JCNA Jaguar Air Conditioning Judges' Guide

For 1955-1971 factory approved or factory installed units

with

A Brief History of Jaguar's pioneering efforts in developing air conditioning for "import" Saloons and Sports Models

Draft to be presented at the 50th Annual AGM, March 2008

By George Camp, Chief Judge – Jaguar Society of South Carolina

Judging Guides are an important part of JCNA's program to improve the quality and standardization of JCNA Concours judging and the Judge's and member's knowledge of various Jaguar models. Guides are intended to augment official Jaguar publications by supplying well-researched information not readily available or conveniently presented elsewhere. Following JCNA approval, a judging guide becomes an official JCNA document. The Judging Guides, and other official Jaguar Cars publications, (see Rule Book Appendix C) may be used by Entrants and Judges alike to validate or challenge the authenticity or appropriateness of items, features, materials, patterns, colors, configurations or accessories found on the Jaguar automobiles covered. All Judging Guides are subject to editing and/or correction as additional verified information is acquired.

Scan of a sales catalog offered thru Coolair of Miami through Jaguar dealers

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L. to R. Stew Cleave, Bob Stevenson, George Camp, & Mike Cook at the Mahwah Archives, November 2005

UPDATES

Judges' Guides are all "a work in progress", and as new documented or verifiable information becomes available it will be included in this guide. This page lists what was added, changed, clarified, etc., and the area in the guide where this new information is found.

Note: An * in front of the *HEADING in the body of this Judges' Guide indicates the text below the heading was revised per the following:

DATE	*SECTION*	*DESCRIPTION*

Comments and Contact Information

Comments on this effort are always welcome. Please contact the author by email at scjag@juno.com Please remember that memory is fleeting and any information submitted for consideration should be in the form of an official document, period photo, or a verifiable unmolested original car.

Photos

Unless noted, all photos are by the author.

Preface

JCNA (and more accurately the Jaguar Concours Rules Committee) has begun to build on the set of Judges' Guides begun some years ago and the result has been the clarification of many of the finer points of our automobiles in regards to accuracy of technical detail. While the information is believed to be correct and accurate, JCNA, the parties quoted, and myself cannot be held responsible for errors. The final responsibility of presenting a correct Jaguar for judging lies solely with the entrant. JCNA via the author reserves the right to modify, change, and update this work as new documented information becomes available.

Purpose

The question of what is "correct air conditioning" on Jaguars has been a problem for JCNA Judges for many years. This guide will attempt to clarify this area for Jaguars built up to 1971. 1971 was selected as a cutoff for the simple reason that air conditioning became a standard item for the North American market at that time and is well documented with available illustrated publications from Jaguar. Although cars could be ordered past 1971 without air conditioning they are rare, and in any case, not the subject of this work.

This guide, when used in its creative intent, should supplement guides written for individual models. This guide also serves as a tool to the restorer / preserver to provide information enabling originality to be preserved.

The models covered in this guide are those where direct factory involvement could be proven. Variants of models are not specifically covered but where mechanical difference is little or none the inference that installation would be the same as the base model may be assumed.

One of the most critical tasks for any historian is to ensure that the evidence (sources) is pure and not corrupted by time or sometimes with our Jaguar's memory. The bibliography serves as evidence that only official documents were used (pictures excepted in some cases). While some of the documents were issued from Long Island, Texas, or California, it is shown that the Jaguar placed development responsibility on its U. S. headquarters and distributors; however Jaguar closely monitored and inspected progress.[24]

Originality

This history/guide should not be seen as an attempt to justify air conditioning that was added at the distribution center or dealer / service center as original equipment from the factory. There have been a lot of discussions (some heated - no pun intended) over what defines original. I have always taken the stance that "as it left the factory" is the basis for originality. The crimes that misguided partisans (mostly U.S. market distributors and dealers) perpetrated on some Jaguars are known, and over time, they have become to be thought of as original (AMCO bars on E-Types for example). However, unlike Webasto sunroofs and other disputed items, there is a clear factory connection with air conditioning. It is clear from the research that the Factory was very involved with the development and use of air conditioning (even though the effort was spearheaded by Hornburg - the largest single distributor in the world for Jaguar at the time). [3, 6, 7, 24, 8] How JCNA decides to address this is not the author's call.

In a recent "Sports Car Market" (Feb. 2008) Gary Anderson quips that period air conditioning was ineffective and mostly just made noise! But, he goes on to say that his MK2 with "modern air" is a pleasure to drive and the air conditioning increased the cars value. Having recently completed a 1000-mile journey in a completely stock 420 G with factory air conditioning, I can easily contest this. Period air in proper operating condition will never be as a "modern" system, but isn't part of the lure of driving antique cars the ability to experience them as they were? It is hoped this guide will provide value to all enthusiasts who want to maintain their Jaguars as they were.

History of Jaguar JaguarAir Conditioning

Very little seems to have been written about early Jaguar air conditioning. This is a direct reflection of three facts and a conjecture. First, most secondary works on Jaguar, such as those by Paul Skilleter and others, are concerned with European forms (specifically right hand drive) of the car, and rely heavily on direct access to factory documents, which are (for the period) scarce and vague. Second, air conditioning was a North American desire and effort. Factory installations of air conditioning systems were direct result of research and development work carried out in the Southeast and Western United States. Third, the literature and documents that cover these efforts (including factory publications) are rare and seldom available to the public. Indeed some of the documents that will be used in this guide are likely the only copy that in existence. Given the poor quality of paper used for these technical publications, it will not be many years before other copies (if any) will even be readable. Perhaps the last reason is that air conditioning is seen as only an optional accessory, so why bother. Body and engine aside, these early air conditioning systems were a very large option and affected almost every other system on the car, be it electrical, engine, cooling, or even the body itself. In these days or "retro vintage air" it seems reasonable to document the actual development and use of period air conditioning before memory causes "retro" air to become original!

Since Jaguar's early days (SS cars), air conditioning has been available. On page 63 of the SS 100 parts manual all of the parts for "air conditioning" are listed.[1] A quick read soon reveals that the air can be "conditioned" hotter, but not cooler. This begs Mr. Bernard Shaw's famous quote, "…two peoples divided by a common language". In fact,

Jaguar's approach to air conditioning (cooling type) can best understood in an early manual prepared for dealers in the States by Jaguar Cars via Overseas Motors Corporation, who developed an early air conditioning system for Jaguar.[2]

"For many years, the prevailing opinion of automotive engineers held that, from an engineering standpoint, the refrigerated air conditioning application of an automobile was impractical due to the variable natures under which the system must operate. It was seen that the demand for air conditioning included a rapid cool-down of an extremely hot car interior, this temperature sometimes soaring to as high as 165^{o}F. The same amount of refrigeration capacity would be adequate for a building interior space of perhaps 20 or more times the interior space of the average automobile.

It was felt that this type air conditioning would require special equipment, which was, at the time, not available, and to make it available would result in too much cost, after taking into account the anticipated low sales volume. Even though there were automobile air-conditioners before World War II, it was not until after the war that automobile air conditioning gained a good foothold. This foothold was in the southwestern part of the United States, where several small manufacturers began assembling equipment for use in designing automobile air conditioning, which equipment was being manufactured for residential air conditioning and commercial refrigeration.

The first attempts were crude, but the results were effective, and it began to look as if a new business was born. Quickly, the manufacturers of the components that make up a refrigeration apparatus began designing special equipment for application to the automobile air conditioning. The large automobile manufacturing companies began building and marketing automobile air conditioning; first as an integral assembly to the automobile at the time it was manufactured and then later in kit form, to be installed by dealers throughout the country.

The independent automobile air conditioning manufacturers in the southwest started by making installations in their manufacturing facilities and then later began manufacturing units in kit form, in large quantities, for installation by specialized air conditioning centers throughout the southern part of the United States, and also for installation on automobiles by dealers who were interested.

In the beginning stages, automobile mechanics at the dealerships were apprehensive of installing air conditioning, were apprehensive of servicing an automobile equipped with air conditioning, and dealers scorned this new business. Public demand forced dealers to raise their eyebrows and take another look. In hot climates, customers wanted air conditioning!

Now there is hardly a dealer in the southern part of the United States that does not have an adequately equipped and efficient air conditioning department, and in the metropolitan areas of the north and east, the business is growing by leaps and bounds.

The Jaguar dealer is presently in the same situation that the domestic car dealer was a few years ago. He now sees that he, too, must prepare for this business if he and his

product are going to remain competitive with others, and if he is going to be able to service his customers' wants." [3]

Having stated Jaguar's case with their own words all that remained was to develop systems for specific models.

The connection to many of the documents used in this guide to Overseas Motors Corporation, Hornburg, and Jaguar are made concrete by the following passage from John Dougdale's *Jaguar in America.* [24]

On page 47, under a chapter titled *"Jaguar the first imported car with air conditioning, 1955"*, Dougdale states in part…. *"It was our Texan outfit, Overseas Motors Corporation, that started us off on another specification change - air conditioning."*

Dougdale writes that air conditioning was necessary and there were all sorts of hang on units on the market. OMC selected a promising unit and had it installed on a MKVII M. "Our LA office then developed a kit through the suppliers and these were sold to dealers. He states that a bulletin was issued at that time (no copy found) that states:

"July 2, 1956

All Jaguar dealers may not be aware that air conditioning units are available in the USA for fitting to Jaguar Mark VIIM sedans…. The unit is Artic-Kar…developed in Texas by the first automotive air-conditioning engineer of the Southwest…the unit …includes twin cold ducts with either rotating plastic units, or with metal louvers…dash mounted switch…. coiling case fitted neatly into the luggage compartment…."

This passage in his work is both welcome and troublesome. It is welcome as it ties the connections together and makes the development of air conditioning traceable and clear. It is troublesome as it is dated 1956 and further in his book he states 1955 (p.122). No documents have been found to bridge the gap from 1955/6 to 1959 when the Hornburg documents first address the subject. The passage via the quoted bulletin does however, describe the system, which would be the standard method in saloons until the XJ6, and adds valuable clarity to the different arrangements found on the cold air vents.

Author's Note. It is becoming more common to see "modern" air conditioning units fitted to older cars. The usual reason given is that modern units "cool better" or are more efficient". Some small measure of this is possible, but for the vast majority of this reasoning the laws of physics would have to change. As an example, an old York compressor may be larger and heaver (slightly) than a modern compressor, but both in good working order will provide the same pressures and performance, which is limited by the physics of the exercise. The point is that the preservation of old units is well worth the effort.

Development And Installation Of Air Conditioning By Model

In a letter (see page 60) issued from Jaguar Cars Inc. dated November 6, 1962, signed by K. Hickman (VP Service and Parts), all distributors and dealers are given specific technical instructions as to general procedures and specific tuning for Jaguars equipped

with air conditioning units. Further, a 9-lb. radiator cap C.18485 (standard to MK X) is to be fitted. A price list and warranty policy is provided in a letter (see page 61) from Charles H. Hornburg Jr. Inc. An attachment to the Jaguar letter further illustrates the commitment to air conditioning. In the letter it states the price for a new MK IX equipped with air conditioning is priced to the dealer at $535 with a suggested retail of $650. The 3.8 MK 2 is $525 and $595 respectively. Warranty is sixth months and the letter suggests that descriptive literature is provided (this has not been found to date). There is also a recommended tools list, which is discussed here as many of the tools are cutting tools which when used would produce less than factory openings. This should be taken into consideration when observing a car fitted by a dealer.

In the letter's attachments from Jaguar, the procedures for warranty claims are discussed and the link to Overseas Motors is completed as all defective materials are to be shipped to Texas (not Jaguar spares in Long Island). Further there is a flat rate labor schedule and recommended parts list and pricing for parts.

The first evidence of "factory installed" air conditioning comes to us in two forms: First, is the inclusion in the Spare Parts Catalog for the 420 sedan (referred to in some cases as the 4.2 sedan) issued with the introduction of the new model. Second, is the issue of Jaguar Technical Bulletin P.42, dated September 1965, which suggests that the 420 was not in fact the first Jaguar to receive "factory" air conditioning.

JAGUAR SERVICE BULLETIN

Number P.42.
Section Electrical & Instruments.

Sheet 1 (of 1)
Date September, 1965.

JAGUAR AIR CONDITIONING EQUIPMENT

(All Models)

To overcome the danger of the air conditioning equipment "icing up" before delivery to the customer due to the "ON-OFF" toggle switch being inadvertently left in the "ON" position all cars so equipped will, in future, leave the works with the system inoperative.

To bring the system into operation it will be necessary to complete the electrical circuit by connecting the compressor clutch cable to the feed cable connector which is clipped to the radiator header tank front mounting bracket.

The Distributor and Dealer from whom the car is obtained is instructed to carry out this service before releasing the car.

The bulletin is an "ALL MODELS" issue simply stating that the air conditioning clutch will be left disconnected leaving the works. Paul Skilleter states in *Jaguar Saloon Cars* p.320 [12] that the 4.2 MK10 could be purchased from the works with Delaney Galley air conditioning and (in the context of his passage) this was in October of 1964.

We now have parallel development of "Jaguar air conditioning" systems that is confusing some 40 years removed, but was confusing in it's day as evidenced by the Hornburg bulletin #176 from 1965 which states in part " All dealers are aware that air conditioning has been available from Delanair in kit form for some time…." It goes on to say, "However, as far as the 4.2 sedan air conditioning is concerned, this being available as

factory installed, shown as such on the commission slip". Further reading shows the critical question of warranty routing is also parallel with "factory" claims going through New York and others to Delanair.

As if there was anticipation of researchers' questions decades later, a full and accurate description of components and identification procedures for the different units was given. Although this was to ensure routing of claims in the period, the descriptions work well for both functions:

"The factory-fitted air conditioning can best be recognized by the control panel fitted on the parcel shelf below the center of the dash board. The control panel is considerably larger than that fitted when a Delanair air conditioner has been installed. The Delanair control panel contains two blower speed controls and one clutch toggle switch and is fitted to the left of the steering column beneath the dash board, whereas the factory panel contains four controls, two blower speed switches, one temperature selector switch and a clutch toggle switch".

Note: The control panel for the Delanair is further identified by its finish, which is lithographed or tintyped. The factory panel is black crinkle finish. Further, the temperature control switch on the Delanair unit was located on the rear parcel tray shelf due to the distance from the rear unit's expansion valve to the front of the car. To select a different temperature the knob must be turned at the rear.

Method

The following method will be used for information. There will be a description of the units fitted to each model. In many cases this will be accompanied by scans of developmental drawings and installation instructions. Due to the bulk of the material all documentation will not be included, but enough will be to illustrate its existence and the general layout of the air conditioning system. Following that, a description of components will be provided. As the parts were shared on all models (E-type excepted) a common section provides the detail necessary.

MK VII, VIII, & IX

The big saloons were the first treated to air conditioning. Due to their size, there was more than enough room to accommodate the necessary components. The MK IX saw more air conditioning units than previous models, as the 3.8 litre engine was able to handle the power loss easier in traffic. Visible changes are the addition of a condenser in front of the radiator (requires the removal of the brace rod behind the grill – the condenser support now serves the function), an under-bumper secondary condenser, a dual control switch panel mounted under the fascia (dash), and air returns and cooling vents on the rear parcel shelf. These vents (cool air) were at first small plastic heads with adjustable vents that stood up 4-6 inches from the rear shelf. This was later one of two possibilities. The second was a set of ducts that followed the rear roofline up from the shelf and blew air over the rear seat to the front (see illustration on the Title Page). Note: Rolls Royce and Bentley used this system well into the 1960s, as did Jaguar. These later ducts were often color coordinated, and if properly installed, covered with the same color fabric as the headliner. On the rear shelf, the temperature control would be found in a central location where a temperature-sensing probe would pass through the rear shelf into the evaporator coils. Later cars (MK X) would see a very long sensor that provided this function to the driver. In the boot, a rather large box (evaporator) painted semi-gloss black was nested against the rear bulkhead. There would be 2 ducts blowing cool air on either side of the box made of formed round duct hose, and a central duct, which was rectangular in shape and made of sewn material, which provided return air. Under the evaporator box the in and out pressure lines could be seen passing through the rear boot floor along with the condensation drain hoses on either side. The entire unit was exposed to the boot with no finishing panels. Often a Jaguar decal or manufacturers' badge would be prominent on the facing surface (see photo on page 50). The engine bay would suffer the most as the brackets that held the compressor were prominent although domed chrome nuts were used along with a chrome top plate in an attempt to stay in cosmetic agreement with the cam covers and engine finish (see engine brackets drawings for S-type on page 34, as they were unchanged). The compressor sat on the exhaust side, forward and above the generator (and later, the power steering pump). Holes were let in the inner fender to pass the lines to the condensers and to the rear. All other lines ran under the car and were unseen. The recommended location for the receiver dryer was in the left front wheel-well, but there are period photos of the dryer placed on the inner fender (engine bay side). The standard generator was retained and there were no additional fans, although a fan spacer was used to move the fan even closer to the radiator. A heavier radiator cap was used and careful tuning recommended. The heater box forward surface received 2 fan resistors. The resistors are described later, but were mounted horizontally side-by-side. The wiring harness followed the main harness through the firewall and traveled through the inside of the car under the carpet.

MK 10 (3.8 and 4.2) and 420 G

Interestingly in the "Jaguar World" (December 2007 issue), and as I was finishing this work, there was a difference of opinion as to whether a Jaguar MK 10 pictured was a 1961 photo or 1967. Prominent in the engine shot is a York model A209 compressor. This is a 1961 photo and the car is the prototype 3.8 litre MK 10. In fact Mr. Skilleter in his excellent work has photos of this car.[12] The compressor is however described as only "apparent" but possibly a non-standard power steering pump. It is in fact air conditioning and the existence of it on the prototype MK 10 says all that is really necessary. The MK 10 could be purchased from the factory with air conditioning whether in 3.8 or 4.2 litre forms. The manual listed in the bibliography[3] lists the 4.2 cars from 1D 50001 and 1D 75001, which is all of them from 1965 forward. The Hornburg papers move the date to 1961.

The MK 10 / 420 G is a much more finished application. There are still dual condensers with one under the front bumper and the York compressor is still utilized. However, with the exception of the 3.8 litre cars, new brackets were devised, which cleaned up the engine bay. The fan resistors were retained, but now hidden in the massive inner fenders. There was still no additional cooling fan and the evaporator continued to reside in the boot. However, the evaporator was now enclosed by a pressed covering that gave it a very finished appearance (see photo on page 50). Further, the evaporator casing was designed to fit flush against the bottom of the rear shelf, eliminating the need for ducts and vastly improving efficiency. The air returns (semi-gloss black) and cooling vents were still on the rear shelf, but designed to force air along the roofline and down the front glass which gave the feeling of face vent air. The cool air vent was gloss black metal with chrome vents, but later in the 4.2, the vent retained the exact appearance, but was now hard plastic. The controls (see photo on page 53) were now centrally mounted and all within the drivers reach. The drier found a home in the engine bay forward of the front wheel well and the wiring harness, while still not included in the master was designed to be hidden from sight. Even though all controls were within the driver's reach, a clutch switch was retained although the clutch cycled on and off depending on the temperature selected.

The bulletin on the next page fixes the MK 10 Factory air conditioning as prior to the 420 air conditioning.

JAGUAR SERVICE BULLETIN

Number D.17
Section Cooling System

Sheet 1 (of 1)
Date April, 1966

INTRODUCTION OF MODIFIED RADIATOR

Model affected	Commencing chassis number	
	R.H. Drive	L.H. Drive
4.2 Mark 10	1D.51950	1D.76088

With the introduction of Air Conditioning equipment to 4.2 Mark 10 models a modified radiator coupled with a larger diameter fan assembly was fitted.

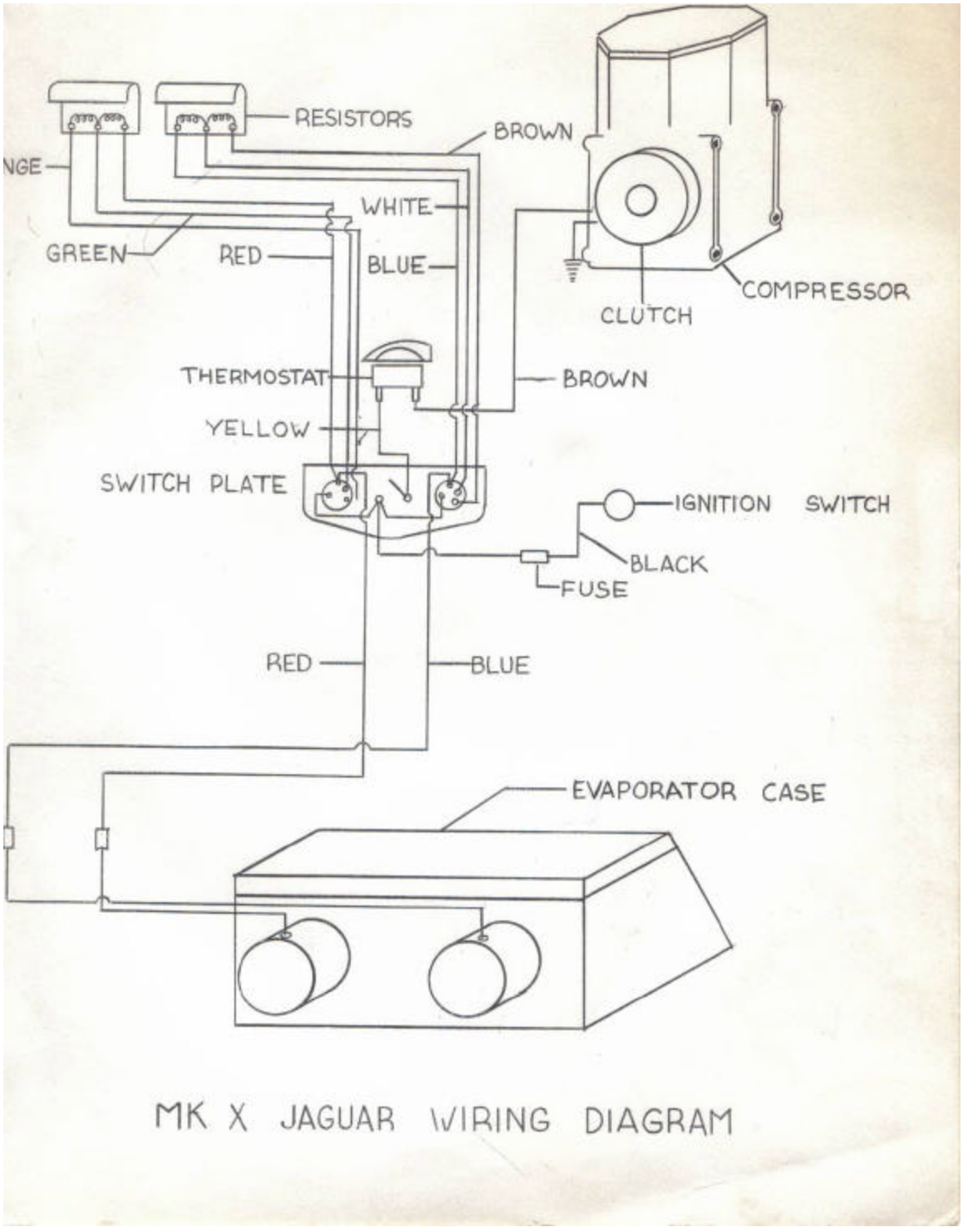
This has now been scheduled as a standard fitting for all 4.2 Mark 10 cars from the above chassis numbers.

The header tank is now a separate item mounted on brackets on the left hand wing valance. Rubber grommets insulate the tank from the mountings.

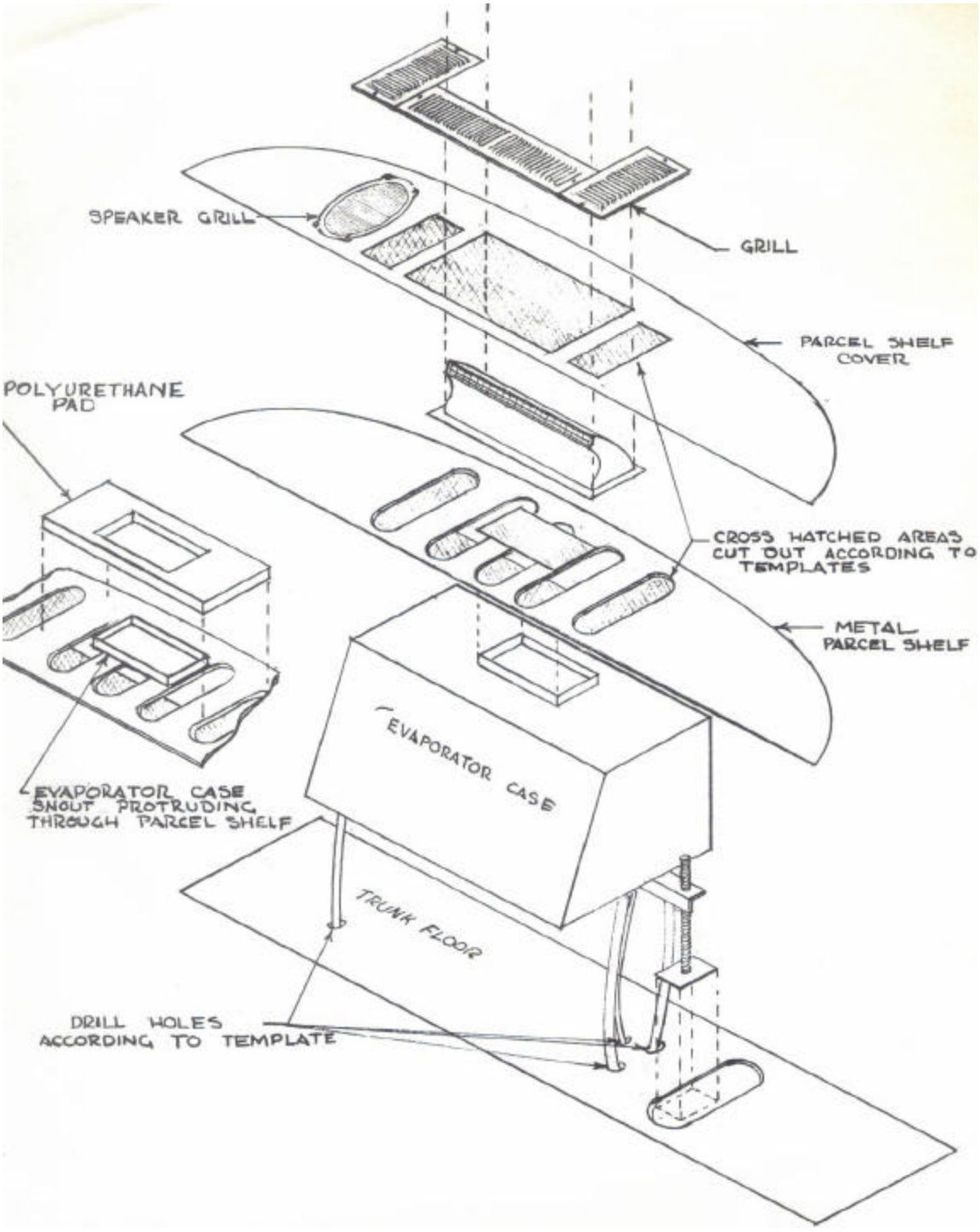
A 7 lb. pressure cap is fitted as standard equipment, a 13 lb. cap being fitted when an air conditioning unit is installed.

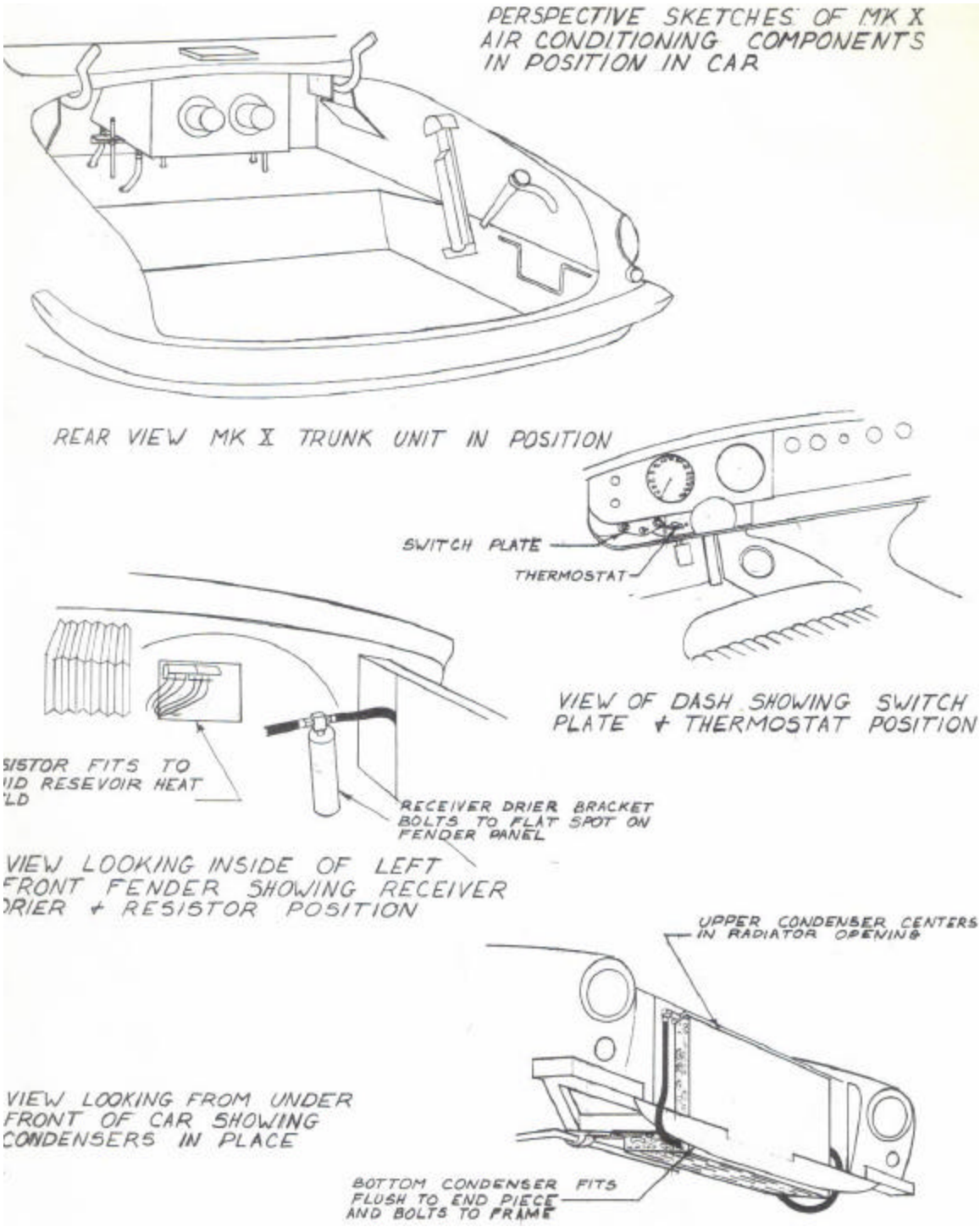
The removal and refitting details remain basically the same.

Spares Bulletin N.14 refers.



MK X JAGUAR WIRING DIAGRAM


SPEAKER GRILL
GRILL
PARCEL SHELF COVER
POLYURETHANE PAD
CROSS HATCHED AREAS CUT OUT ACCORDING TO TEMPLATES
METAL PARCEL SHELF
EVAPORATOR CASE
EVAPORATOR CASE SNOUT PROTRUDING THROUGH PARCEL SHELF
TRUNK FLOOR
DRILL HOLES ACCORDING TO TEMPLATE



The drawings above and on the previous 2 pages clearly represent a 3.8 litre version – note the stylized brake booster to the left of the resistor above, and the "fixed" cool air vent on page 13. Also note that the controls are carried over from previous models and not centrally located as in later versions.

420

Ask most Jaguar pundits (myself included prior to this research) and they will tell you the 420 was the first Jaguar with "factory installed" air conditioning. While the 420 parts manual[5] has a complete air conditioning section, this is simply not true. The 420 system followed the MK 10 / 420 G setup, which had been in use since the MK VII. However, the 420 did modernize the controls by using the 4.2 E-type switch set up (see photo below), as it had been determined that independent control over each fan motor was not necessary and the clutch cycle switch could be included with the on/off switch. Further, the 420 utilized ceramic resistors as the E-type, eliminating the open resistors with covers. The 420 discarded the under bumper condenser for a single unit in front of the radiator. The evaporator unit (still boot mounted) was covered by a molded fiberglass cover (flat black) making a much cleaner appearance in the boot. The receiver drier was also housed behind this cover. As in the MK 10, the evaporator fit securely against the underneath of the parcel shelf and a fitted gasket provided a positive seal. The rear vent system was exactly that of the MK 10, only scaled down to fit (see photo on page 57). The air outlet was hard plastic instead of metal but still gloss black with chrome vents.

The 420 Evaporator Covering

The 420 air conditioning Controls

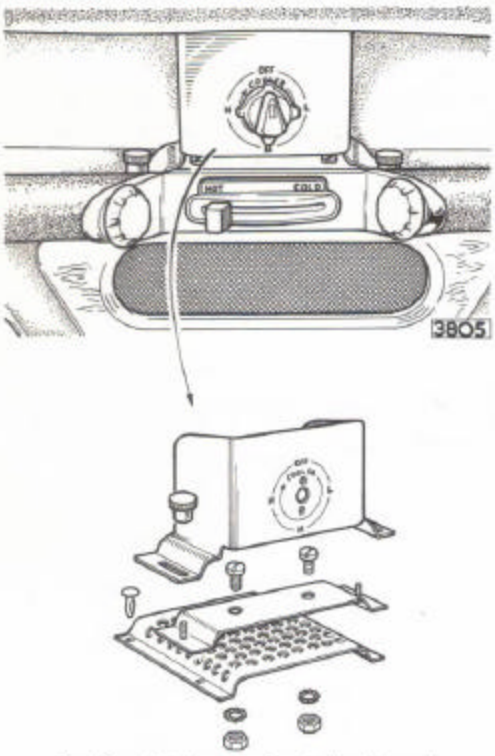


Fig. 21. Attachment of control unit panel.

Fit the Receiver Drier Unit

Remove the two cross headed drive screws, located adjacent to the left-hand motor in the evaporator unit, and fit the receiver drier unit and mounting bracket.

Remove the rubber caps from the unit and connect the pipe line from the evaporator to the rear connection and the pipe line from the condenser to the front union.

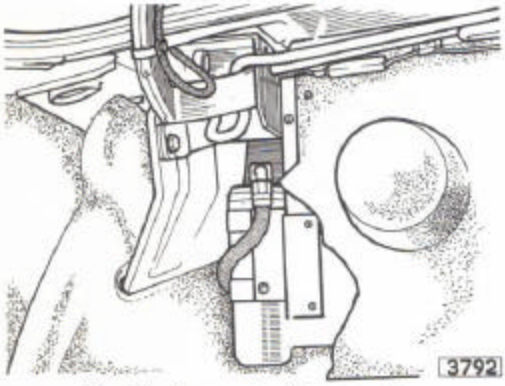


Fig. 22. The receiver/drier mounting.

Remove the drive screws and detach the unit mounting bracket. This is necessary to enable the sight glass to be observed when charging the system.

Charging the System

Reconnect the battery and check the coolant level in the radiator.

The air-conditioning system is now ready for charging as detailed on pages C1-4.

Fit the Evaporator Cover

Refit the luggage compartment floor covering. Cut the covering as necessary to fit snugly around the evaporator hoses.

Refit the spare wheel.

Fit the evaporator cover after refitting the receiver/drier unit.

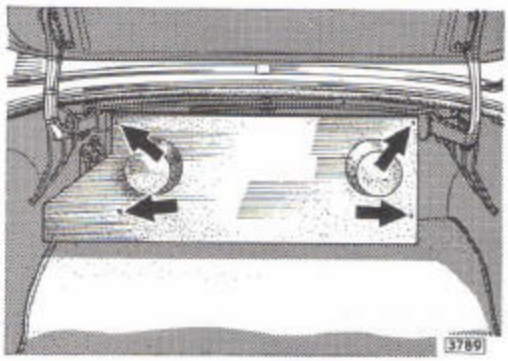


Fig. 23. The evaporator cover mounting points.

Fit the Bonnet

Fit the bonnet and left-hand seat as detailed in the 420 Service Manual - Section N.

Fit the Evaporator Cover

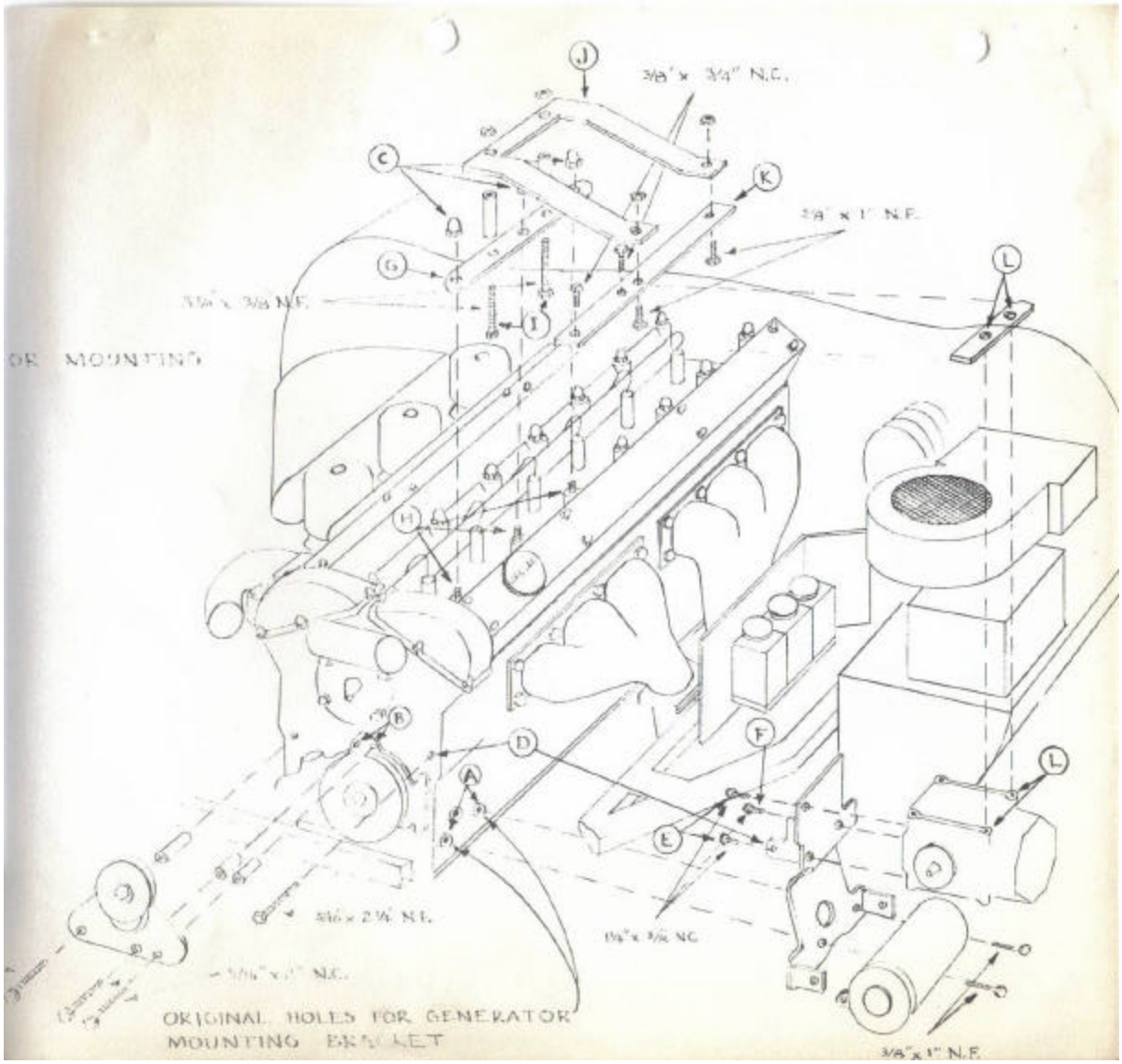
Place the evaporator cover over the fan housings, drill through the four holes in the top and bottom corners with a No. 29 drill and secure the cover with the four drive screws.

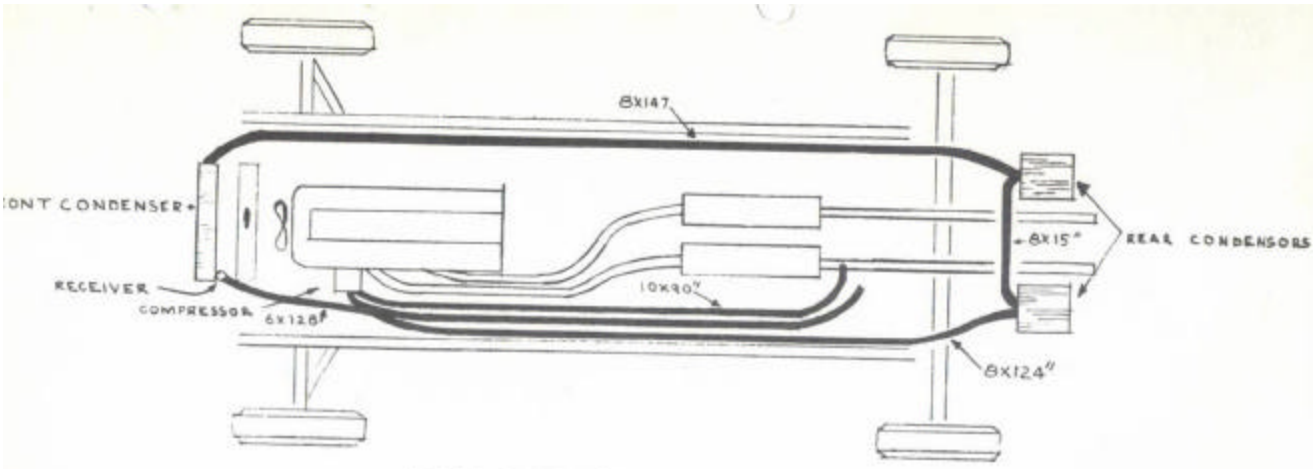
The 420 air conditioning Manual showing the controls

E-type 3.8 (Series 1)

While I had heard of early E-type air conditioning installations I believed they were things of legend. I had also heard that the installations were cumbersome or just weird. The following material suggests that grotesque would be more appropriate in description, but at least one car received this treatment. In fact in 2006 an E-type was up for sale on E-bay that had this application. Comments from the forums on the appearance were along the lines of the authors, but no one recognized this was in fact a factory-backed modification. These systems are extremely rare, but the most evident modification is the addition of two bulges in the rear boot floor that house the twin condensers. They protrude on either side of the rear resonators and are quite pronounced. The center console has a large cover that in fact is the air outlet ducting and the rear bulkhead shelf houses the evaporator. Components are the same as sedans.

The following scanned drawings should cover all questions:


3/8" x 3/4" N.C.
3/8" x 1" N.F.
OR MOUNTING
ORIGINAL HOLES FOR GENERATOR MOUNTING BRACKET
3/8" x 1" N.F.



HOSE ROUTING

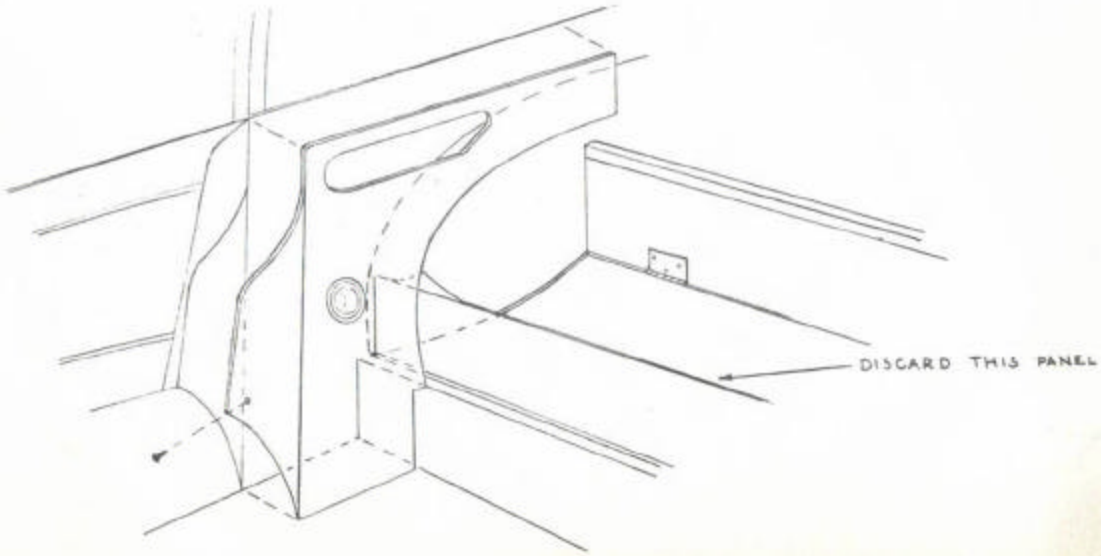


FIG. 1

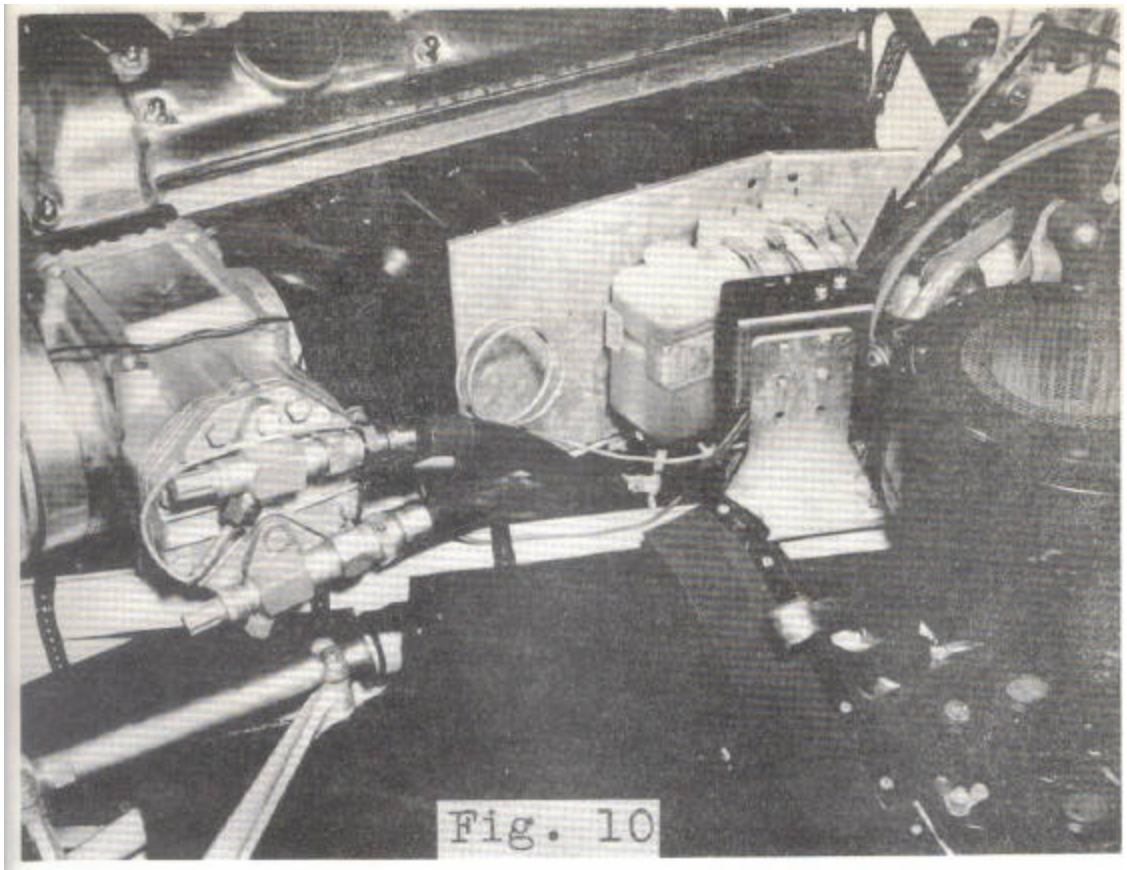


Fig. 10

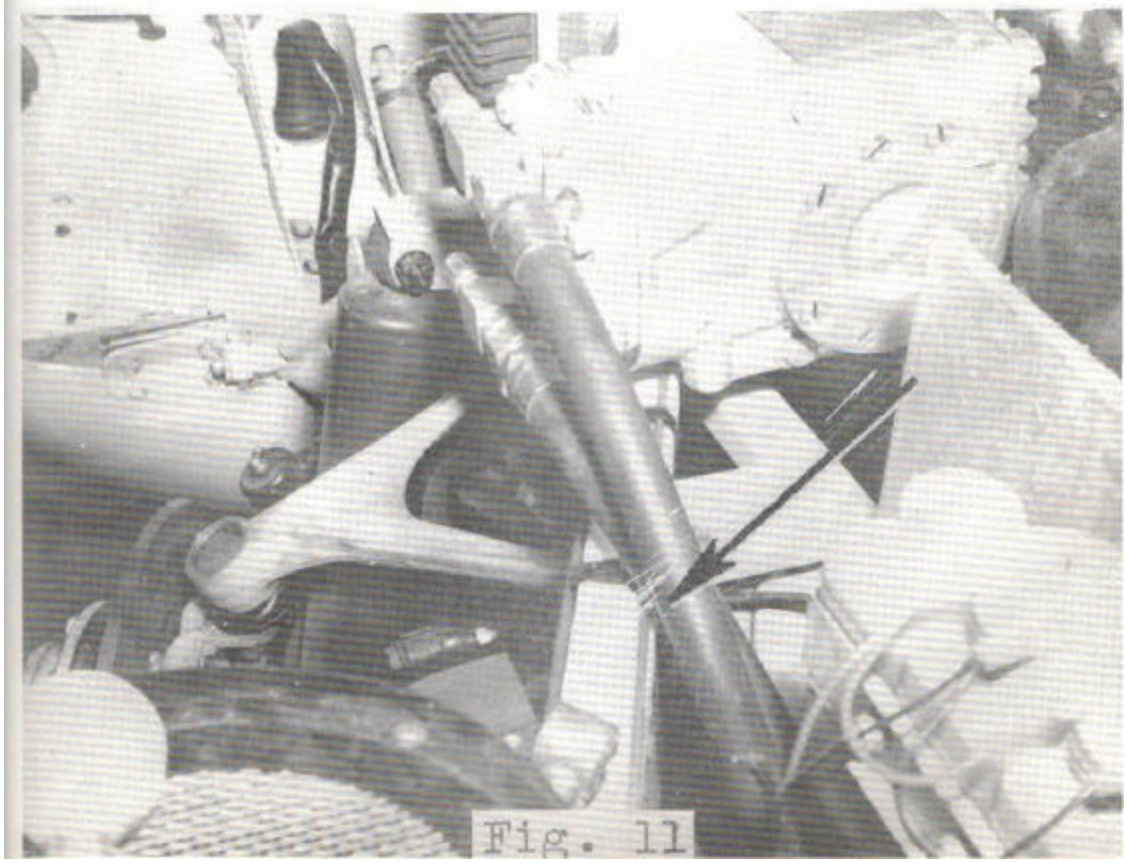


Fig. 11

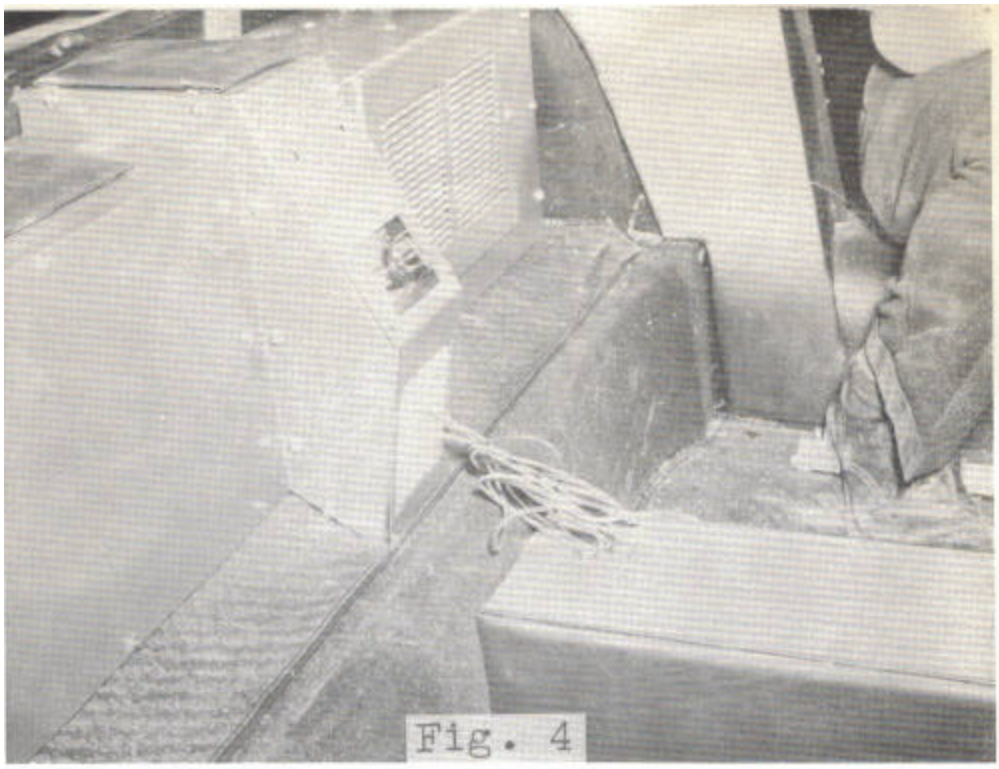


Fig. 4

Fig. 5

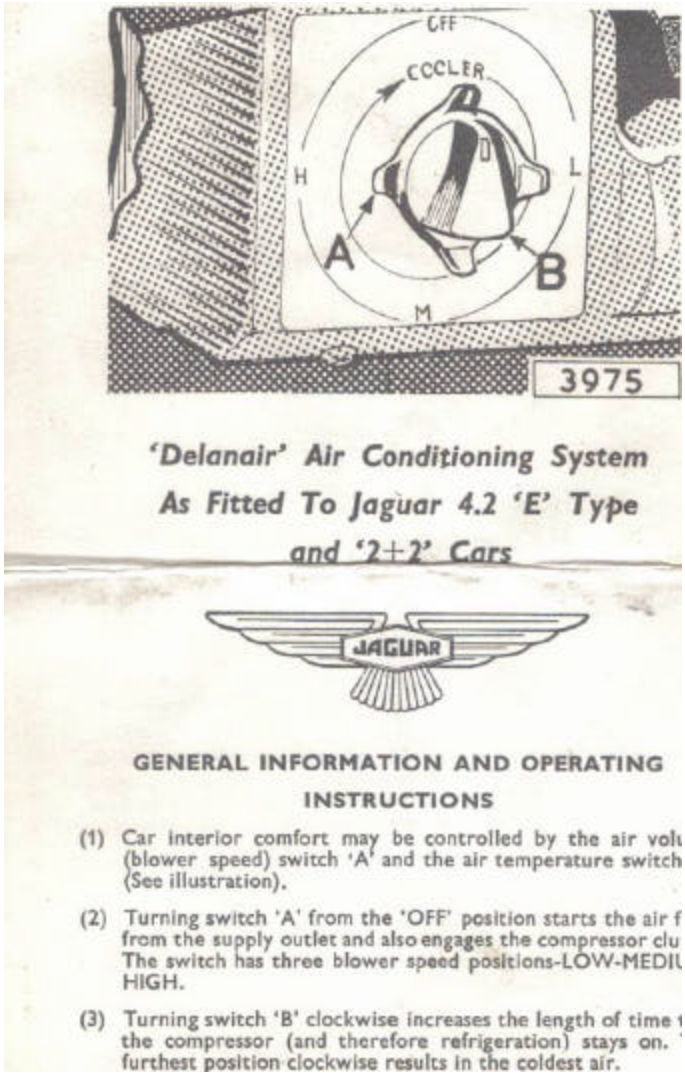
The proof – the center console from an early E-type

E-type 4.2 (Series 1) and Model Year 1968 E-type

Jaguar announced that the 1968 Jaguar E-type would not be made available with air conditioning. In fact it was and is covered well in the parts manual.[15] This air conditioning system is the exact factory application of the kit that had been available for the 4.2 for some time. The revised radiator and header tank made the task easier, and the twin cooling fans certainly did not hurt. The Tecumseh HG500 compressor was mounted vertically, and would remain that way until the 1970 E-type production. The Lucas Alternator (see note on page 24) was reversed and mounted where the header tank had been in the prior model. The condenser was mounted in front of the radiator behind a relocated stone guard. The hoses passed along the frame rails behind an additional exhaust shield until they entered the firewall just inside the transmission tunnel. The wiring harness, now very visible, utilized the Jaguar strapping to hold it on the rail and the fan resistor (green ceramic) was mounted on the fluid reservoir heat shield, as was the receiver dryer (gloss black with a brass service port). The evaporator unit was purpose-built, and fit neatly on the lower edge of the fascia. A revised radio console mounted below the evaporator. A white sticker was on all unit components (see photo on page 23) and carried the serial number for the installation. The stickers were on the top of the compressor, on top of the condenser closing panel (top), and on the top side of the evaporator housing. The control panel for the air conditioning did not incorporate the ignition key, as the 1968 E-type had a separate tab on the steering column for this purpose.

Typical E-type air conditioning serial number tag

An E-type air conditioning Alternator Fan - the “A.C.” designates this as a reverse unit for use only when air conditioning is fitted



This card was included in all E-type air conditioning kits and would have been included in the handbook literature. When equipped from the factory it was included in the "pouch" up till the end of S2 production – it is 2-sided

Authors Note: Motorola alternators on E-types have been a problem for Judges for years. Original owners claimed that their car came with a 60 Amp Motorola alternator. While their memory/truthfulness were sometimes questioned the situation arose enough that there was clearly something amiss. Now, with the Hornburg letters, we know that E-types with air conditioning installed at the factory **did not** have Motorola Alternators. Jaguar U.S. accomplished the modification under warranty, but only until a 60-amp Lucas unit was fitted. This was to be accomplished only under complaint, but a savvy dealer would have been wise to change stock prior to sale for customer relations and warranty payment. This only applied to MY 1968 and "some" Series 2 E-type models, as a Lucas 60-amp unit was fitted later for the Series 2 E-type.

The following bulletins on pages 25 and 26 address the alternator dilemma:

ARLES H. HORNBURG JR. INC.
SUNSET BOULEVARD • LOS ANGELES 69, CALIFORNIA
JAGUAR DISTRIBUTOR
CABLE: HORNCAR
BRADSHAW 2-7737

February 18, 1969

TO: All Dealers

ATTENTION: Service Manager

SUBJECT: FACTORY AIR-CONDITIONED 1968 AND 1969 XK-E CARS

Under certain extreme conditions, it is possible for trouble to be experienced with discharged batteries on 1968 and some 1969 Factory air-conditioned XK-E cars.

This condition only arises normally where it is necessary for the car to be operated at night with all lights and the air conditioning operating simultaneously. Under these conditions, the alternator may not be able to balance the battery draw, particularly in low-speed traffic conditions.

Obviously, a thorough check has to be made in these circumstances to establish that the alternator and regulator are operating properly, and that the battery itself is in good condition, using the test procedures outlined in the 4.2 Addendum to the XK-E Service Manual.

In genuine cases of constant battery discharging due to abnormal operating conditions, and not to some defect or maladjustment, it will be in order to fit a 60 amp. alternator kit, Part #HAC17, on a Warranty basis.

However, in every case, submission of a Product Report is necessary for record purposes. The kit should be ordered from Jaguar Service, Inc., the dealer nett price being $89.25. The labor allowance for fitting the kit will be 1½ hours.

Please note that displaced alternators must be returned freight pre-paid in all cases to Jaguar Service, Inc., 1717 North Orange Drive, Hollywood 90028, with the usual label giving car Serial and Claim numbers.

KH:lf

Service Bulletin #28

JAGUAR SERVICE, INC.

1717 NORTH ORANGE DRIVE • HOLLYWOOD 28, CALIFORNIA — CRESTVIEW 4-6381

JAGUAR PARTS DISTRIBUTOR—SERVICE HEADQUARTERS — CABLE: HORNCAR

September 3, 1969

TO: All Dealers

ATTENTION: Service Manager (copy for Parts Manager)

SUBJECT: LUCAS 60 AMP HEAVY DUTY ALTERNATOR

We have been advised by the factory that a Lucas 60 amp alternator has been introduced on all XKE cars now being produced, commencing at the following chassis numbers:-

XKE Roadster	..... 1R9457
XKE Coupe	..... 1R26320
XKE 2+2	..... 1R42013

Please note that it will not, therefore, be necessary to fit the Motorola 60 amp alternator to any air conditioned cars after the above chassis numbers.

Service Bulletin # 40

KH:mm

SUBSIDIARY OF CHARLES H. HORNBURG JR. INC. • JAGUAR DISTRIBUTOR

JAGUAR SERVICE, INC.

717 NORTH ORANGE DRIVE • HOLLYWOOD 28, CALIFORNIA — CRESTVIEW 4-6381

JAGUAR PARTS DISTRIBUTOR—SERVICE HEADQUARTERS — CABLE: HORNCAR

August 30, 1966

TO ALL DEALERS

ATTN: SERVICE MANAGER

DELANAIR AIR CONDITIONING FOR 4.2 XKE MODELS

We believe that the following suggestions will help you in installing the above units, and these are based upon our own experience:

(1) When fitting the new crankshaft pulley, modify the lock plate for the crankshaft damper securing nut by cutting the locking tabs back to the outboard edge of the securing bolt hole. Install in reverse position to original fitting so that the tab securing holes line up with the pulley through the bolt holes.

(2) It may be found that the fan mount brace holes at the end of the mount do not line up and this will necessitate filing the hole. Also, check the alignment of the alternator bracket carefully after assembling since we have found some of these do not allow the pulleys to line up and have to be bent. This, also, applies to the idler pulley which is provided.

(3) It may be necessary to file the compressor brackets' elongated holes and caution must be used in levering the compressor to adjust the belt, to avoid bending the sub-frame.

(4) The rear pillow block bearing lube fitting must be changed for a 45° fitting as otherwise, it is masked by the steering rack lube.

(5) Make certain that the new radiator hose provided is long enough. We have had cases where the length was insufficient to allow for normal engine movement without the risk of the hose pulling off the fitting.

SUBSIDIARY OF CHARLES H. HORNBURG JR. INC. • JAGUAR DISTRIBUTOR

This bulletin was 3-pages in total and contained numerous suggestions learned through experience installing numerous “kits”.

HARLES H. HORNBURG JR. INC.

SUNSET BOULEVARD • LOS ANGELES 69, CALIFORNIA
JAGUAR DISTRIBUTOR

JAGUAR

CABLE: HORNCAR
BRADSHAW 2-7737

February 5, 1968

To: ALL DEALERS

Attention: SERVICE DEPARTMENT

Copy to: SALES MANAGER

AIR CONDITIONING 1968 XKE CARS

Jaguar Cars have informed us that there will not be an add-on air conditioning kit supplied for fitting to 1968 XKE cars.

This is due to the fact that the labor involved in fitting kits after the car has been produced is very considerable and the fitting would not, therefore, be in any way practical. They have made it quite clear that there will be no question of kits being supplied, regardless of the circumstances.

At the present time, therefore, there is no air conditioning kit of any kind available for fitting to 1968 XKE cars.

KH: arf

BULLETIN #284

THE FINEST CAR OF ITS CLASS IN THE WORLD

The strength of the US market changed this pronouncement rather quickly.

JAGUAR **SERVICE BULLETIN**

Number D.20
Section Cooling System

Sheet 1 of 1
Date July, 1967

4.2 'E' TYPE F.H.C./OPEN SPORTS/2 + 2 CARS AIR CONDITIONING EQUIPMENT

4.2 'E' Type cars, when equipped with the JAGUAR Air Condition Equipment, have a sealed coolant system; the expansion tank with a 13lb. pressure cap, being mounted on the bulkhead.

The header tank filler cap is not fitted with a relief valve. CARE MUST BE TAKEN THAT EXPANSION TANK AND HEADER TANK FILLER CAPS A NOT REVERSED.

The procedure for filling and subsequent 'topping up' the cool system differs from the normal method as follows:-

Filling

Remove the header tank filler cap and fill the system to the b of the filler neck. Replace the filler cap and tighten down fully

Remove the expansion tank filler cap, top up the coolant level the halfway mark. Replace the filler cap and tighten down fully.

Topping Up

IMPORTANT: Topping up must be done at the expansion tank with the engine COLD and the MAXIMUM level must not exceed the halfway mark in the expansion tank.

Note that the factory is involved with this bulletin.

Series 2 E-Type

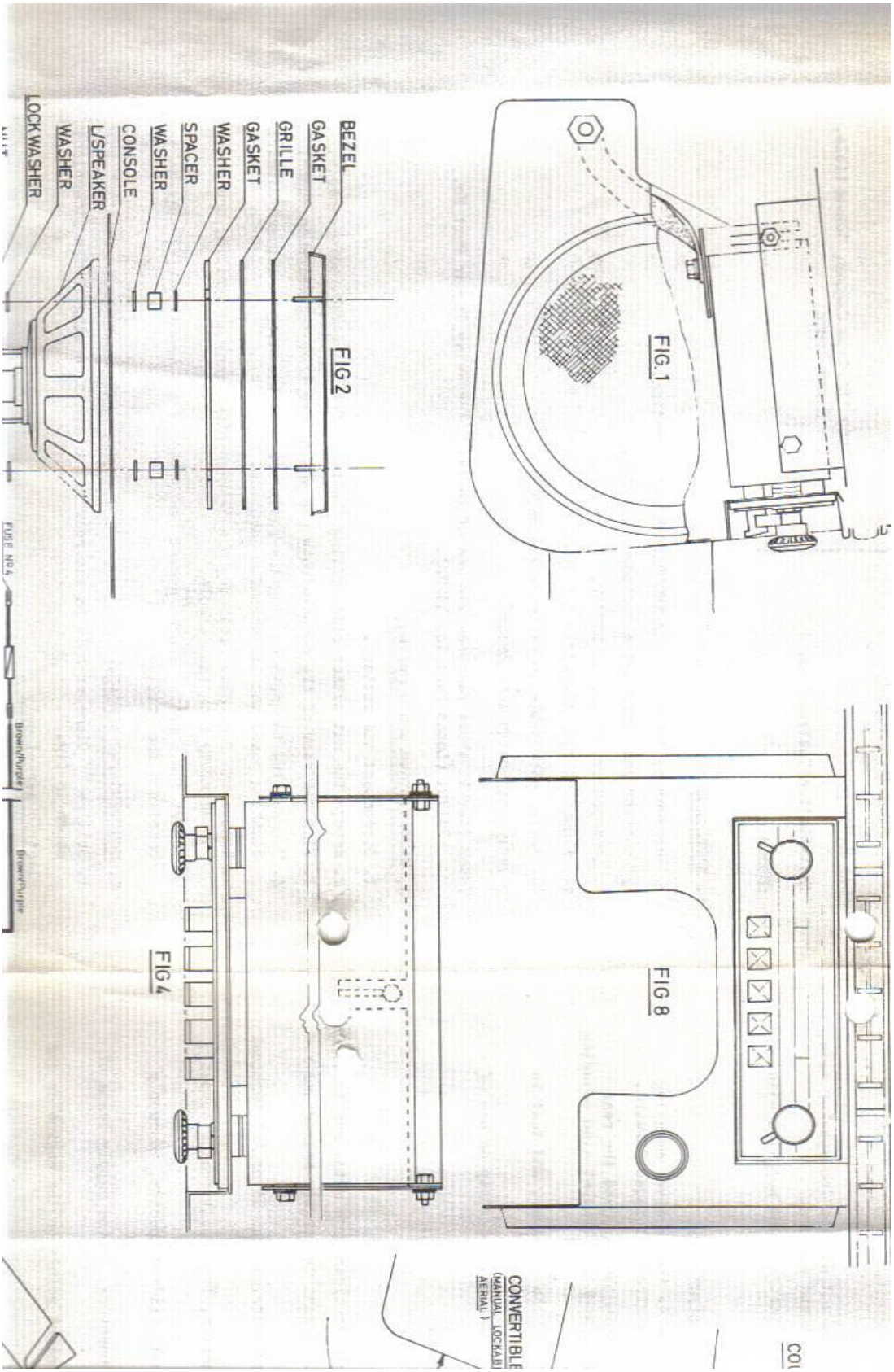
The Series 2 air conditioning was exactly as the 1968 with the following exceptions. The compressor was mounted on its side with the introduction of a revised mounting bracket introduced at the VINs listed below. The new bracket allowed belt changing without bracket removal and the bracket also facilitated mounting power steering. While both were fabricated, the later was more rigid and finished looking (see photos of early and late brackets below). The ignition key was removed from the air conditioning control panel tab when locking steering became standard. The green (not gloss brown) ceramic fan resistor was still mounted on the heat shield (on the frame rail on cars fitted with power steering) and the PVC wrapped wiring harness used the Jaguar straps to secure it. There was movement of other items in the engine compartment but they are well covered in the JCNA Series 2 E-type Judges' Guide. The VIN break points for Series 2 air conditioning follows:

	Left Hand Drive	Right Hand Drive
Early:		
OTS:	1R.1001 to 1R.1183	1R.7001 to 1R.9456
FHC:	1R.20001 to 1R.20260	1R.25001 to 1R.26319
2+2:	1R.35001 to 1R.35332	1R.40001 to 1R.42012
Later:		
OTS:	from 1R.1184	from 1R.9457
FHC:	from 1R.20261	from 1R.26320
2+2:	from 1R.35333	from 1R.42013

Early later bracket left and early bracket right

Below is an illustration of the proper radio mounting, which might help explain why so many air conditioning evaporator casings are broken or warped. The radio mounts to the evaporator casing – not the console!

Radio mounts on an E-type evaporator case – note the serial number sticker on the near bracket



Note the proper mounting of the E-type radio – to the air conditioning evaporator

S-type, MK2 & 340

The S-type and MK2 are virtually identical due to the shared body. The diagrams on the following pages show the proper brackets and installation. Note all models prior (E-types excepted) used this bracket arrangement. The wiring scheme, hose routing, and component location are standard. One interesting item is the modified bracket for the washer bottle as this was moved by necessity on these models. The condenser for these cars was very interesting and was referred to as a "Chair" condenser due to its unique shape (see photo on page 42).

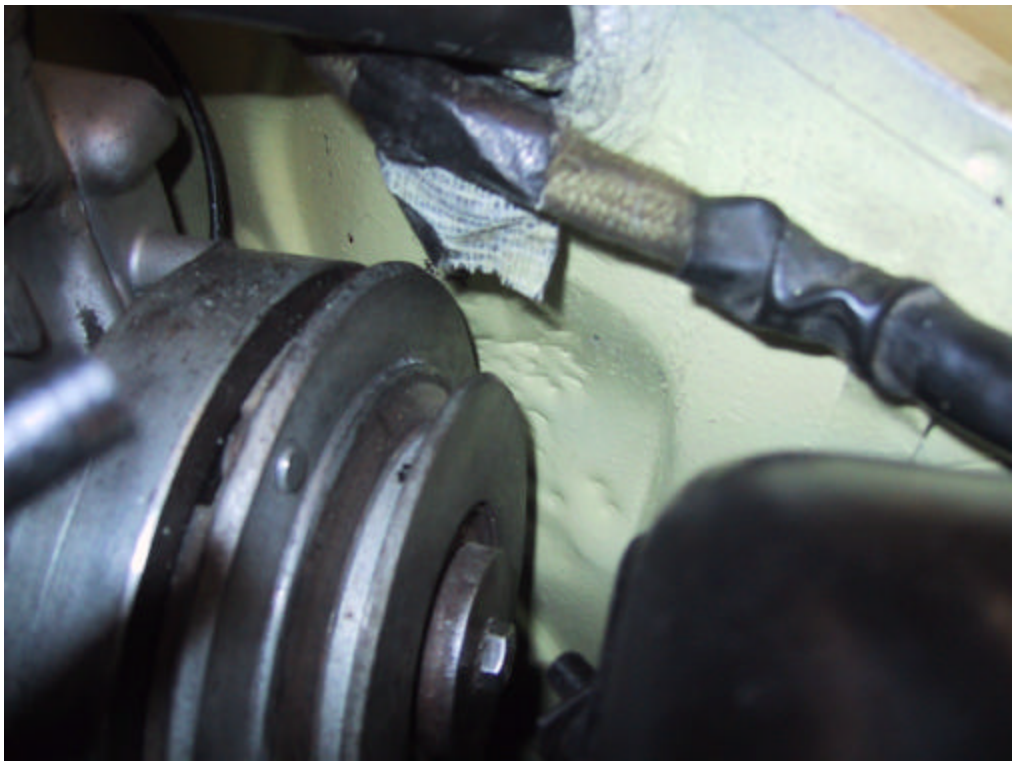


Photo by Dr. Gregory Andrachuk

A photo showing an indentation in the wheel well of a late MK2 to possibly accommodate the compressor – no official Jaguar documentation could be found on the Chassis No. change point

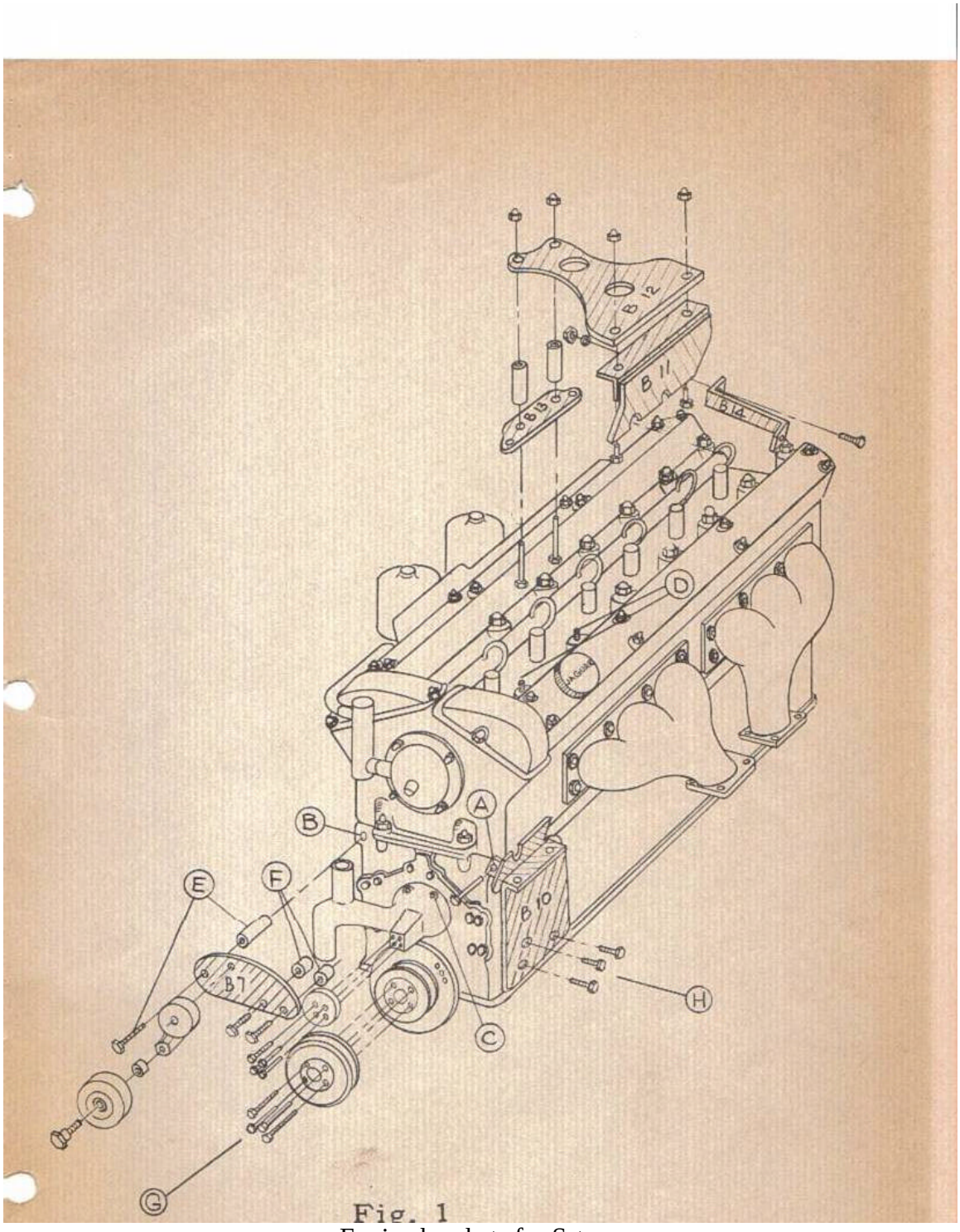
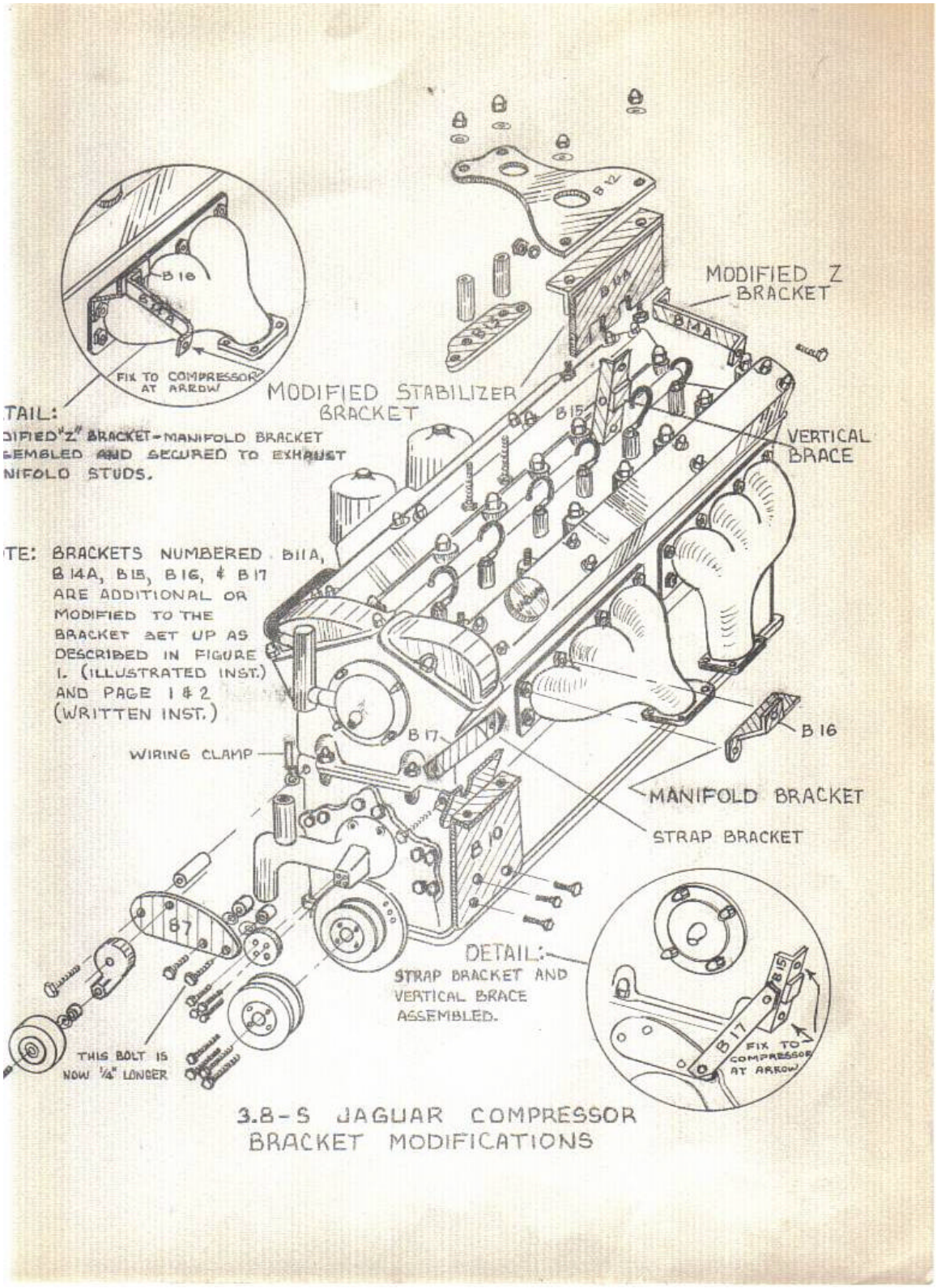
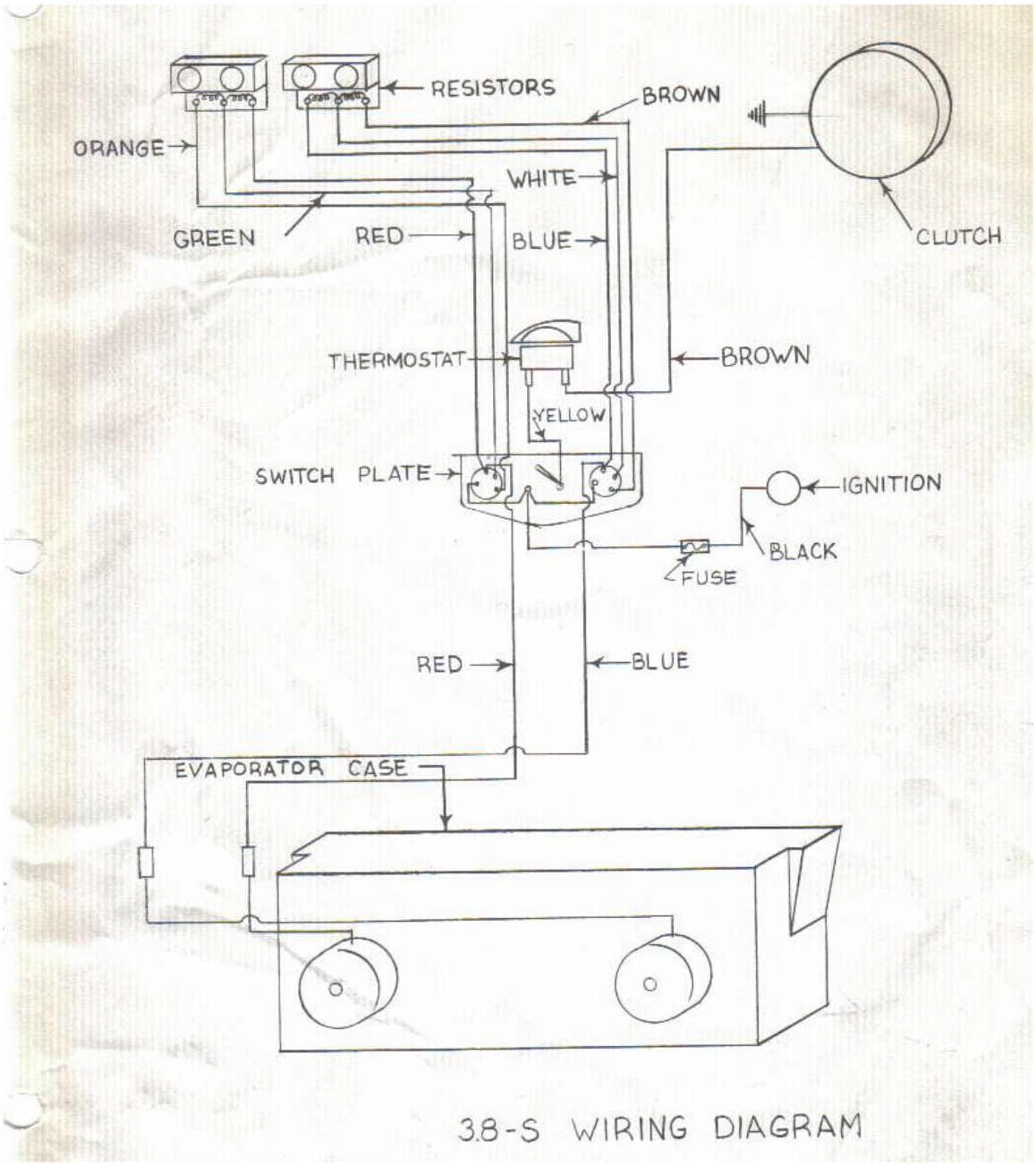


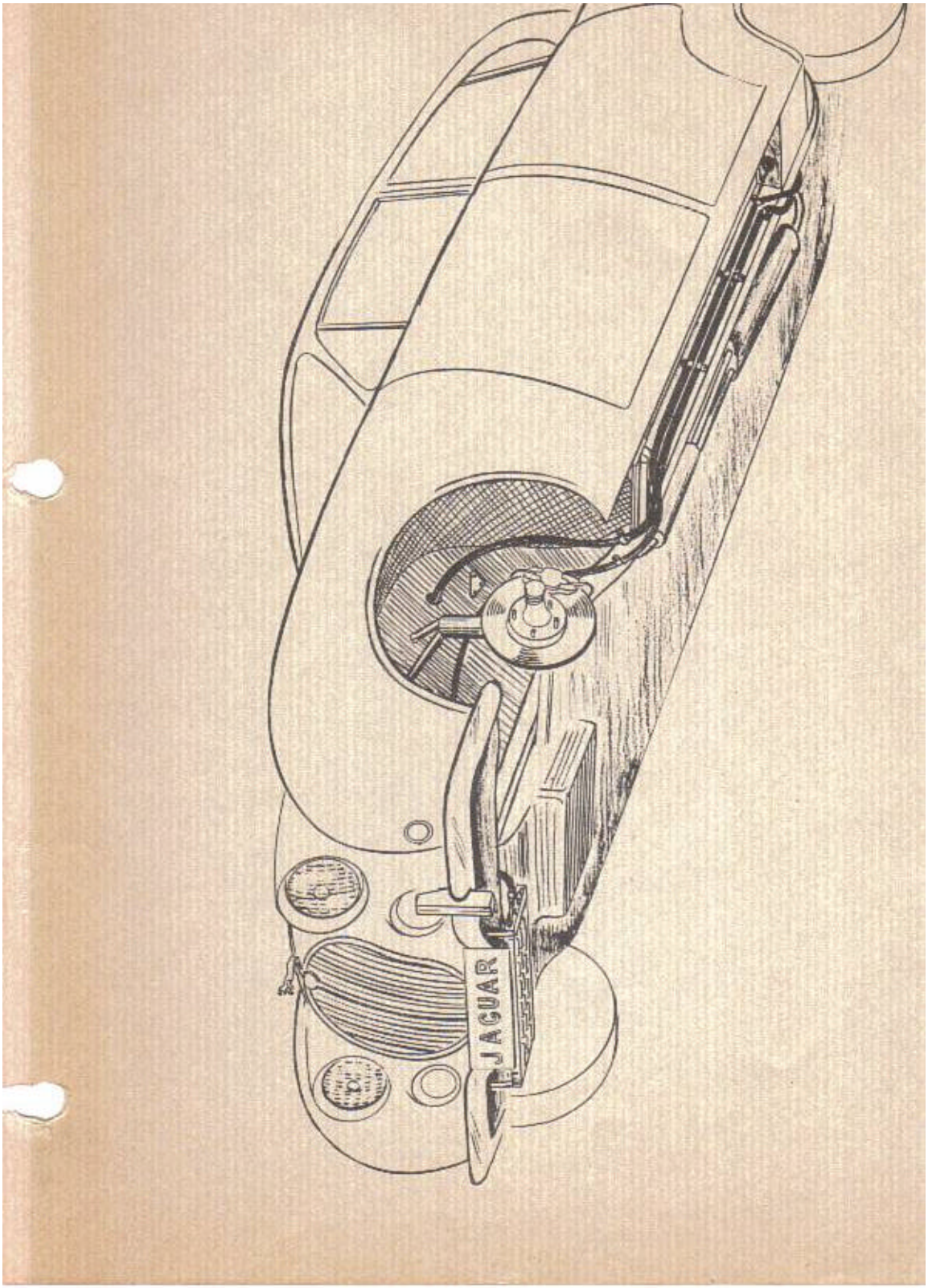
Fig. 1
Engine brackets for S-type



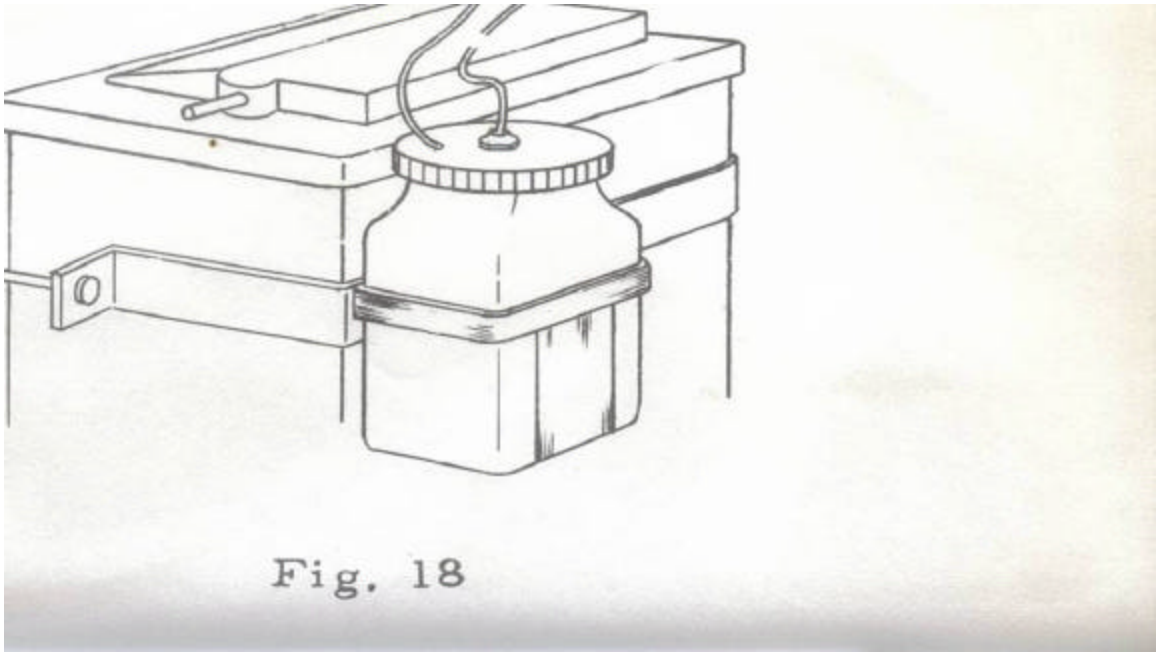
S-type compressor brackets



Typical S-type wiring scheme including trace codes



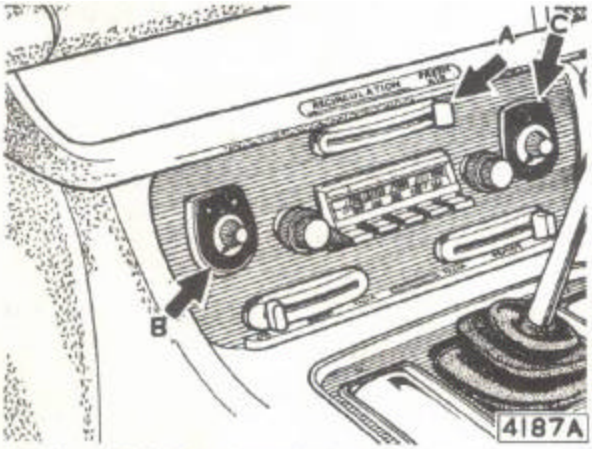
Routing of the air conditioning hose lines



Modified washer bottle mount on S-type and MK2

XJ6 Series 1

The Series 1 XJ6 is the last model discussed. With its introduction all other models of sedans were discontinued in the U.S. While the XJ6 had some initial growing pains with air conditioning, they were overcome quickly and the air conditioning system became standard. The XJ6 air conditioning components are well documented in the parts and service manuals. The S1 XJ6 was included in this guide as the first issues were just continuations of the 420 G system in component use. It was a modern car, but did use some time-tested parts. See entries in component section – specifically compressors and resistors. The controls are pictured below.



'Delanair' Air Conditioning System As Fitted To 2.8 Litre and 4.2 Litre Jaguar XJ.6.

GENERAL INFORMATION AND OPERATING INSTRUCTIONS

Car interior comfort may be controlled by adjusting the air intake quadrant 'A' or the air temperature switch 'B' or both and also by the two-speed fan switch.

Turning the air temperature switch 'B' clockwise from the stop position electrically engages the compressor clutch. Rotate the switch clockwise towards 'COLD' to obtain the desired temperature.

Moving the quadrant lever 'A' to the left will close the fresh air intake in the scuttle and the system will then be re-circulating only.

Switch the fans to 'FAST' or 'SLOW' speed to increase the air volume from the outlet ducts.

Movement of the quadrant levers, mounted below the radio aperture in the console, to the 'FACIA' position will direct refrigerated air only to the screen.

Note: When air conditioning equipment is fitted fresh air at ambient temperatures will not be available at the adjustable facia outlets.

To obtain maximum efficiency from the system the heater control 'C' marked 'HOT' should be turned to 'OFF'.

This card was included in the handbook "pouch" for the early S1 XJ6

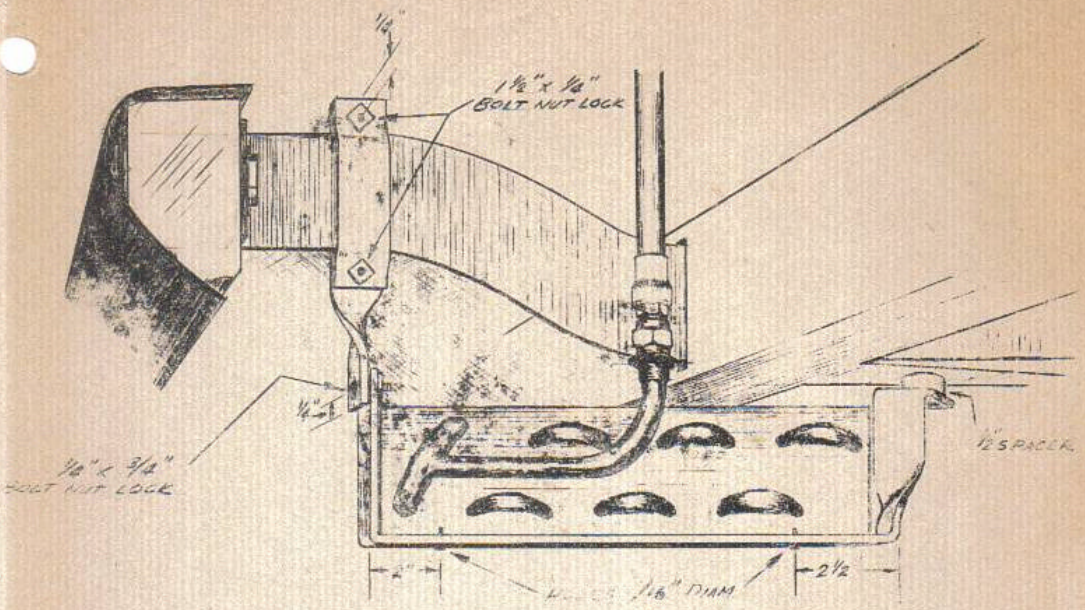
Description of Components

Note: Unless noted, the finish and/or appearance of air conditioning parts is/are the same for all models.

Condenser

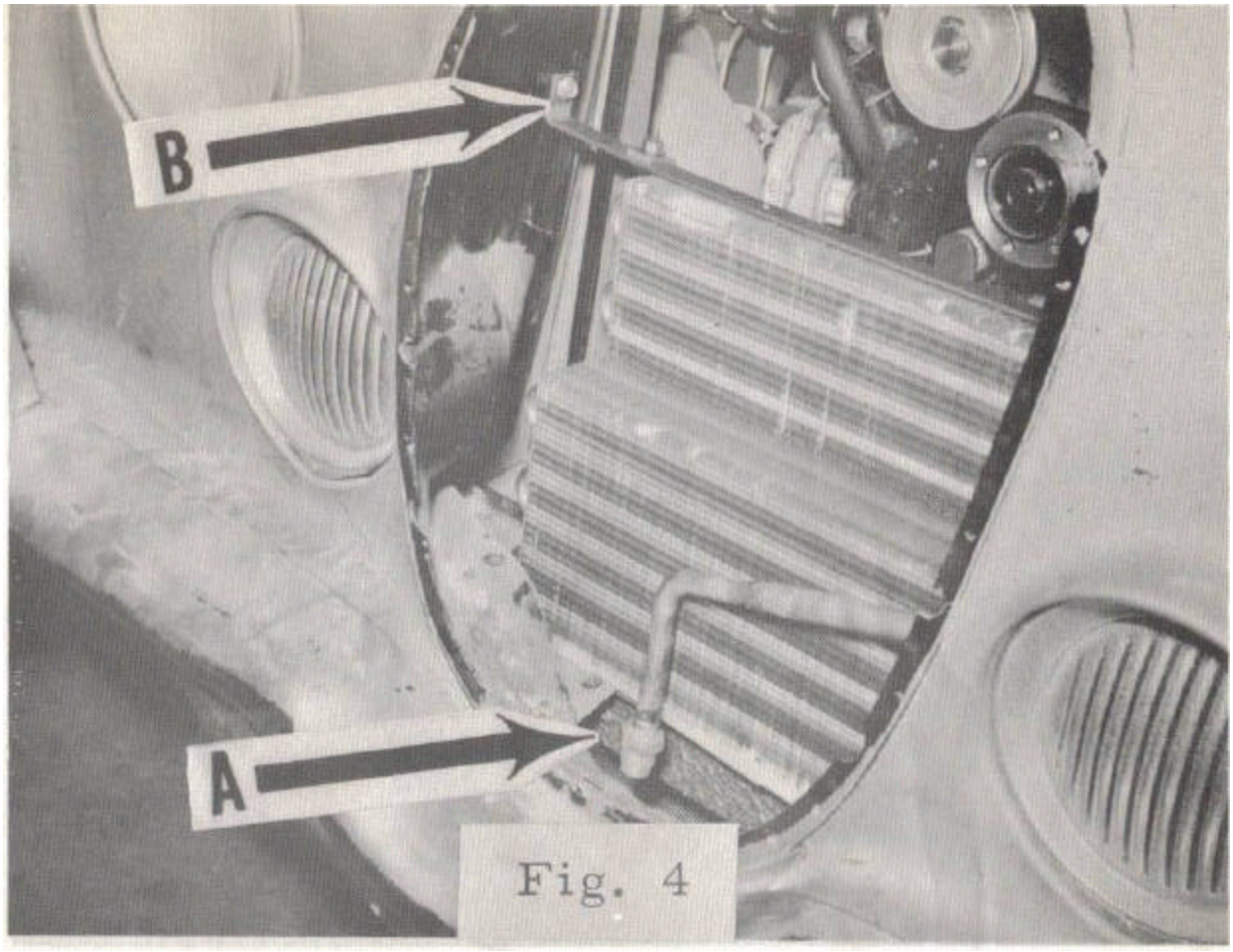
All condensers are horizontally finned units finished in either blond aluminum or black painted copper.

Note some cars (MK VII, MK VIII, MK IX, MK 10, 420 G, S-type, MK2, & 340), had dual condensers. One located prior to the radiator and one slung beneath the bumper. They were connected in parallel (like a parallel electrical circuit). A fabricated road debris guard of perforated steel mesh or a heavily louvered cover was fitted and painted black for obscurity. The drawings on pages 41 and 42 are typical of the mounting scheme.



The mounting, as depicted above, should position the condenser at approximately a 15 degree angle with the rear of the condenser lower. The clamp which positions around the bumper arm can be left loose, i.e. the bolts and nuts finger tight, so that it can slide on the arm for ease of installation. The brackets fix to the condenser flanges by two each #8 x 1/2 SMS.

FIG. 8. A



This is the “Chair” condenser for the MK2 / S-type application.

Compressor

An aluminum York compressor of twin piston design was used with all models including early (3.8 litre) E-types. The compressor has a hexagonal head and two valves on the top. The valves are of the type that isolation of the system is possible. This allows removal of the compressor without loss of the systems charge. The same valves with a different mount were used on the E-type. The York compressor was unpainted and lightly polished. A model tag in the front of the compressor described it as a Model A209. The 4.2 Series 1 E-type used a Tecumseh HG500. This is often mistaken for a unit called a mini-York. In fact the two are quite different. The Tecumseh unit was made under license in Italy and bears a plate with this information. Further true E-type compressors are milled differently from other applications (see photo) and are painted glossy black. The Series 1 XJ6 compressor changed at engine 7L.42595 from the York to the Frigidaire A6 unit.

The following photos are of York A209 compressors (note the valves are bolted on – not secured with a fitting (or Rotolock) as in modern York’s.

A York A209 compressor

A York A209 compressor for a MK2 / S-type with mounting hardware. Note the bracket is chromed where it would cross the polished cam cover.

The earliest York A209 found on a Jaguar by the Author. It is a 1956 model (note the "retro" fin look – no doubt thought at the time to be needed for cooling).

Following are 3 photos of the Tecumseh HG500 compressor. Note the clutch mounting bosses are not drilled and on one side machined almost away. This is an E-type compressor. Those seen with the bosses drilled and not milled down are not correct.

A Tecumseh HG500 compressor

A Tecumseh HG500 compressor

This photo also serves to show proper valve finish on the Tecumseh HG500 compressor – brass service caps and aluminum valve stem dust covers – not plastic. Also note the valve bodies are steel and not aluminum, as were the later replacements.

Clutch and Coil

Clutches varied with models, but all were silver cadmium plated steel with one black trigger wire. Earlier clutches used pressings, but later clutches were machined. Jaguar used clutches that were unusual as they tended to use hidden mounts with bolts internal to the coil. The 420 was an exception. The Series 1 XJ6 clutch was similar, until Jaguar changed to the Frigidaire unit.

An E-type coil showing the typical Jaguar internal mount and finish

An E-type clutch

Hoses

Hoses were of standard size and used 6, 8, 10, or 12 fittings. Hoses were black and fittings were silver cad. Factory installed units utilized Dunlop hoses with the words Dunlop in bold yellow letters. The crimping of the hose ran parallel with the hose not perpendicular as in modern barrier hose.

Belts and pulleys

Pulleys were either blond aluminum or steel painted black and the standard Jaguar jockey pulley (water pump type) was used with a special mount to adjust tension (see drawing in "S" section).

Evaporators

Mounted in the boot on all models except the S1 XJ6 and the E-type. In the saloons it would be a large black unit mounted under the parcel tray. This is the evaporator case as the evaporator is actually inside with the fans and expansion valve. Some units had a serial number on the unit in the form of a decal (see photo) and others had a badge from the manufacturer such as Artickar or Coolkar. Most observed units were simply black painted and the factory units were derived from pressings and not fabrication, which gave a better appearance. Vents were of either grill configurations or directed plastic units (see photos on pages 48 and 49).

XJ6 evaporator is hidden, as this is the first car that was designed around an air conditioning system. See factory photo in Skilleter's *Jaguar Saloon Cars*, p. 335. [12]

E-Type evaporator is wrinkle black fiberglass. The unit should be straight not curved over the radio. The unit has 5 moveable louvers of black plastic (although some chrome vents have been observed, their originality cannot be established – replacement parts in original packaging with part number are black). To the left of the evaporator the control knobs are black plastic with white registration marks. A black silk-screened plate with white directional arrows is behind the control knobs and held by 2 black screws. On early Series 2 E-types (prior to locking steering), there is an extension plate held by the same 2 screws, which also holds the ignition switch.

The S-type / MK2 evaporator case – note the shape to fit the boot space. The round ducts for the air are clearly seen, as is the remnant of the cloth duct for air return.

The 420 evaporator case – note the gasket for direct seal against the underneath of the parcel shelf and the Delanair decal.

A 420 evaporator case

The evaporator case removed from a MK VII M. It has an unusual coffin shape – the remnants of the Jaguar decal were there, but not visible in the photo

An installed 420 G unit, which is the same as a 4.2 MK10

The typical Jaguar decal

Controls

Controls varied by model. The E-Type has been covered. The 420 used the same switching system as the E-type, but mounted to a sub panel (wrinkle black) attached with two thumbscrews to the parcel tray.

The Mk10 / 420 G used the same type of panel, but with dual fan controls and separate clutch control (see photo on page 55).

The XJ6 used separate controls.

The same type of sub panel was used on all the other models with the plate either a press lined aluminum panel or more commonly, a lithograph screening in a brownish tint.

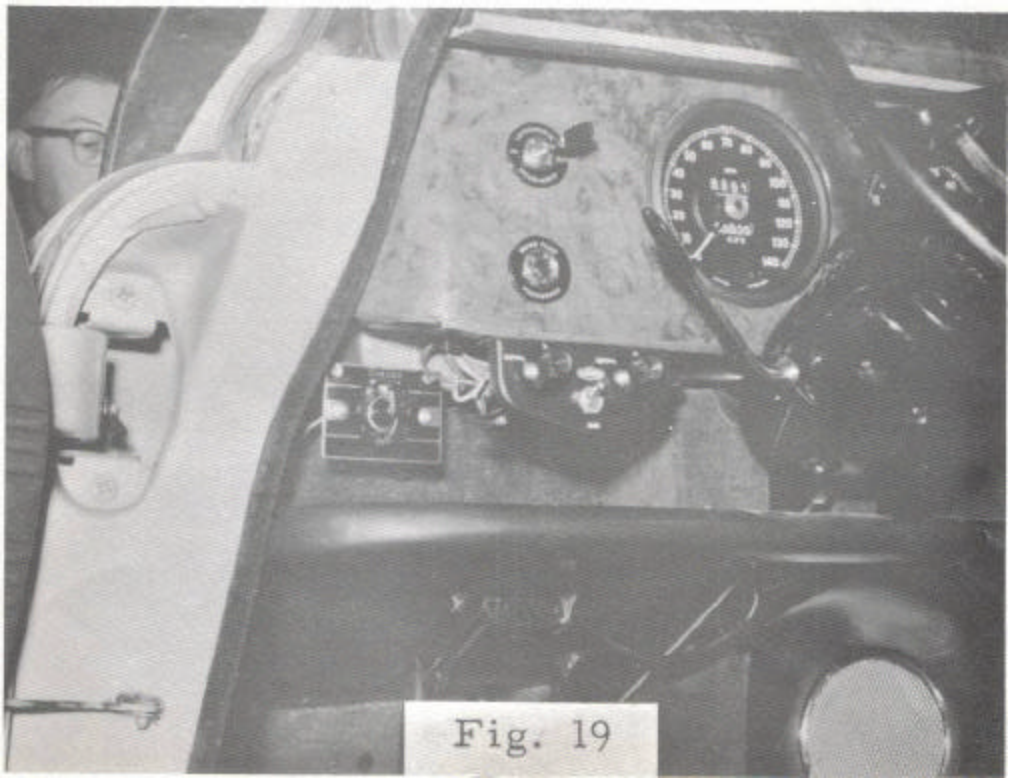
An early rear deck temperature control switch

A master control switch for early cars

A fascia mount temperature control with long sensor probe

A 420 control panel

A MK10 / 420 G control panel



A period photo of a dual switch and temperature control installed in an S-type

Fan Resistors

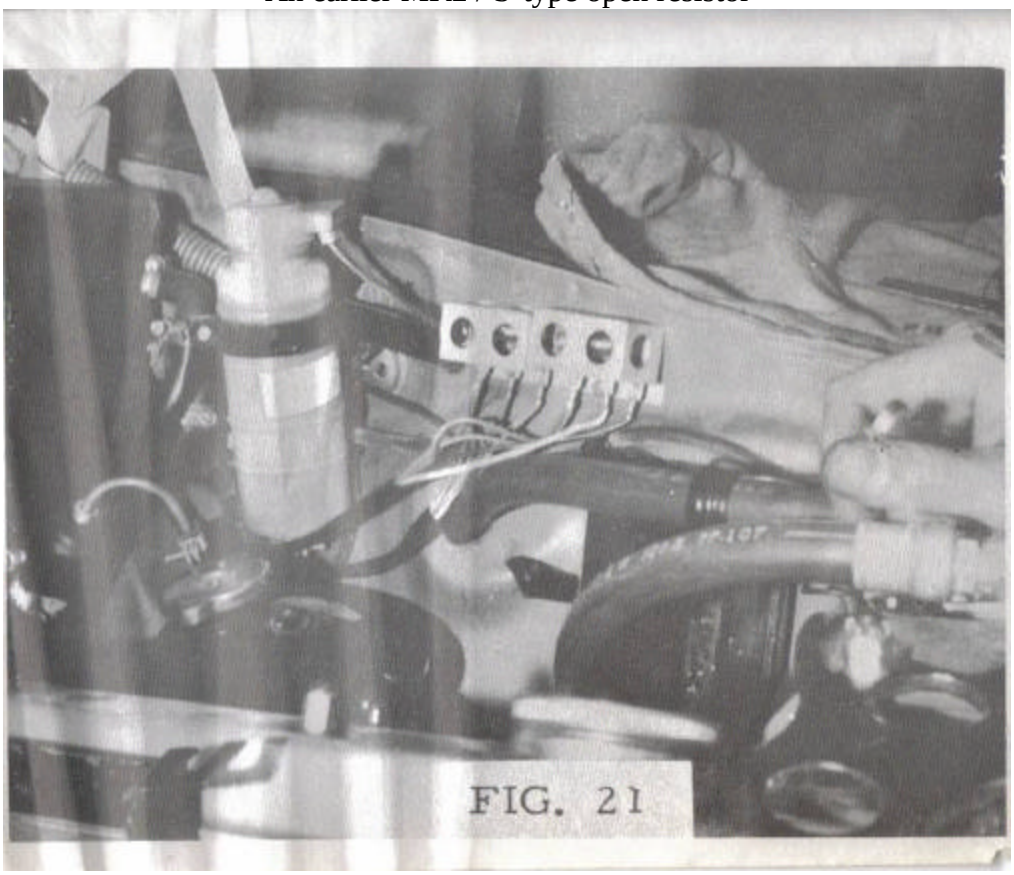
Fan resistors in the E-type were located on the brake reservoir heat shield (when power steering was optioned the resistor was moved to the frame rail just forward of the heater). It was mounted in a special bracket, which was black. The resistor was a muted medium green with three riveted spades to connect the wiring. Further, each spade was covered by a black shrink tube. The 420 shared this type of ceramic resistor and mount. Resistors on the XJ6 were white in the same fashion as ignition resistors found on the late Series 2 E-types.

Resistors on the other models were found in the engine bay. There would be one resistor for each fan motor. They consisted of the resistor and heat shield until the E-Type / 420 open resistor windings were used, hence the need for the shield.

A 420 resistor set-up

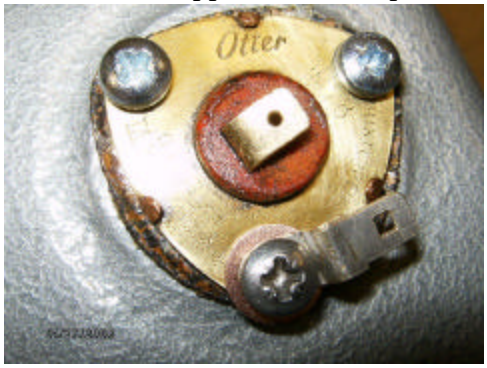
A MK 10 / 420 G resistor under the right fender

An earlier MK2 / S-type open resistor



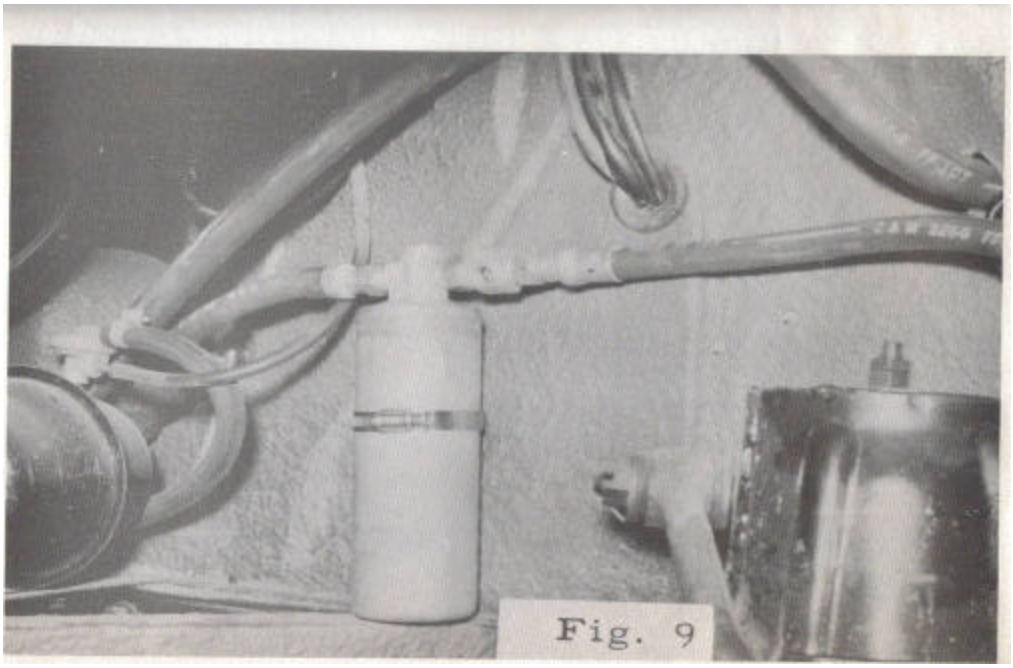
Wiring

As the air conditioning systems were a U.S. creation, the wiring is not two colored as is usual Jaguar (British Standard) practice, but is single color wire. One exception is the wire that triggers the Otter® switch over-ride relay for the electric fans in the E-type. It is white with a blue tracer. The Series 1 XJ6 is the exception, as it is a designed system. See the wiring scheme in the S-type section on page 36. These solid wire codes were typical. Also, the wiring harness was wrapped in PVC tape.



Otter® switch mounted in the header tank of a Series 1 E-type – Photo by Bill Beatty

Receiver Driers



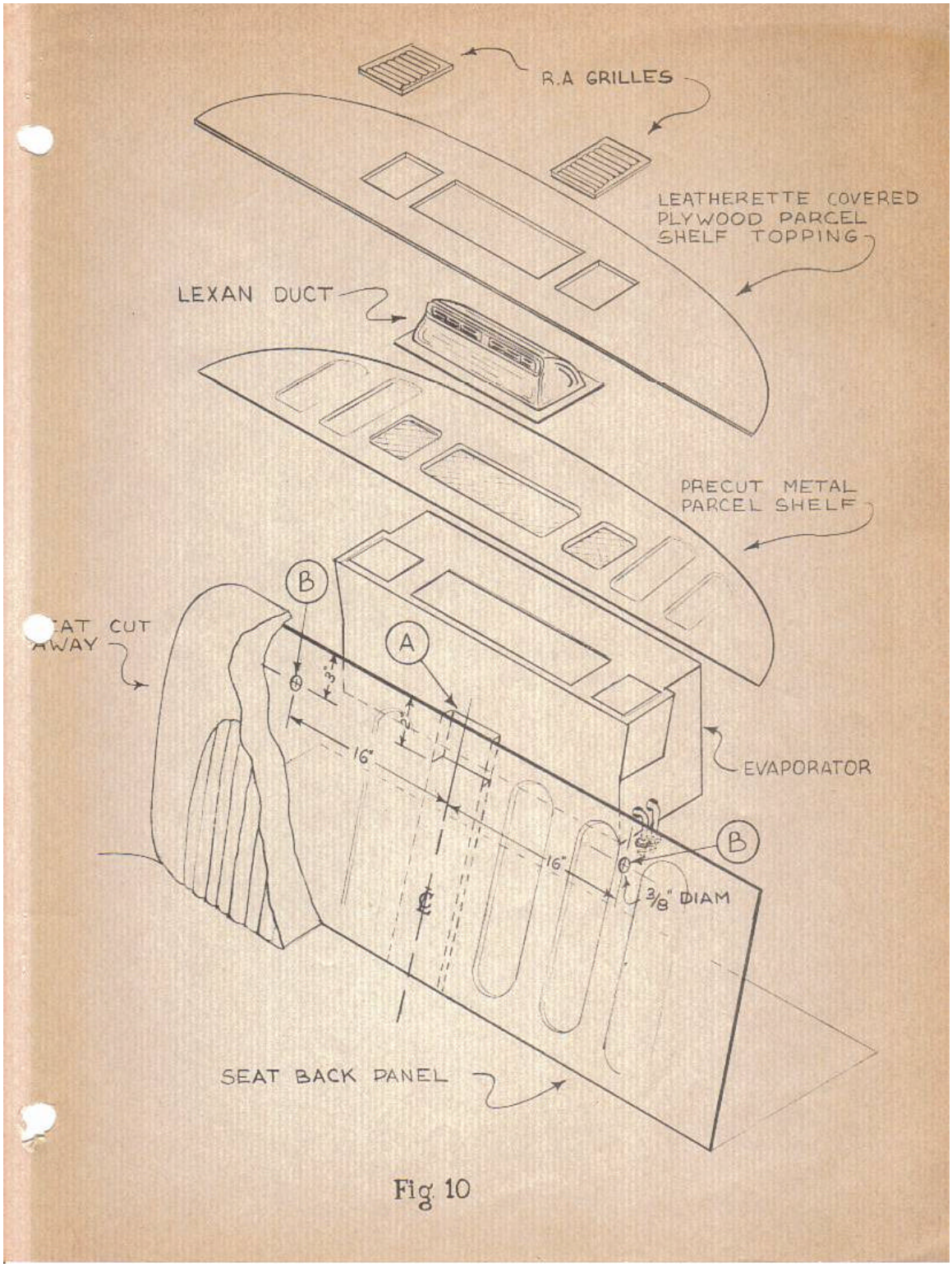
Receiver dryer mounted in the wheel well of the S-type / MK2

Air Returns and Vents

420 air vent

MK 10 air vent (top later metal – bottom early plastic)

MK 10 /420 G later air vent



A 3.8 litre MK 10 early vent system – note the cool air director has no adjustments – also the Lexan does not hold up well and only remnants have been seen

TECHNICAL SERVICE TELEPHONE
EXETER 2-5010

PARTS DEPARTMENT TELEPHONE
EXETER 2-5011-2-3

November 6, 1962

TO: ALL JAGUAR DISTRIBUTORS AND DEALERS

JAGUAR AIR CONDITIONING UNITS - ENGINE COOLING SYSTEM

When fitting air conditioning units to Jaguar cars, it is essential that particular attention is paid to the engine cooling system, by ensuring that the ignition timing and tuning of the engine are correctly set in accordance with factory recommendations.

The recommendations for current cars are set out below for your information:--

Model	Compression Ratio	Static Ignition Timing	Distributor Type and Contact Breaker Gap	Champion Spark Plug Type & Gap
3.8L Mk.2	8 to 1	7° BTDC	Lucas 40640A .014" - .016"	N8 or UN12Y .025"
3.8L Mk.2	9 to 1	5° BTDC	Lucas 40665A .014" - .016"	N5 or UN12Y .025"
E Type	9 to 1	10° BTDC	Lucas 40617A .014" - .016"	N5 (N3 for racing) .025"
Mark X	8 to 1	9° BTDC	Lucas 40828A .014" - .016"	N5 or UN12Y .025"
Mark X	9 to 1	10° BTDC	Lucas 40828A .014" - .016"	N5 or UN12Y .025"

Paper element air cleaners fitted to all above cars.

It is useless to attempt carburettor tuning until the following checks and adjustments have been made:--

1. Check and adjust distributor contact breaker and sparking plug gaps.

2. Ensure that distributor vacuum and centrifugal automatic advance mechanisms are operating correctly.

3. Set ignition timing in accordance with the recommendations given above.

To ensure complete accuracy in setting the ignition timing, rotate the engine until the top dead centre arrow on the flywheel or torque converter rim is in exact alignment with the appropriate mark adjacent to the inspection opening or

This letter clearly proves that the Jaguar factory was in involved with Air Conditioning as early as 1962.

As you know, air conditioning for Jaguars is now available as an approved Jaguar option. We, therefore, are pleased to advise you that we are prepared to effect installation of the units in addition to our regular New Car Preparation.

This unit will carry a six months warranty and will include one free service after 1,000 miles from the time of installation.

The following are the suggested list prices and your dealer cost:

	Retail	Dealer
Jaguar Mark Nine	$650.00	$535.00
Jaguar 3.8	595.00	525.00

The price includes finishing the unit to color match the interior trim of the car. Normally installation can be effected within three days, therefore it will be appreciated if you will consider the allowance of this time in addition to the regular New Car Preparation when ordered.

Descriptive literature will be provided to you under separate cover. Upon receipt of this material we would suggest that you familiarize your sales staff with the unit and give serious consideration to equipping one of your demonstrators in order to create extra sales and profit for you.

Should you have any further questions concerning this unit, please direct your inquiries to Mr. Kenneth McDermott, our General Service Manager

CHARLES H. HORNBURG, JR., INC.

This letter shows air conditioning was available on the MK IX and MK2, which dates this to 1960 or 1961

JAGUAR CARS INC.
PARTS AND TECHNICAL SERVICE DEPARTMENTS
42-50 TWENTY FIRST STREET
LONG ISLAND CITY 1, N. Y.
CABLES: JAGNAPARTS

CE TELEPHONE
2-5010

PARTS DEPARTMENT TELEPHONE
EXETER 2-5011-2-3

JAGUAR AIR CONDITIONING UNITS - GUARANTEE PROCEDURE

Each Jaguar Air Conditioning installation kit will be supplied with a Warranty Registration Card, It is essential that this card is completed, when Overseas Motors copy should be detatched and forwarded to the Air Conditioning Division, Overseas Motors Corporation, 2824 White Settlement Road, Fort Worth 7, Texas, since the warranty will not be considered valid unless this is done. The other copies should be distributed as indicated on each copy.

Guarantee claims should be submitted on the standard Jaguar claim forms in exactly the same manner as for Jaguar Warranty, except that the air conditioner compressor unit serial number should be quoted in the box normally used for Engine Number. A separate claim form should be used for air conditioning claims, and no labour or material relating to other parts of the car should be entered on air conditioning claims.

Labour hours will be in accordance with the Air Conditioning Labour Schedule attached herewith and the labour rate will be as registered with Jaguar Cars Inc.

Dealers will be reimbursed by their Distributor for their cost of any defective material, upon receipt of the defective material by the Distributors.

Distributors should forward defective material freight prepaid to the Air Conditioning Division of Overseas Motors Corporation, 2824 White Settlement Road, Fort Worth 7, Texas, clearly labeled with the Guarantee Claim, chassis, and compressor numbers. The Overseas Motors Corporation will then replace defective material.

Please note that the guarantee applies to both labour and material for six months and for a further six months for material only. The guarantee is effective from the date of installation of the unit, and if this differs from the date of sale of the vehicle, this should be indicated on any claims.

Claims for minor adjustments, such as tensioning of fan or compressor belts, and for correction of defects such as leakage of freon from joints, poor electrical connections, chafing of pipes or other fittings, etc. will be considered the responsibility of the installer, and must therefore be accepted as after sales service by the installer.

Settlement of claims will be in accordance with normal Jaguar procedure, i.e., on a monthly basis with Distributors. Jaguar Cars Inc. will settle labour claims only.

Early letter linking Overseas Motors Corporation to Jaguar

About the Author

From the age of 16 George Camp has been a Jaguar fan. He first began collecting technical literature for the simple reason he could not afford to have "professionals" repair his cars. This led to what now is described as the largest and most complete technical library on Jaguar cars outside the factory holdings. A member of JCNA at the age of 18, and a member of various other Jaguar clubs (due to his military postings), he has been an active Jaguar enthusiast and has contributed to numerous JCNA Jaguar Judges' Guides and other writings.

First "discovered" by Karen Miller when he won the "Hot Lap" JCNA knowledge quiz, George has been a frequent contributor to the Jaguar Archives (US) and helped save the archives when Jaguar moved to Mahwah. One of his fondest memories was scrounging in the dirt with Karen and Charlie Miller, and Mike Cook to prevent the loss of documents and artifacts. He misses Karen and Charlie (as does JCNA) and is fortunate to still maintain relations with Mike, furthering Jaguar knowledge. In addition to literature and cars, George has been able to assemble a full set of Churchill factory tools that cover the period 1948-1987, which proves his sickness beyond a doubt. He lives with his long suffering wife Marcia and his son Joshua, who is the proud owner of a Primrose MK2 and won his first JCNA class first at the age of 8. He is a member and Chief Judge of the Jaguar Society of South Carolina. He also serves JCNA as the SE Representative of the JCRC and serves proudly under the stewardship of Dick Cavicke.

Credits

I'd like to thank Stew Cleave, JOCO's Chief Judge, for helping me with the final formatting and editing of this guide. Thanks Stew! Bruce Smith, JOCO's Assistant Chief Judge, also helped with the final proof reading. Thanks Bruce!

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