



JAGUAR

JOURNAL

Official Magazine of the Jaguar Clubs of North America

July - August 2014

Living With An F-TYPE

Roads To Colorado

New 'Original' XJ13



PROJECT 7 LIVES

FEATURES

XJ13 – A Phoenix Rises

Part One

By Peter Crespin with Neville Swales

Introduction

Some years ago I was trawling 'eBait', as you do, and because of my family background I occasionally checked the German and French sites for Jaguar parts. One day, out of the blue, I seemed to hit the Mother Lode on the German site – an original 4-cam V12 engine. Anyone who knows sporting Jaguars knows about the fabled XJ13 and one of the pre-eminent facts one immediately learns is that there is, was, and only ever will be one factory-built example. Actually, that's not quite true – the factory built two, but the second was constructed around the remains of the first, after it was comprehensively destroyed in a crash at the Motor Industry Research Association (MIRA) proving grounds, not far from Coventry.

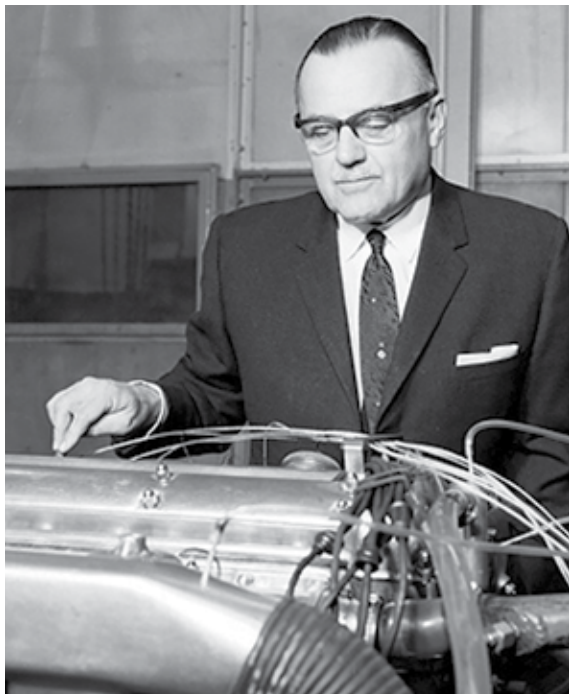
You also don't even have to know about the XJ13 at all, to figure out that you can't create an effective new racing engine by putting all your efforts into one example – unless you're a model engineer or private competitor perhaps. Any serious engine development program requires several test prototypes, of which usually one or more are run to destruction and the others are used to examine specific systems and then typically cannibalized to keep the lead candidates supplied with spare parts. This applied to the 4-cam V12 as much as any other engine and, as we shall see, the fate of each engine was carefully documented.

There was no question the thing was genuine. The eBay listing contained multiple clear photographs and the unique double XK-style heads and twin ignition system shouted 'Jaguar'. I had forgotten the specifics, but it seemed clear this was either a unique engine or one of perhaps two in existence. It seemed that sometimes you DO find rocking horse manure and I simply had to have it. Such pipedreams usually wither at the stroke of midnight and you wake up realizing that the economics and practicality of buying and running such an engine are best left to the professionals. But I knew my way around racing engines, so if I took it slowly, did my research and consulted widely maybe I could re-commission the beast? Best of all, thanks to a recent house sale

Top: Peter Wilson, ex Jaguar Competitions Department, with 'The Prize'
© XJ13 - Building the Legend

Bottom: Like S1 and S3 E-types, the two XJ13 bod-ies were significantly different
© XJ13 - Building the Legend





William Munger "Bill" Heynes – an engine man to his core © Jaguar Heritage

and living in rented accommodation, I had a lot of cash sitting in the bank for about the first time in my life. I was fated to buy it, surely. Fame and fortune beckoned. Yeah, right...

Neville to the rescue

Amnesia has kindly glossed over the sad details, but somewhere along the line I corresponded with a friend and Jaguar racer Neville Swales, who seemed even keener than I, and vastly better equipped, to take the project forward. With house proceeds sitting in the bank I was pretty sure I could have won the item, and had mentally set myself a suitable bidding limit. But apart from one or two derisory opening bids, I withdrew from contention and watched the auction proceed to a conclusion over my bidding limit but within range of auction fever. Coulda, woulda, shoulda? Not really. The best man won but even Neville

didn't realize how all-consuming the quest to build a suitable new vehicle for it would become.

My plan had involved housing the engine in something like a Proteus XJ13 replica – not a bad choice but not the real deal either. I'd had two D-Type replicas and Neville a C-type and we both enjoyed running stripped-down competition machinery. However, he lives near Norman Dewis in the UK and once he owned the only surviving engine of identical specification to the original installed in the 1966 car, Neville decided to take it to another level.

"My aim became to fulfil a long-held ambition of building and racing a unique, absolutely authentic and accurate "toolroom" copy of the original Jaguar XJ13 prototype Le Mans race-car – true to Malcolm Sayer's original "pure" 1966 vision and different in many respects from Jaguar's rebuilt current car" says Neville.

Unfinished business

Neville's dream was to continue where Jaguar left off and compete in historic rac-

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Sir William Lyons – happy to race if it sold cars © Jaguar Heritage

ing against the cars XJ13 was designed to run with, including the mighty Ford GT40, sublime Ferrari P330 and others of that era. In 1965 the XJ13 project carried Jaguar's aspirations of a return to racing and now fifty years later the realization of that dream seems tantalizingly close. Barring catastrophe, we should finally, and for the very first time, hear the glorious bark of Jaguar's quad-cam V12 used in anger on the world's racetracks, clothed in the late genius Malcolm Sayer's ultimate creation. But let's not get ahead of ourselves ...

The place is Coventry and the time is late Spring 1963. Khrushchev's claims of a 100-megaton nuclear bomb and the America's atomic tests in Nevada cast a shadow over the world. Life carries on as normal in the West Midlands and the sounds of hammering and banging can be heard from the vicinity of Browns Lane. The muffled sound of The Beatles hit "Please Please Me" can be heard on the Tannoy above the sounds of activity behind the tightly-closed doors of the Competition Department. The UK is only just emerging from one of the coldest winters on record and a white blanket still adorns Coventry roof-tops.

Chief Engineer, William Heynes leaves footprints in the snow as he purposefully crosses the yard to the Competition Department, to check on progress of the latest all-aluminium Lightweight E-Type customer car (of which the last six in the series will be built over fifty years later in 2014-15). As he ventures inside the noisy building, a fresh-faced Peter Wilson briefly looks up before resuming his work and his hummed rendition of the Beatles hit.

The Competition Department is stretched to the limit with that year's twelve Lightweights – no time for pleasantries! Since Graham Hill's victory a few months earlier in the Lombard Trophy at Snetterton, the competitiveness and potential of the new car was becoming evident and private entrants such as Briggs Cunningham were keeping the Competition Department extremely busy. Cunningham's three cars were entered in the 1963 Le Mans race and timescales were tight. Whilst these customer cars enjoyed varying levels of Works support, none of them were true factory entries. But that year plans were being drawn up for Jaguar's return to racing in their own right ...

Return to Le Mans?

Jaguar were considering entering the 1965 Le Mans 24-hour Endurance Race – scene of their famous victories in the 1950s with their legendary C and D-Types. The plan was to enter a team of XJ13 cars to contest this ultimate test of endurance and performance. Things had moved on since the glory days and any such undertaking would require thorough planning and analysis. It would not be the first time for Jaguar. In the summer of 1958 William Heynes had met with Sir William Lyons over a meal. Jaguar had already retired from racing as a factory team two years earlier and their lunch-time meeting came less than a year after a devastating factory fire.

We know the gist of their lunch-time conversation, as Heynes later confirmed the main points in a private memo. Sir William replied in writing, giving fascinating insights into Lyons' pronouncements on conditions for a return to racing. Lyons also copied his memo to Lofty England.

In his memo to Sir William, Heynes outlined his proposed strategy, saying Jaguar should complete "ten or twelve 'E-Type' cars for general competition work in 1959". Heynes' memo also referred to development of a "G-Type" with a centrally-mounted engine. He stated that "work is still proceeding on this ... I would still make sure that we had three cars, if required, ready and fully-tested in time for Le Mans". His thinking was that this "G-Type" would follow on from a program of racing E-Types. At the time of the memo, E1A, the first of the "E-Types" was about to undergo its first track tests – piloted by Mike Hawthorn. When the E-Types eventually became uncompetitive, this "G-Type" could take up the challenge.

Racing engine development was in Heynes' blood and he was a consistent champion for the racing cause as a means of testing his theories and designs. Lyons, on the other hand, prioritized Jaguar's core business of luxurious and sporting saloons, although he did recognize the value that racing success had for his business.

As an interesting aside, Heynes' memo also made reference to a mid-engined Grand Prix single-seater racing car which would share the same engineering units as the "G-Type".

Sir William's reply was straightforward. He said, " ... it would be a most foolish policy for us to recommence racing until we have cars which:

Have outstandingly superior performance to that of any known competitors.

Have undergone tests to prove their reliability"

He went on to say, "During the years we raced, in spite of various set-backs, we were successful in establishing a high reputation, and this is reflecting favourably on our prestige. It could be entirely nullified if we were to return to racing without being completely successful. Mercedes returned to racing successfully, and I see no reason why we should not do the same thing."

Lyons went on to give an unequivocal "green light" to Heynes' plans for a return to racing, subject to the proviso that the cars were competitive and thoroughly-tested.

As far as the "G-Type" was concerned, Lyons said, " ... With regard to the G-Type, this, of course, should be pursued with all energy, including the possibility of a Grand Prix model ...". He then prompted Heynes with the statement, " ... I have not yet received the development programme for the G-Type ...".

The signal could not be clearer – he had been given an unambiguous "go-ahead" for a return to racing and the ball was firmly in Heynes' court.

E1A, E2A and the Lightweights

The first E-Type racecar, E1A, was duly tested at Silverstone by Mike Hawthorn on the 10th July 1958. Sadly, the car, for some unfathomable reason, hadn't been

FEATURES

M. Weaver

PROJECT SPECIFICATION

FROM: Mr. R. J. KNIGHT. **DATE:** 3rd June 1965.

INSTRUCTION TO PROCEED: SEE ACTION COLUMNS.

COPIES TO: Sir W. Lyons, Mr. Whittaker, Mr. Haynes, Mr. England, Mr. Hassan, Mr. Baily, Mr. Hundy, Mr. Tattersall, Mr. McMillan, Mr. Weaver, Mr. Dewis, Mr. Wilson.

TITLE OF PROJECT: XJ13 CAR. **PROJECT & ISSUE No.** ZX 558/04/1

TARGET DATE FOR COMPLETION OF: **SETS:** **No. TO BE ORDERED:**

DESIGN	BUILD	TEST	RELEASE	INCORPORATION
ITEM AND REMARKS				
<p>Build one prototype competition car for development purposes to specification set out below, including "soak ups" of sections of the car as required.</p> <p><u>ENGINE SCHEDULE NO. X 127</u></p> <p>Specification as set out in Mr. Baily's project specification No. ZX 558/03/1 to be installed in the car with ZF transmission type 5 DS 25.</p>				
ACTION				



Top: The start of XJ13 – an instruction to proceed
© XJ13 - Building the Legend **Bottom:** Used today to advertise the '63 light-weights, but a '61 race car © Jaguar Heritage

prepared to full competition specification and its times were disappointing. A full competition version wasn't available until a year later. This competition version, E2A, was seen by Briggs Cunningham during a factory visit, who immediately said, "I would like it for Le Mans".

Herculean efforts by Jaguar's Competition Department saw E2A ready for the 1960

Le Mans. Unfortunately, fuel injection pipe failures led to the car being withdrawn after 89 laps early on the Sunday morning of the race. As ever, the *Sarthe* circuit cruelly exposed known and unknown weaknesses in the designs, or in this case probably work-hardening of materials, of all who attempted the over 3,000-mile race distance. Works-supported Jaguars continued to be seen until 1964 when

Malcolm Sayer's beautiful low drag Light-weight E-Type crashed at the Monthéry 1000km event, killing its owner and driver Peter Lindner.

Out of money, out of time

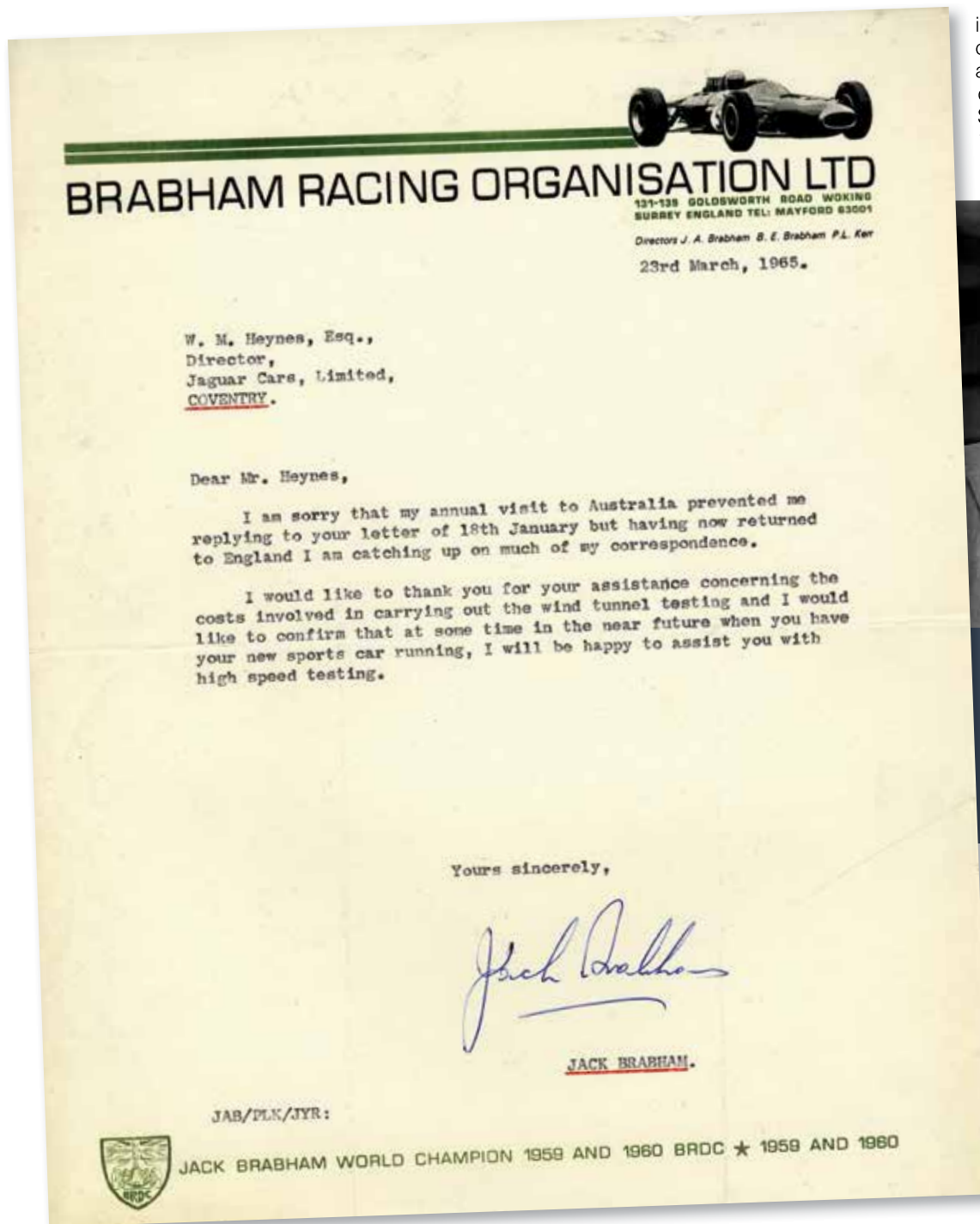
Meanwhile, plans for a car which should have returned Jaguar to racing were in hand. Sadly, the project began to suffer from a lack of urgency as resources were diverted towards production of sedans. It wasn't until 1965 when a young Mike Kimberley was given control of the project, that real progress was made. Unfortunately, other factors interfered, such as BMC's merger with Pressed Steel and Jaguar (British Motoring Holdings – later to combine with others to become part of the British Leyland empire). There was also the growing dominance of Ford's GT40 after 1965 and an increased emphasis on sedans, such as the forthcoming XJ6, which meant that Jaguar's planned mid-1960s return to racing never finally materialized.

Work on the XJ13 by Jaguar's Competition Department continued during 1965 at a relatively slow pace. As Peter Wilson reports in his book on the XJ13 – "*The definitive story of the Jaguar Le Mans car and the V12 engine that powered it*" (Available from the JCNA Shoppe):

"By now Le Mans 1965 had come and gone. We were well past the post as far as the original aspirations for the car were concerned and we in the Competition Department were left wondering just what the purpose of the XJ13 was. Whatever the thoughts of the senior Jaguar management, even at our lowly level it seemed to us pretty obvious that any official Jaguar return to racing was by now just a distant dream – it was never going to happen."

The car was finally completed by May of 1966. It was pushed into a corner of the Competition Department and covered with a cloth. The car didn't turn a wheel until February of the following year. Rumors abound of "unofficial tests" in the intervening period but these were certainly fabrications because the car remained sitting forlornly in the corner of the workshop for the best part of a year.

On the 5th March, 1967 the XJ13 finally emerged from hibernation and the bark of the quad-cam racing engine was heard again, to begin the first of a series of eight official tests at MIRA, culminating with a final high-speed run at Silverstone. A summary of these tests will appear in a future



inimitable Norman Dewis also contributed to a handful of tests although the final assessments during high-speed running at Silverstone, in the summer of 1967, were conducted by Hobbs and Attwood.



Above: Malcom Sayer – XJ13 was his masterpiece
© Jaguar Heritage

Left: Aiming high – Jack Brabham was asked to test XJ13 © XJ13 - Building the Legend

Hobbs was among an elite of drivers at the time and a successful, accomplished racer (a later article will explore his varied racing career). In one of his earlier outings with the XJ13, the fearless Hobbs achieved an unofficial UK closed-circuit lap record at an average speed of 161.6 mph – a record which was to stand for 32 years until beaten by a McLaren F1 as late as 1999 (topping Hobbs' average by only 6.4 mph).

The latent potential of the XJ13 was there for all to see in 1967. Would the XJ13 have been competitive against the all-conquering Ford GT40? We shall return to this question later. More to the point, will a recreated XJ13 be competitive in historic racing in the 21st Century?

Wait and see

Next issue: The build begins

article along with an assessment of how the car may have fared in open combat.

From the outset, Jaguar realized that a car such as the XJ13 called for experienced current racing drivers to assist with testing and development to push the limits as they existed by that time, not those of the 1950s. Bill Heynes approached double

F1 world champion Jack Brabham early in 1965.

In the end, Jaguar called on the services of race drivers and former Jaguar apprentices David "Hobbo" Hobbs and Richard "Dickie" Attwood. The lion's share of testing was carried out by Hobbs, who can be seen on F1 race weekends today co-hosting NBC's Formula One coverage. The