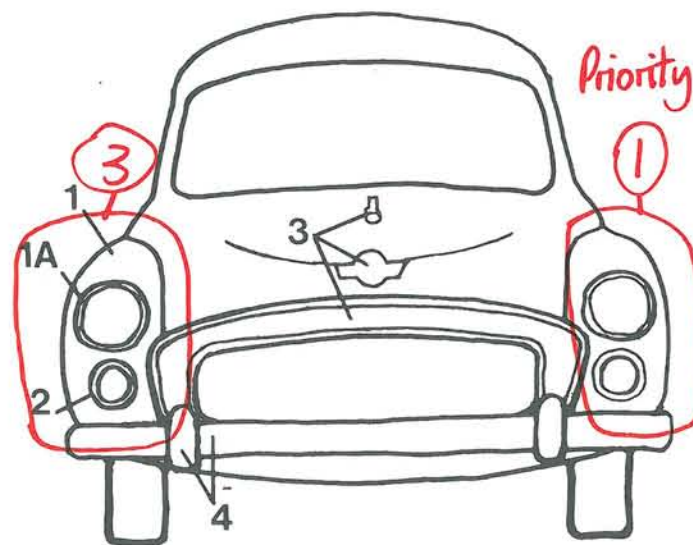
5. Send back one questionnaire and retain the other for your own reference. We will normally reply within a week or ten days.

6. If you need advice within 24 hours, and wish to be contacted, (our phones are usually very busy) we make a charge of £1.00 to cover telephone costs.

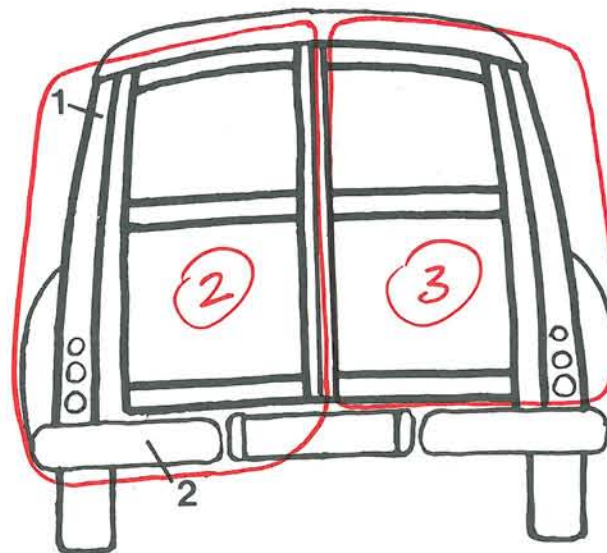
Name Morris Minor Centre  
Address Avon House, Lower Bristol Road  
Bath, Avon. Tel. No. (0225) 315449  
Reg. No. WAH 793H Colour Trafalgar Blue Mileage 82,000  
Short history of car.

*A well used car that has had an unknown number of owners. Mechanically average, Chassis well below average Bodywork below average, Woodwork below average.*

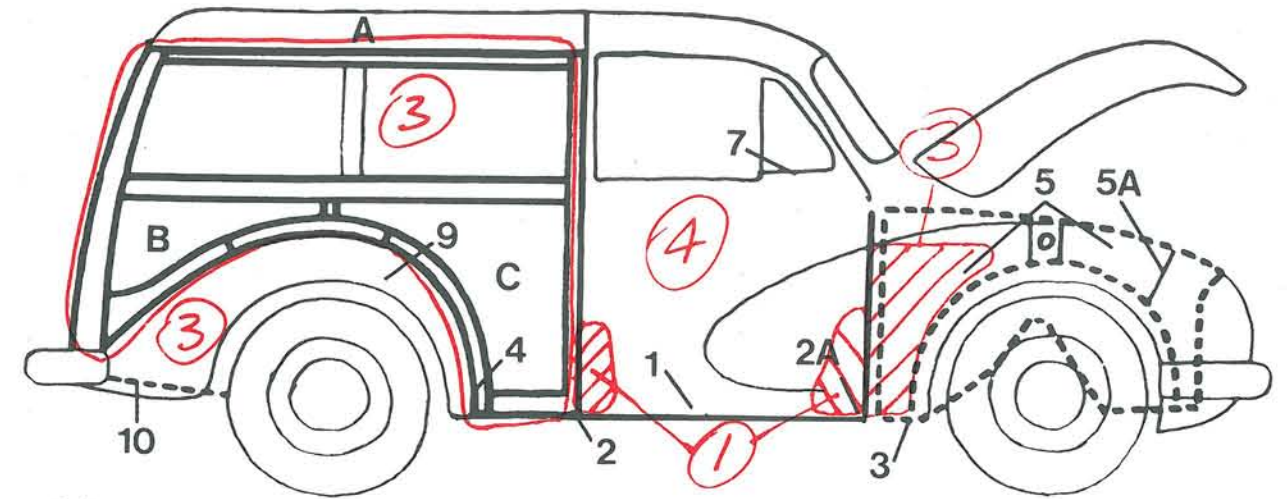
- 1.1A. Check for corrosion on shoulder of wing and around headlamp.
2. On late models remove side light/indicator lens and check base.
3. Condition of grille, grille surround and chrome finishes.
4. Condition of chrome bumper blade, valance and over-riders.



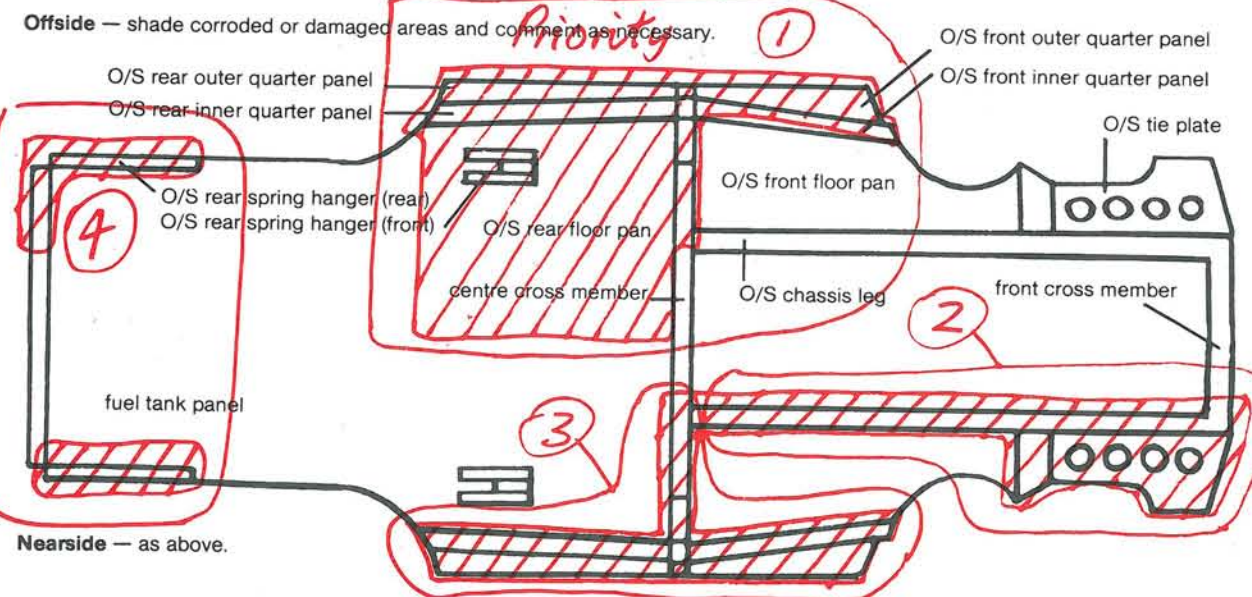
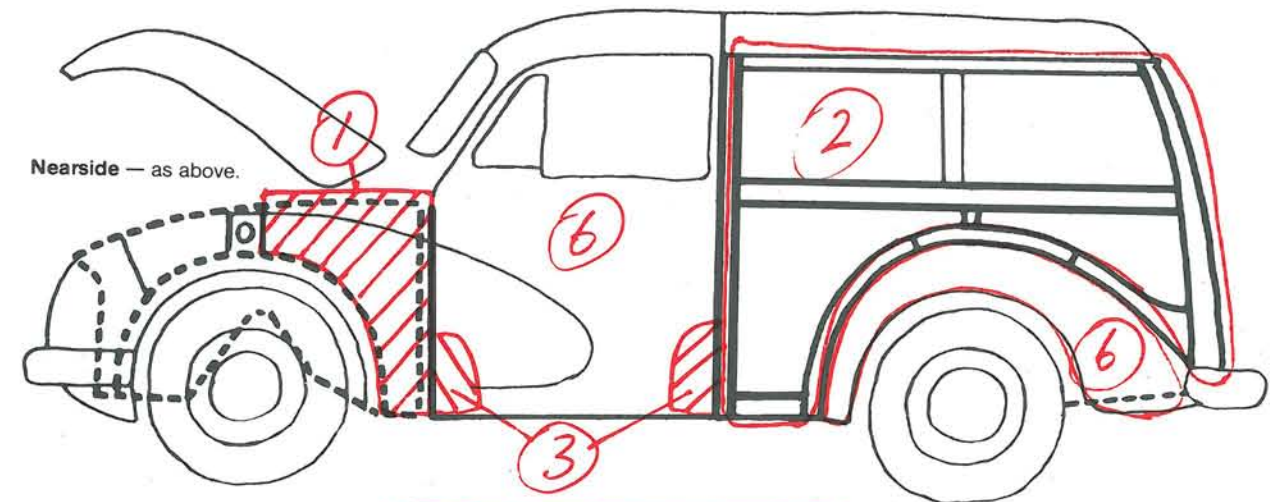
1. Shade 'soft' areas of woodwork in red. Discoloured areas of woodwork shade in black.
2. Condition of chrome bumper blades.



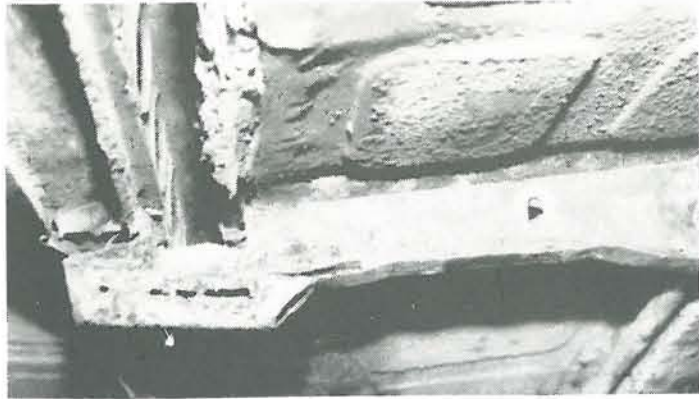
Offside — shade corroded or damaged areas particularly areas indicated and comment as necessary. O/S drivers side



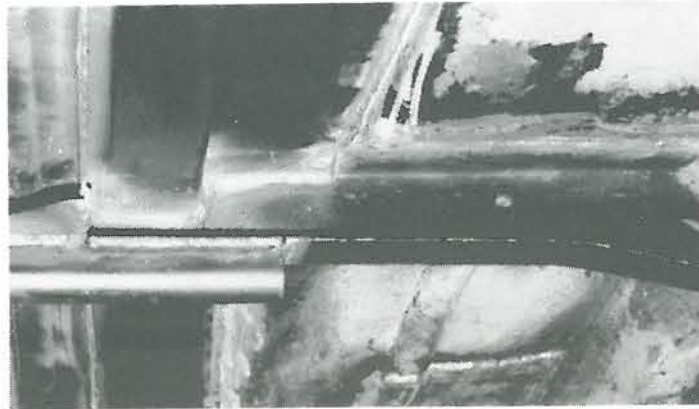
1. Bottom of front door.
- 2.2A. Open door and check bottom of shut pillar (2) and hinge pillar (2A).
3. Wheel arch rise, behind front wing (tap with hammer).
4. Wheel arch rise, behind rear wing (tap with hammer).
- 5.5A. Lift bonnet and check this area and this seam (5A).
6. Check for flaking paint on aluminium panels, A, B & C.
7. Check for interior split below quarter light.
8. Shade 'soft' areas of wood work in red. Discoloured areas of woodwork shade in black.
9. Check for corrosion on rear wing.
10. Check area above rear spring hanger.







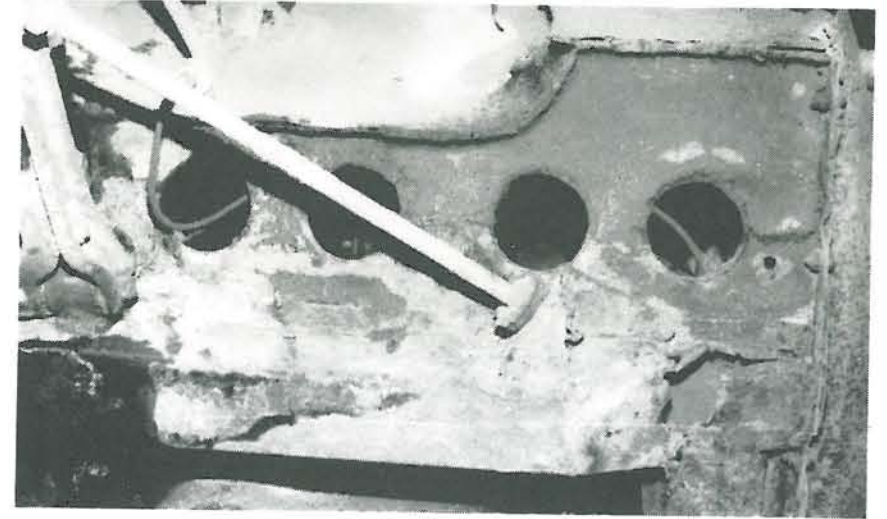
The weak cross member and jacking point before replacement.



The new cross member end and jacking point fitted.

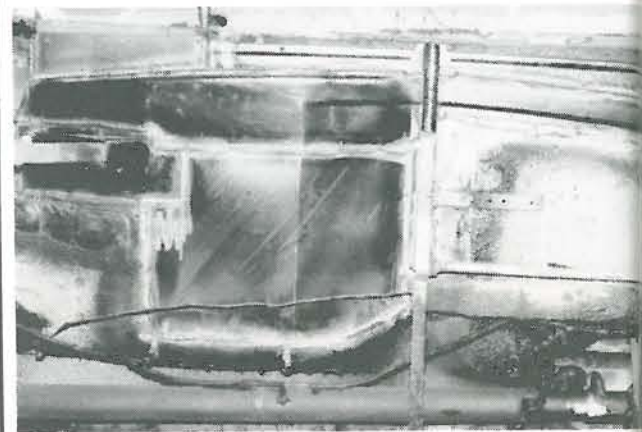


The rotten chassis leg and tie plate before replacement.

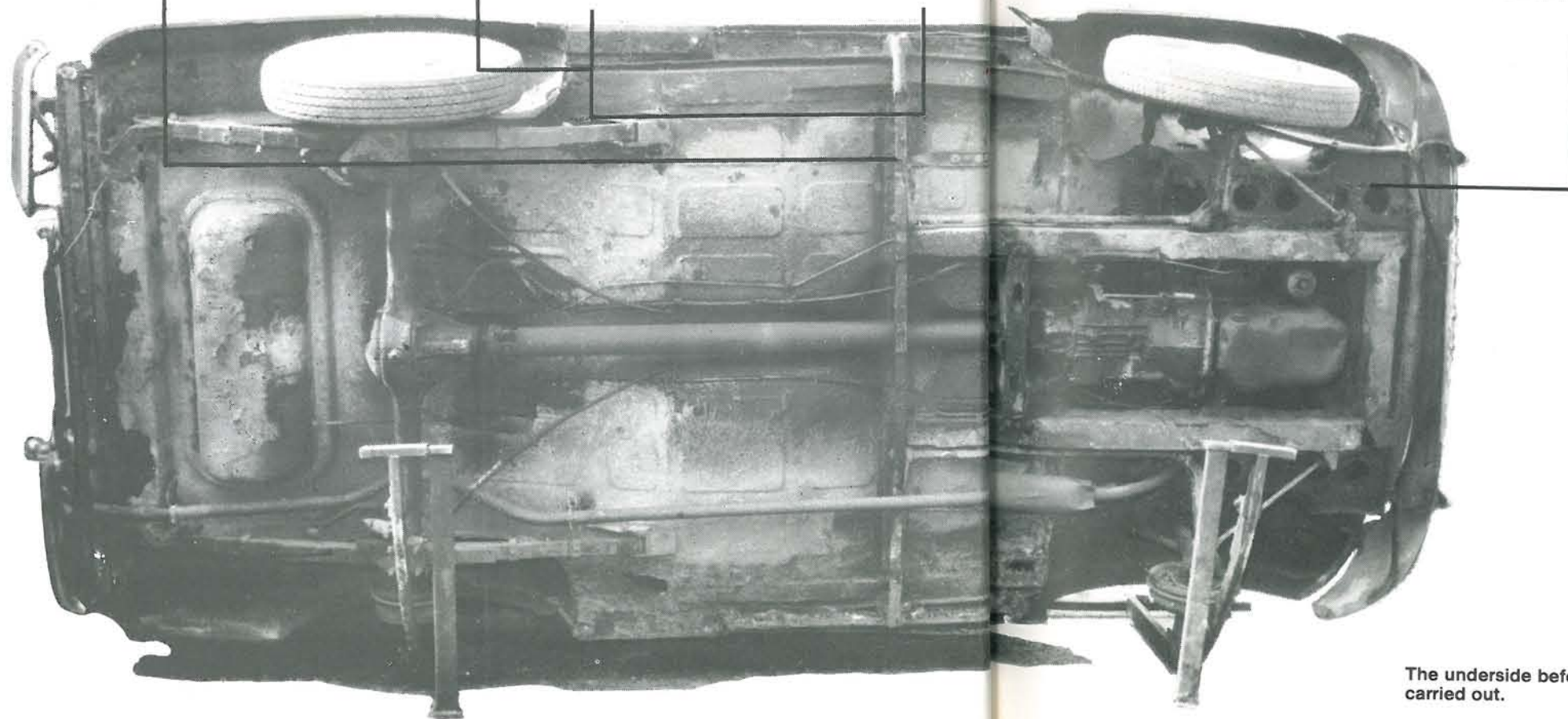
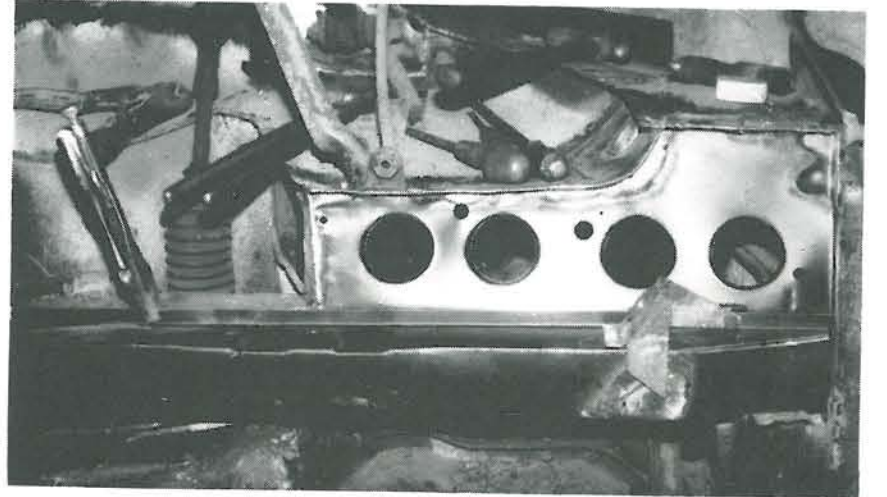


The new replacement chassis leg and tie plate.

The MOT 'Cover panels' removed in this area showing the very bad internal corrosion.



The complete side rebuilt.



The underside before any work had been carried out.



EXPENDITURE	Year Miles ('000's)																				Average per year (£)	Total 20 years	Average per mile (Pence)	% of total Expenditure
	10	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19				

WAH 793H Trafalgar Blue 1970 Traveller (Cost £100 — Resale value after 20 years £3000) 14.12% of total outlay (1/7th), 1.5p per mile.

Capital Cost of Car	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	100	5.00	0.05	0.47
(Cash Sale - No Interest)	118	144	144	144	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	933	46.65	0.47	4.40
Structural Repairs — Body	380	278	196	150	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1004	50.20	0.50	4.73
— Chassis	—	360	134	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	903	45.15	0.45	4.26
— Woodwork	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	550	27.50	0.28	2.59
— Sundry	20	50	—	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	100	174.50	1.75	16.45
Sub Total	618	832	474	220	454	100	196	55	196	—	—	—	—	—	—	—	—	—	—	—	—	3490	174.50	1.75	16.45
Interest @ 15% Over One Year	90	125	71	33	68	15	29	8	29	—	—	—	—	—	—	—	—	—	—	—	—	520	26.00	0.26	2.45

#### TOTAL COST AND CAPITAL

#### IMPROVEMENT PLUS INTEREST ON STRUCTURAL OUTLAY

Service — 6 Months	708	957	545	253	522	115	225	63	225	—	—	—	—	—	—	—	—	—	—	—	—	115	200.50	2.01	18.90
— 12 Months	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28.00	0.28	2.64
Engine	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45.00	0.45	4.24
Clutch	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Brakes	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Gears	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Suspension — Front	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
— Rear	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Axle & Differential	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Exhaust	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fuel System	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Electrical	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tyres	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Body Maintenance	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TOTAL MAINTENANCE	283	223	538	328	243	213	218	418	283	243	268	343	388	393	218	283	178	418	173	418	6070	418	303.50	3.03	28.61
Tax & Insurance	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170.00	1.70	16.02
Petrol	380	380	380	380	380	380	380	380	380	380	380	380	380	380	380	380	380	380	380	380	380	380	380.00	3.80	35.81
M.O.T.	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7.00	0.07	0.66
TOTAL RUNNING COSTS	557	557	557	557	557	557	557	557	557	557	557	557	557	557	557	557	557	557	557	557	557	557	557.00	5.57	52.49
GRAND TOTAL	548	1737	1640	1138	1322	885	1000	1038	1065	800	825	900	945	950	775	892	850	975	845	1090	21220	1061.00	10.61	100.00	

## The Morris Minor National Survival Plan

The comparative statistics show that, provided long term logic is applied to reconstruction work and maintenance, the Morris Minor is very inexpensive to run on a day to day basis over a long period. It is therefore a sensible and practical candidate for long term conservation because:-

1 All essential parts are still manufactured and distributed by either Unipart or ourselves as licensed agents for B.L. Heritage Ltd. As B.L. gradually stops supplying parts, we have been stepping in to re-manufacture replica replacement parts, built to original quality specifications.

2 The U.K. Morris Minor stock position (see page 37 for details) is large enough to allow for bulk manufacture of new parts to be cheap and cost effective.

3 A complete and comprehensive technical package is available, which has been practically tested (see page 39 Stormont Engineering at Woolwich) and found to be readily adapted to garage workshops without previous experience in long life conservation technology. All the essential ingredients are therefore available to conserve the national Morris Minor stock.

The only practical problem is that because the *compounding terminal rust* is not being properly treated, the re-education of owners and garages will have to be *rapidly* implemented. An intelligent guess based on analysis of the 1979 and 1982 national census stock levels, leads us to believe that if things go on as they are, *over 150,000 of these very useful cars could be scrapped over the next seven to eight years.* In order to facilitate the practical conservation of the national Morris Minor stock, with its wide job creation potential (see page 37 on job creation) we have formulated the following survival plan which will (if enough owners are interested in taking it up):-

1 Create a U.K. infra-structure of approved licensed garages, to carry out the programme.

2 Introduce a computer programme which will have the facility to rapidly and accurately analyse the structural and mechanical condition of the whole stock, and provide owners with a 15 year print out of all priority costs on their Minors.

3 Introduce a national computer dating system to arrange 'marriages' between buyers and sellers.

4 Form national and regional owners' consumer societies to help administer the plan.

## The Licensed Garage Infra-Structure

Let us examine these proposals in detail.

In order to ensure that all owners have a specialist Morris Minor workshop within easy reach, the Morris Minor Centre will licence garages throughout the U.K. to carry out the National Survival Plan. These garages will be able to apply to B.L. Heritage for formal approval of their standards of work and service.

We know the locations by postal district of all Minors 'on the road' so that it will not be difficult to appoint the right number of specialist workshops in relation to the U.K. Morris Minor population.

These will be of varying size but all will offer a very personal service.

Quality of workmanship and service will be standard throughout the U.K. and the Morris Minor Centre and other motoring organizations will be involved in making sure that high standards are maintained.

Labour charge-out rates will be related to a fair going rate in any regional area, and there will be a complete set of standard times for all jobs which will be available to the owners.

The computer dating system will logically value the car, based on its fundamental structural and mechanical condition, rather than its glossy look.

Valuation centres would be distributed around the U.K. to facilitate this service and a fair commission would be paid by the buyer and seller.



## The Computer Based Forecasting System

The principles are straightforward:-

### 1 Structural Requirements

Analysed on a time basis, i.e. on how long any structural chassis or body panel will practically last before it becomes unsafe or lets in water, which could damage a sound adjacent panel.

### 2 Mechanical Requirements

Analysed on a mileage basis, i.e. on how many miles any part is likely to travel before it becomes a safety hazard or a likely cause of breakdowns.

In practice we see the Plan operating as follows:-

- The car is booked in for an inspection at any of our regional Inspection Centres. The cost of this service will depend on the degree of detailed analysis that the customer requires.
- The results of the inspection are punched into the computer terminal and the information will be printed out as a fifteen year programme of all bottom line priority costs necessary each year to keep the Minor running safely and efficiently.
- The licensed garage nearest to the owner's home will, once a year when the MOT is due, carry out the work laid down in the computer forecast and any additional work the owner might feel inclined to have done.

### Computer Dating System

This will be a national system for putting buyers and sellers in touch with each other and ensuring that both sides get a fair deal. At the moment all buying and selling of Minors is illogical. This is because they are seen as 'antique investments' rather than useful motor cars and no-one knows what to pay or what to ask when they are buying or selling. They are, as a result, sold mainly on their appearance and not on their structural strength.

### Insurance

One of the largest Insurance Groups in the U.K. has worked out a specific Morris Minor insurance package, based on long term structural condition, rather than on appearance.

Owners involved in the Survival Plan, will be able to participate in this scheme and be confident that they will get back their invested money if the car is stolen or written off in an accident.

## The Owner's Part in the Survival Programme

### Garage/Customer Relations

Are traditionally fraught with mutual suspicion which breaks out into open warfare, when the customer's expectations are not met and the garage feels they are unrealistic. Garage repair shops and their customers have differing views as to the efficiency that can reasonably be expected from a second hand car. The reasons for this are worth examining.

### Garage Expectations

Out of a total of sixteen million cars on our roads, over ten million are not covered by comprehensive manufacturers warranties and are steadily drifting downwards in value and reliability.

Garage repair workshops, fully understanding this inevitable decline in mechanical efficiency, are naturally fatalistic about the frequent mechanical and structural failures that compound as the car gets older. They find it hard to understand why their customers get so angry with them when their secondhand car breaks down without warning.

### Customer Expectations

Owners of secondhand cars are born optimists. They genuinely believe that their 'new' secondhand cars will be reliable, and the unexpected breakdowns and subsequent expensive repairs and inconvenience, are the direct result of shoddy workmanship and lack of caring on the part of the garage. This commonly held belief is the result of:-

- Manufacturers advertising and selling techniques which emphasise the durability, reliability and low running costs of their new cars.
- Car Salesmen who sell and don't generally service or repair cars, usually know next to nothing about mechanical problems and are therefore born optimists like their customers.

A good salesman really believes that his product is best. Unmechanically minded customers are always swept off their feet by his conviction and enthusiasm, until the car they have been persuaded to buy breaks down unexpectedly. The root cause of this deep lack of mutual trust between garages and the public is because the manufacturers and their agents are naturally reluctant to stress the basic fact that *planned obsolescent motor cars are supposed to collapse within seven to ten years.*

## Viability of Stock for Long Term Conservation Technology

### Mechanical

All Minors are mechanically viable. An old Minor sitting in the corner of a barn or field will usually start and function mechanically by changing the plugs and points and the battery.

Almost any Minor can be overhauled and put into good running order for under £500 worth of labour, time and parts.

It is therefore mechanically viable to keep the complete stock on the road indefinitely at a low cost per mile.

### Structural

We examine between 30 to 40 Minors a week, that are in daily use or off the road, and feel that with the correct application of long life technology 90% of the total stock is recoverable. Because about 10% of the recoverable stock will need a very high initial labour input, we see two separate financial systems operating.

- The national network of licensed garages carrying out the bulk of the work.
- State aided and privately backed charitable trusts etc. carrying out a minority of conservation work using subsidised labour rates on a small percentage of Minors needing a very high initial labour content.

*The U.K. Morris Minor Stock Position as at March 1982*

Vehicles on the Road Taxed and M.O.T.'d	
a) Private vehicles (saloons, travellers, convertibles)	124,197
b) Commercial (vans and pick-ups)	12,109

### Lapsed Licenses Stored Off the Road

Intelligent guesstimate based on our own experience in visiting owners to advise them on restoration or value when selling, probably 70,000 but say	50,000
<b>Total</b>	<b>186,306</b>

## Job Creation Potential

At the moment the average Minor in the U.K. probably has about 7 hours worked annually on it in a garage for servicing or M.O.T. work.

The number of hours therefore worked on private and commercial vehicles on the road is 954.142—or at the most one million hours a year.

With the survival plan fully operational we would expect to see the following increase in hours worked on Minors in garages up and down the U.K.

1 Vehicles on the road (an extra 20 hrs. per Minor)	2,726.120
2 Vehicles off the road (an extra 27 hrs. per Minor)	1,350.000
3 Total number of additional hours	4,076.120

Assuming the average workman recovers 1,800 hours per annum, this would create the following permanent jobs:-	
Trademen and labourers	2,264
Management & office staff approximately	300
<b>Total</b>	<b>2,564</b>

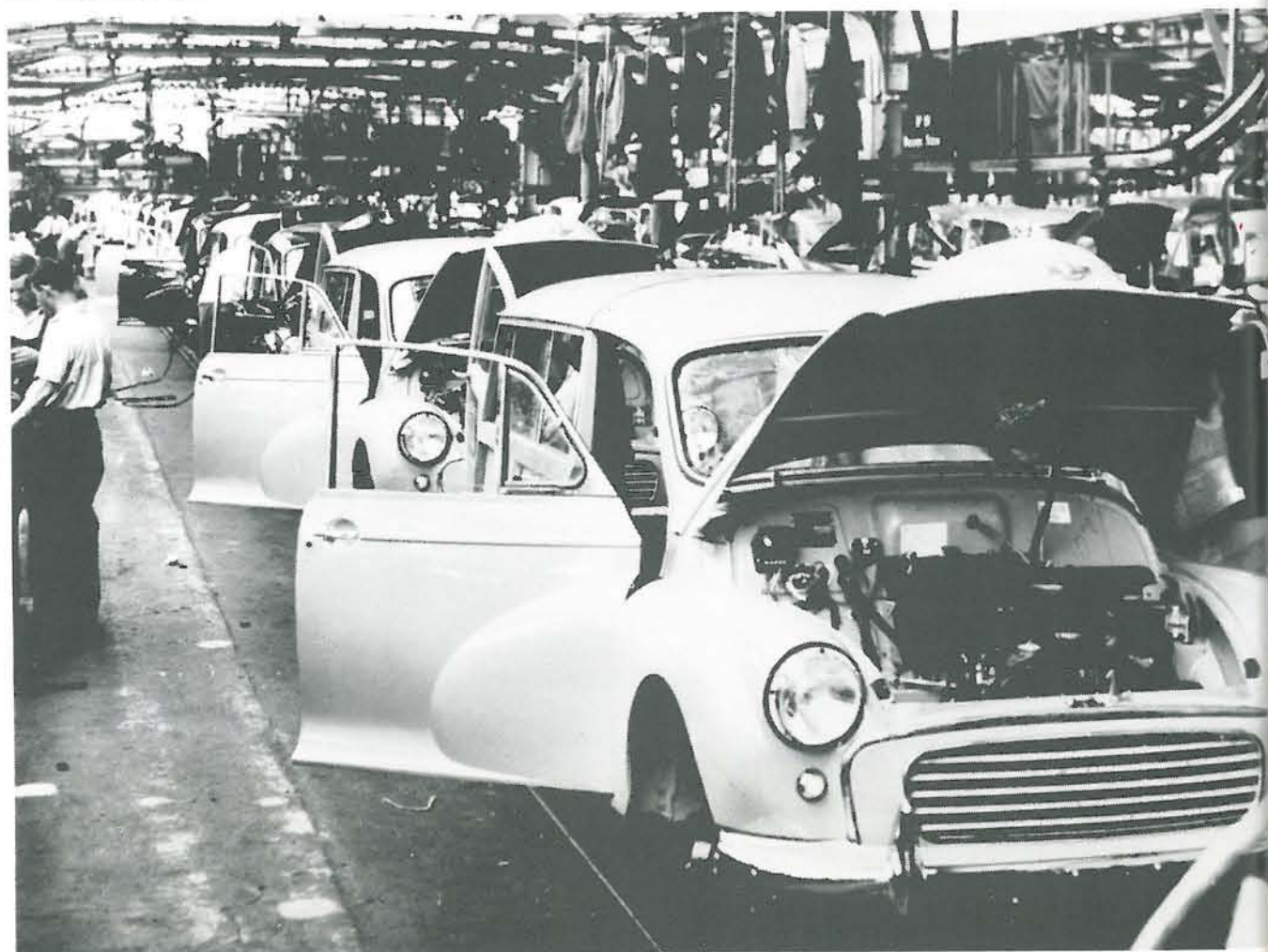
*N.B. Clearly this total would depend on how quickly owners realize that it is not necessary or sensible to throw away a rusty Minor without an M.O.T.!*



Skilled men assembling the aluminium and ash wood frame of the Traveller 1957.



The assembly line 1957.



## The Stormont 'Experiment'

*The following contribution is by the General Manager of Stormont (the largest Ford distributors in Europe) who have been successfully practising the Morris Minor Centre 'long life' technical package for the last two years in a small unit at their Woolwich bodyshop in S.E. London.*

The vast majority of us have grown up, lived and worked in an era of ever increasing apparent prosperity. The more we have the more we want and the manufacturers of consumer durables have not been slow in cashing in on this human foible.

The incidence of car ownership per capita of population has grown significantly, decade by decade, since the Second World War and is now at a point, despite (or, perhaps, because of) the efforts of public transport authorities, where most people consider the ownership of a car as 'essential'. So much so that only housing and food take higher priority in the family budget.

During a Depression money is short, unemployment grows as Industry and Commerce fight to price themselves more competitively by raising productivity, without which they have no customer, no profit and no job. So the vicious circle.

Those of us in the Motor Trade wishing to stay in business—and many of us have social responsibility to maintain our levels of employment and wages—have done some energetic soul searching in the last 18 months or so. This has caused some of us to realize that times are changing and we must do likewise. Hence, what might, in former times have been an expansionary move became instead, a substitution of associated activities.

Stormont's association with The Morris Minor Centre at Bath began as one and nearly two years later has proved to have been timely. Timely in two particular senses. Firstly, it has enabled us to expand our work force, whilst contributing to keeping existing staff gainfully employed and, secondly, we have been able to contribute our actual experience to Long Life Car Technology, whilst preserving a few more of the Nation's, fast dwindling, stock of Morris Minors. In the process this activity has, of course, helped to defray our fixed overheads, thereby enabling us to keep our charges down.

We accept that the element of emotion contributed to our decision to diversify in this way. However, the proof of the pudding shows it to have been commercially sound. On average, we have 'sold' some 100 additional hours of skilled labour per week, together with the associated spare parts. But there have been other less quantifiable and obvious benefits.

It is probably true to say that 'job satisfaction' is the second most important factor affecting a person's type and place of work. Restoring and repairing Morris Minors has offered job satisfaction to many of our skilled staff, who, through force of circumstances, tended to be employed in repetitive 'fitting' jobs, which offered no outlet for their instinctive creative talents. It has also brought them into contact with a new 'breed' of car owner, who, whilst rightly demanding, does appreciate their skill and says so!

Many of us now drive Morris Minors and, therefore, happily practice what we preach. It may well be that there are other models to which this technology could (and should) be applied, for this is not a 'woolly' campaign organised by active 'do-gooders'. It is, instead, a fresh look at current national needs and makes sense in terms of job creation, job satisfaction, conservation of energy and resources, profit and wealth creation in the era of a Depression which may well be with us for as long as a decade.

**Michael Mulloy**  
Group Executive Director  
Stormont  
Woolwich, London SE18.



## Ian Nairn—A Personal View of His Minor

First, and with apology, what I can only call a curriculum vitae. My first car, bought in 1950, was four years older than myself. An Austin Seven, PP 7116, built in 1926, it was bought by parents in Driffield, E.R. for their son—and then sold, because the lad would do 60 m.p.h. in it.

It was a fantastic vehicle, in a way the Minor of the 'twenties. An aluminium body, a lever to advance or retard the spark, another to give pre-set cruising speed—forty years before the motorways. It took me all around Norfolk, and from there to Edinburgh and back. (It also had the carburettor mounted directly above the exhaust pipe, and that carburettor frequently leaked, so that I was driving around inside my very own home-made bomb.)

Thereafter, various other pre-War Austin Sevens, nowhere near as much fun, and, after a sudden windfall, two splendid bits of the other: a Lea-Francis 1¾ litre sports; then a Sunbeam Alpine—the real one—two and a quarter litres, an engine that did 50,000 miles without overhaul—and a body which eventually rusted around me beyond repair. Hélas

So then what? Open-topped, reliable, lively . . . Ah, the Morris Minor. So, in 1965, there was FPC 603C, traded in two years later (at half the purchase price) for PPH 721E, and then again for XPC 359G. Which is where I am at the moment. Himself (herself?—I can't decide, both at once, but not hermaphrodite) has just taken us round East Anglia and is now parked in front of our Pimlico flat. It has been on television several times—dammit, people remember the car more than they do me, and they may be right at that. It has clocked over 80 mph in a mad dash to the Mediterranean coast near the Camargue to film the sunset; it has, all over Britain and Europe, carried myself and director in the front sitting down, and cameraman and sound recordist standing up, in the back. It has, when required, a standing start of some power which once perturbed the director when I roared out of the castle at Ghent: he was draped over the boot at the time, hanging on from grim death.

And it will potter and meander along lanes to your heart's content while johnny-come-lately executive saloons growl and nudge and their owners nurse their ulcers. It is patient with horses of all kinds, and exceptionally patient around Newmarket or Malton, where a bit of brash driving could demolish the winner of the 3.30. This carefulness is invariably acknowledged, one of the few courtesies left on the road.

Sillybuggers decided to stop making the Minor, around 1970; I bet they are regretting it now. So a sillybugger in the other sense—glorious folly rather than cloddish stupidity—arranged the resurrection, in a part of Bath that is far from the Circus and the Crescent, Charlie Ware set up the Morris Minor Centre.

I first heard of it, I think, from an article in the Sunday Mirror. As my good garage in Surrey had closed down, I went to Bath. It's a long way for a service, but the M4 takes the pillocks and the A4 is a fine historic ride once you are past Slough. And you don't have to go that way: you can wander off to Devizes, stay at the Bear where the painter Sir Thomas Lawrence started life as the innkeeper's son, and drink Wadworths.

This may sound a woolly-minded maunder. It ain't. The Minor will perform non-stop and long-distance if it has to, but what it really likes is intelligent diversions. And, also, if you think this transference of human feelings to inanimate objects is maunder Mark Two think again. As a pilot, I trained on Tiger Moths. The unit had five of them, and each was an individual. My three Minors were just the same: the first a touch too soft, the second a touch too hard, and this one, bless it, is just right.

Him/her is just coming up to 90,000: I've husbanded the miles, preferring to hire cars at the other end if there's nowt to be gained from the journey. In that time it has never had a breakdown that involved calling for a tow truck. Because I don't push it, the petrol consumption is well above 40 m.p.g. In the last year I have had three people come up to me in the street, in three different towns, to ask if they could buy it.

I suppose the only equivalent would be the VW Beetle. This I have only driven once—in Mexico, but that's another story. It was utterly reliable, but because of my size it was also diabolically uncomfortable, my left leg jammed up against the nearside front wheel housing. Whereas the Minor not only has two adjustments for the driver's seat, it has three. Unbolt and bolt, and I can drive legs extended, which I couldn't do on the one and only occasion that I piloted a Rolls.

Thanks, Sir Alec, for that extra option. And for everything else about the Minor. It is not the people's car, which is what the VW's name means: it is the People's car, all classes, all ages, all temperaments. But be warned; there is no way I can see a comfortable solution to a passionate embrace in the back seat.

## BL Heritage Ltd. — Approval Scheme



Before looking at the BL Heritage Approval Scheme and the operation of The Association of Heritage Approved Specialists Ltd., it will be helpful to understand a little about the formation of the Heritage company, its aims and objectives.

BL Heritage Ltd. was formed in 1978 around Leyland Historic Vehicles Ltd. The purpose for the formation of the Heritage operation is to collect, conserve, research and display on a self-financing basis those items of historic, social and technical interest which are obtained by the Heritage from the 50 Companies which over the years have come to form the Austin Rover Group, Jaguar, Daimler, and Leyland Truck and Bus Division.

The provision of a public museum is an important part of the activities of the company and the opening of the Heritage Vehicle Collection at Syon Park meets this requirement. The Collection is by far the largest owned by any motor manufacturer in the world outside the United States and is the largest Collection available for public show within the United Kingdom.

Equally important, but not so glamorous, is the provision of restoration workshops for the upkeep and refurbishment of the three hundred or so vehicles that are currently held by the company.

Another area which is a financial drain on the company, but a very necessary part of our education work, is the provision of storage and research facilities for the many millions of archival documents, photographs, and drawings which are now forming a major part of the companies activities.

Sources of income other than museum entrance generated by the Heritage are essential to the operation of the company, historic vehicle hire, promotions, consultancy fees, licencing and the Approved Supplier Network, all contribute to support what is basically an academic unit run on commercial lines. This does occasionally cause a conflict of interest within the company but the academic aims always take precedence over the commercial objectives.

While the functions of vehicle hire, promotions and consultancies are fairly obvious, the operation of the Heritage Approval Scheme will need some explanation.

Fairly shortly after the formation of the BL Heritage company, it became very obvious that some sort of vetting of Companies supplying spares and carrying out restoration of the older BL vehicles was necessary if the Heritage was to be in a position to recommend to its many enquirers responsible Companies to carry out work and supply parts for their own vehicles.

After a great deal of research and work, an agreement was prepared which covered the three main categories involved in the classic car market: the supplier, the restorer, the manufacturer. This Agreement is the basis of the Heritage Approval Scheme. The whole operation has evolved over the past four years and the present criteria laid down for Approval ensures that Companies which have the privilege to use this logo meet a standard of service, quality and reliability that offers a safeguard to the customer, especially to those who have no expert knowledge.

The limiting factor to the number of Approved Companies is governed entirely by a Company's ability to meet the very strict criteria laid down by BL Heritage Ltd.

Income generated through the Approved Companies is used to help finance the academic work of the company, particularly in the development of a technical drawing archive. This is to some extent an enlightened self-interest on the part of the Approved Companies as only they have official access to detailed drawings necessary to the manufacture of components.

If the conservation plan proposed in this book works successfully, it will be of great benefit to Morris Minor owners.

Peter Mitchell,  
BL Heritage Ltd.,  
Studley,  
Warwicks. 1982.





There is no doubt in my mind that anything that can contribute to extending the life of selected cars in the durable car market should be encouraged.

This particular conservation plan is the first of its type to be specially prepared for a volume produced car and to cover the well known Morris Minor, it must surely be very welcomed by both existing owners, future owners and the repairing side of the retail motor trade.

By producing a known expenditure programme, which will ensure longevity of life both to ownership and the well loved Morris Minor the success of the whole project in my mind is assured. Personally I have very little criticism of the plan, and the retail motor repair trade will no doubt welcome the opportunity of participating.

J.L. Venner-Pack,  
Regional Director,  
Motor Agents' Association Ltd.,  
South West and South Wales Region,  
73 Park Street,  
Bristol BS1 5PS.

Pioneers of the Morris Minor Revival. Featured on BBC TV Pebble Mill, ITV 'Wheels' and Afternoon Plus. Recommended by Sunday Times Motoring Column. The Observer Motoring Column, Practical Classics, Motor, Thoroughbred and Classic Cars. Features in the Observer Colour Magazine, Sunday Mirror, Daily Express, Yorkshire Post and other national and regional newspapers. Auto Car, Cosmopolitan, She and other magazines. The Centre was started in 1977.

## Advantages of Owning a Minor

If you have never owned one, the following facts may help you to understand why this small family car, first introduced in 1948, is still the preferred transport for anything up to half a million people around the world.

- 1. Reliability.** A well maintained Minor will start first time in all temperature conditions, whether it's used every day or only once or twice a month.
- 2. Fuel consumption.** Average around 40mpg, but many of our customers find that on mixed town and country driving over 50mpg is quite common.
- 3. Low cost servicing.** The large, well designed engine compartment and easy-to-get-at greasing points makes it simple and inexpensive to service and because of its simple mechanical layout, an ideal car for home maintenance.
- 4. Low cost spares.** Because it is the last of the 'nuts and bolts' cars all major mechanical assemblies can be easily broken down to low cost component form.

**5. Good spares backup service.** All mechanical parts essential to the day to day running of a Minor are available. Until recently Leyland were gradually reducing production, but due to the recent revival of interest in the Minor as an alternative form of low cost transport, and existing Minor owners realizing that their old friends can go on for another 20 years or so, they are increasing production again.

*We are re-manufacturing and reconditioning obsolete parts and in order to make it easier for owners to obtain all parts we have produced a complete and comprehensive International mail order catalogue (fully illustrated).*

**6. Underside (chassis).** Because of its strong and durable character individual replacement panels can be easily fitted.  
*We have available a range of structural panels specially designed for this purpose.*

**7. Body.** All panels are bolted on the shell, which means they can be replaced easily if rusty or damaged.

**8. Handling and performance.** In first class order a Minor will handle like a new car, light accurate rack and pinion steering, independent front suspension, and a lively engine make it an ideal day to day transporter. Although not a fast car by today's standards it will cruise between 55-65 mph without any significant wear to the working parts, and motorway driving at 65-70 mph will not cause harm.

**9. Low cost Table 1 insurance,** is available at normal tariffs whether your car is worth £300 or £3,000.

**10. Generous leg and head room** for driver and passengers. The Minors' high curved roof and generously rounded form allows four people to travel in comfort without feeling cramped or suffocated. The Traveller with its useful rear access doors and folding down rear seats is one of the best designed small estate cars available today.

## Owners' Restoration Services

After reading pages 26 to 34 describing in detail the rebuilding of WAH 793H, you will understand that virtually any Minor is economically viable to rebuild over a number of years.

Whether you already own or are thinking of buying one, the following specifications and approximate prices may help you to understand your own financial priorities and reasons for running a durable car.

Approximately 90% of all Minors suffer from internal corrosion even if they are 'low mileage, one lady owner', etc. The chassis is, therefore, a top priority.

Chassis (underside) reconditioned.

### Stage One Welding

In order not to damage and burn any of the interior trim panels, we have to remove

everything with the exception of the headlining and refit it afterwards. This costs £40.00. All weak or 'MOT' repaired panels are cut out and our new purpose made structural panels fitted and seam welded in. Depending on how much money you have to spend at the time and how few panels need to be fitted, costs can be from £50 — £1,200.

### Stage Two Welding

This applies to the upper portion of the Bodyshell, behind the front and rear wings and at the bottoms of door shut posts and hinge posts. In order to carry out these repairs comprehensively, wings must be removed and refitted after work. A charge of between £15 — £25 is made per wing. The work itself can cost between £100 and £500.

### Stage Three Welding

To protect the long term replacement panels and to prolong the useful life of all sound existing sections it is vitally important to protect the inner faces of all these 'closed' structural parts. For this reason we inject all the hollow pressings and double skinned body panels, like doors and hinge pillars, with an anti-rust capillary action fluid. Unless this process is carried out we are unable to guarantee our work. Cost: £80.00.

### Bodywork.

#### Coachbuilding Standard Specification

1. Remove all detachable panels from the body shell.
2. Throw out all severely damaged and rusted panels.
3. a) Good secondhand panels.  
Grind off all superficial rust, beat out minor dents. Grind off all unsound paint surfaces and old filler. Grind off paints and etch prime all Traveller aluminium panels.  
b) New or reconditioned panels.  
Disc-grind off all manufacturer's protective paint coats.  
Pre-undersal all new wings for extra protection.
4. All panels. Stop out, prepare and face fill only, and flat out between each coat. Six coats of top quality primer to be applied to all individual panels.
5. When primed surface is satisfactory, apply four coats of cellulose, flattening off between coats as necessary.
6. Lightly cut and polish paint once it is hard. Do not overpolish, as this results in a considerable loss of paint thickness.
7. Bodyshell.  
a) Exterior. Specification as for panels.



- b) Inner faces of door shut posts, hinge posts and interior of car. Repair damaged areas individually spot prime and paint as necessary to achieve a sound finish.
- c) Engine compartment. Unless specifically asked for, brush coat the whole with Hammerite anti rust paint. (Reason, the labour cost of taking out the mechanical parts makes it very expensive. If required, allow an extra £350).

Costs depend totally on the history of the car, whether it has been in accidents and skilfully repaired or painted in synthetic paint, whether the original paint has oxidised or pickled, or if all the panels are rusty.

Prices range from £900 — £1,500 for this long term specification.

As part of a programme this standard of work applies to the replacement of any individual or related bolt on body panel.

#### Mechanical

Morris Minors are intrinsically reliable. Major components like engine, gearbox and transmission give ample warning of wearing out, and can be replaced at quite low cost as necessary.

As a priority the average car usually needs a fair amount of time put into suspension and brake overhauls, and the replacement of engine hoses, timing chains etc. Most Minors can be put into really sound running order for between £200 to £600. A progressive improvement programme can be arranged for individual cars.

#### Trim

Nearly all trim is now available, particularly for post 1964 cars (see Catalogue for details). We of course supply and fit as required.

#### Traveller Woodwork

The unique strength and flexibility of Ash timber has long made it a favourite coachbuilding material. The complete passenger and luggage area is protected by a structural ash frame clad in light aluminium panels. (Unlike the Mini Countryman, where the timber is 'stuck on decoration').

It is a *major structural* part of the car and not a cosmetic item. The common specialist trade practice and D.I.Y. approach to workwork, is to clean it down, bleach out the dark stains and revarnish. This is a complete waste of time because the dark stains are the beginning of rot, and the revarnishing helps to *accelerate terminal rot*.

Another wasteful and dangerous practice is to cut out small badly rotted areas and put in fillets of new timber to make the appearance better. This is ultimately a dangerous practice because it gives the impression that the frame is strong when in reality it is weak.

The wood replacement on a Traveller is a major job and because the various replacement sections available on the market are not jointed correctly, we have manufactured our own to the original 'critical part' specification. Which is a little bit more expensive because more man hours go into its manufacture.

A guide to prices supplied and fitted.

- Complete side with window channels. £365.
- Two sides and rear doors cleaned down. £725.
- Complete woodwork. £950.

This can of course be programmed, dealing with the worst first.

#### Sale Cars.

If you already own a Minor, most of its faults will be known to you and working out a long term programme will prove to be a straightforward business.

It is difficult though, for someone who has not experienced Morris Minor ownership, to know where to start, because each car is different. Before giving you some idea of what you are likely to get for your money within certain price ranges, it is worth looking at the general value of Morris Minors on the open market *before any restoration work has been carried out*.

From our experience of being offered about thirty a week, it can be generally said that:—

- up to 80% of Minors sell for less than £600.00.
- A further 10% for under £1,000.
- A further 6% for less than £1,500.
- and only 4% for over £1,500.

All of them need work to turn them into long term cars again, but almost without exception they will be reliable mechanically.

The following price guide is an attempt to classify cars sold by us from the centre.

**Cars for Restoration (Price Range: Saloons from £250.00, Travellers from £400.00, Convertibles from £800.00. Individual guarantees offered.**

#### Individual Guarantees Offered

These are cars which we feel form a good basis for long term restoration. Each one is sold with a structural and mechanical report listing the priorities to be tackled immediately. At the top end they will have new MOT's and be basically decent cars without any major faults. At the bottom end a certain amount of work will have to be done to get an average MOT.

**Sensible Runners (Price Range: Saloons from £1,100, Travellers from £1,200, Convertibles from £1,800).**

Guarantees depend on individual mechanical and structural specifications.

#### 1. General Specification

- First class basic rust free undersides.
- Carefully overhauled brakes and suspension.
- Sound engines, gearboxes and transmission.
- First class MOT's.
- Clean, basically sound interior trim.
- General appearance average at starting figures.

#### 2. Individual Specifications

- Traveller wood will be sound but not perfect.
- Convertibles in reasonable basic order cost about 50% more than saloons or travellers because they are rare, and over 60% more time has to go into basic structural welding, so that at our starting price, they won't have particularly good looking bodies, hoods will be sound but not very smart.

**Original Cars (Price Range £1,500 upwards).**

Guaranteed six months parts — twelve months parts and labour.

They may have travelled as little as 25 miles or as much as 150,000 miles from new.

Whether manufactured in 1948 or 1971 they share in common:

- Excellent well kept undersides.
- Well cared for rust-free bodies.
- Beautiful original interiors.

Mechanically they are in sensible running order at the bottom of the range, and in first class mechanical order at the top end. Best value at the lower end of our price range is on well kept, early saloons which can still be

bought by us for reasonable prices.

At the top end you will have to get out your magnifying glasses to find faults. Original travellers are rarer than saloons and much more expensive.

Original convertibles in first class order are very rare indeed.

**Fully Reconditioned Cars (Price Range: from about £3,500 to about £6,500).**

At the lower end these cars will be 'as new' structurally, and overhauled mechanically, so that they are in sound running order.

At the top end they will have a 98% new mechanical specification. These cars are built to order and the specification agreed before work proceeds.

**General Advice When deciding which price range to buy in, always remember that owning a durable car like a Minor gives you the option to start with a friendly ugly Duckling at £250 and turn it into a Swan over a few years.**

#### Guarantees

Modern 'tin boxes' are planned to collapse and be uneconomically repairable within seven years, and yet new car advertising is directed towards making the public believe they are in fact buying 'for life'. Emotive words like 'durable', 'rugged' and 'built to last' are used constantly and it is therefore inevitable that conflict will arise between the 'brainwashed' customer and the dealer, when any question of 'warranty work' arises.

Motor trade guarantees, are written like legal documents with numerous finely printed clauses inserted, to minimise the dealers' responsibility for doing any warranty work at all, and you cannot really blame him, the manufacturers are ultimately responsible for these problems in the first place.

The Morris Minor being a survivor from the old days when cars were really built to last, can actually be guaranteed in a logical way.

#### A. Mechanical

##### 1. New parts

All parts fitted by us (apart from Brake Shoes and Clutch assemblies) are guaranteed parts and labour for 12 months.

##### 2. General guarantees

(a) On Sale cars: These relate to the price



range of the car you purchase.

(b) On Owner's Cars: If we carry out a full mechanical or structural overhaul, the work will carry a general guarantee.

### 3. Specific guarantees

These apply to particular items we supply and fit if we are rebuilding your car, or in the case of sale cars, where the item fitted carries a longer warranty than the general guarantee we can offer on the car.

*N.B. No guarantees at all are offered on Electrical components unless we have replaced them with new or reconditioned parts.*

*All we can do is make sure they are working properly when the car goes out from us.*

### B. Guarantees on Sale cars and Customer's cars.

**1. Cars for restoration** No General Guarantee. Specific guarantees only.

**2. 'Sensible runners' and 'Original cars'** — General guarantees from six months on all parts, to twelve months parts and labour depending on the specification agreed between us.

*N.B. All guarantees depend on you playing your part and not over-straining or ill treating the car, and we reserve the right to refuse to pay if the damage has been caused by your negligence.*

### C. Chassis (Underside)

#### 1. Sale Cars

With the exception of cars for restoration, we guarantee the chassis (underside) for one year to three years depending on the price.

#### 2. Sale Cars and Owners Cars.

All panels supplied and fitted by us are guaranteed for three years. If the Stage Three injection system is carried out, we can extend the guarantee to five years.

### D. Bodywork.

Any new or reconditioned panel that we supply, fit and paint under our coach building standard will be guaranteed against bubbling and blistering paint for two years.

### E. Woodwork

All new members fitted by us are guaranteed for two years.

*N.B. This guarantee is valid, providing you play your part in keeping to the maintenance instructions we provide you with when the car goes out.*

## Other Services

### 1. Parts.

We provide a complete comprehensive service to meet all your requirements.

**2. Insurance valuations.** For an agreed fee we will value your car for replacement Insurance purposes. This can be very important if your car is written off in an accident or stolen and never recovered, because as there are no official 'Book Values' your Insurance Company will only pay the sum insured.

**3. Probate valuations** are also carried out. A charge is made.

**4. Accident damage.** Estimates and Advice is given, and pre-accident valuations carried out. A charge is made.

**5.** If you need a car while your own is being restored we can offer you a tatty but reliable Saloon or Traveller for about £15 a week or less if you are having a large job carried out by us.

**6. Finance.** We can arrange Finance on vehicle purchase and restoration.

We have produced this International Mail order catalogue of all Morris Minor parts and accessories available. Each part is illustrated and the number and cross-reference used makes it easy for unmechanically minded people to order anything they need quickly.

It can be used as a simple visual way of communicating with your garage, so that both of you know which parts are being used, and why, and also helps you to understand your car.

We hope you will enjoy it and use it! Incidentally, we charge normal prices for all our parts and will give discounts on larger orders.

**All items remanufactured by us under our licence firm B.L. Heritage Ltd. are made to the original quality and 'Critical part' standards.**

The catalogue, which covers all cars from Series II onwards (1953 - 1971) is ringbound in washable plastic covers and printed on strong, heavy paper. Ring binding means that any further information sheets on parts we are re-introducing can be slotted into the appropriate section. It contains over 300 pages including a short history of the Morris Minor.

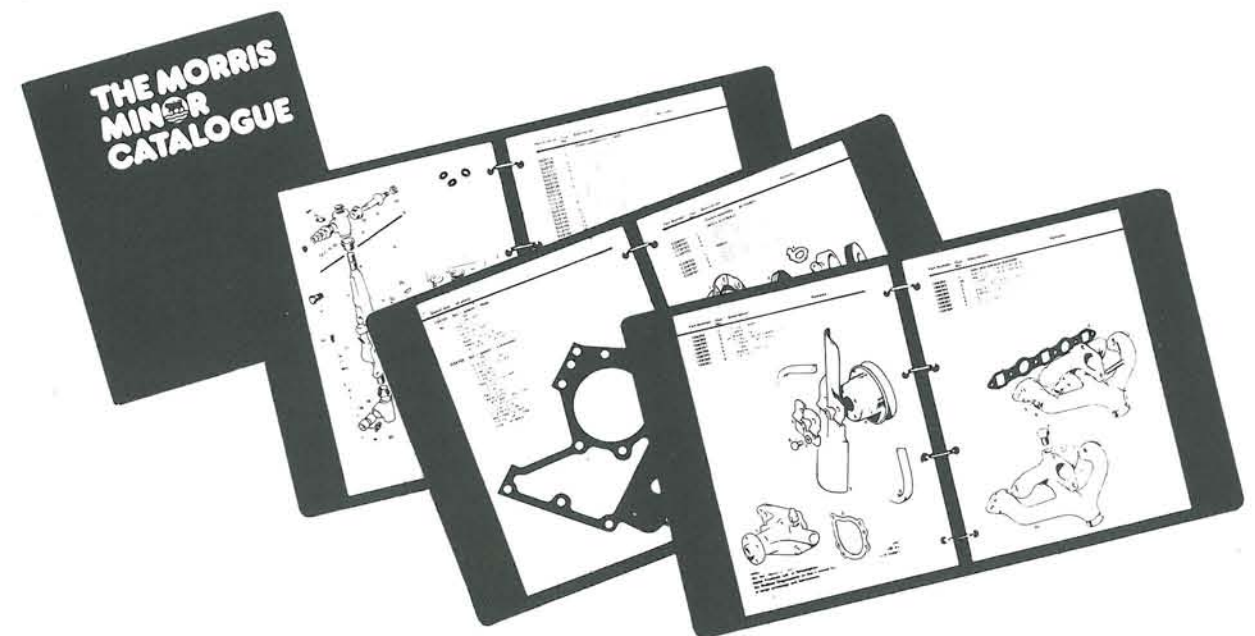
The catalogue costs £4.00. In the back you will find two vouchers for £2.00 each, which can be discounted against your first two orders for £25.00 or on one order for £50.00.

## How to Join the Survival Plan

Send 50p. and a self-addressed and stamped envelope. You will be sent a detailed Questionnaire which should be filled in and returned to us. We will then telephone or write to you confirming an appointment for an inspection within your area.

Our scale of charges for advice range from £4.00 for a verbal opinion on the long term structural condition and future of your car, to £30.00 for a long term detailed written estimate, including a year by year priority structural and mechanical programme.

If work is subsequently carried out, the estimating costs would be deducted from the price of the job, on a sliding scale.





This book explains in detail the unique long-term rebuilding and maintenance systems we have developed over the last seven years for the post-war Morris Minor which can be readily adapted for the total stock of durable cars in the British Isles.

The conservation plan for Minors proposed in this book is designed to be practically adaptable to all durable cars and shows how owners can save up to *half the motoring costs* of a modern planned-obsoluscent car, whilst also helping to create an additional *fifteen thousand skilled jobs* in the UK garage repair industry.

