

THE NEWSLETTER OF THE INTERNATIONAL JAGUAR 'S'-TYPE REGISTER



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Editor's Views

Your Editors are always pleased to hear that 'S'-types are still beating the Mk2s and 420s. The JCNA (Jaguar Clubs of North America) recently announced their 2009 championships. Long time Register member, and avid 'S'-typer, Dick Podoloff (P1B8235BW) was Northeast concours driven-class champion and placed 4th in the small saloon slalom championship.

Kudos also to Register member Merritt Chisholm (P1B76102BW) who toured down from Canada to win a year-end 8th in the small saloon slalom standings.

There must be other Register members who are competing in slaloms, rallies and concours in their areas. Let us know.

Register member Richard Singleton (A1B57566DN) alerted your Editors to a *Telegraph* (London) article about the 'S'-type in the

Classic Cars segment of their Motoring section.

It has a great picture of an 'S'-type at speed. The article is a bit quirky – but interesting. It has more to do with the type of person who drove 'S'-types than about the car itself. In their day, 'S'-types were the conveyances of villains, aristocratic politicians, landed gentry and movie stars. These characters gave the car an élan that was unique.

They were always called 'Jags' and everyone could recognize their flash and the sound of the XK engine at full song.

The article is well worth a look and can be found at:

<http://www.telegraph.co.uk/motoring/classiccars/7450138/Classic-Jaguar-S-type.html>

Manual Gearboxes—1

The manual gearbox used in all Jaguars up until the mid 1960's was originally designed and built by Moss Gear Co. of Birmingham. The company was founded in 1910 by the Dukitt family in Aston, West Midlands. They named the company Moss Gear, as the family seat was in Moss Side, Yorkshire. They started by manufacturing spiral bevel gears and gearboxes for the developing car and motorcycle industry. Moss gearboxes gained a reputation of being robust and long-lived. Jaguars used the Moss four-speed manual gearbox with its 'crash' first gear for many years, beginning with the pre-war SS. Enthusiasts loved the vintage whine emitted by that non-synchromesh bottom gear.

After World War II, when British production reverted back to civilian applications, Moss became the supplier of choice to AC, Alvis, Jenson, Lea Francis, and Morgan as well as Jaguar. The Moss gearbox was the only manual Jaguar gearbox until Brown's Lane

developed its own, more refined, four-speed all-synchromesh gearbox introduced in 1965.

Jaguar gradually took over the assembly of their Moss gearboxes and then completely built their own versions. Jaguar units used mainly Moss parts, but incorporated seven Jaguar-made components: primary (input) shaft; layshaft unit; synchro hubs; front cover; rear cover; top cover and gear change (shift lever directly above the gearbox).

Various Jaguar models required a different position for the mounts, gear lever location, rear extension, and, if an overdrive was fitted, also a longer mainshaft. The prefix to the gearbox serial number denotes the application or specific Jaguar model it is fitted to. Moss gearboxes in 'S'-type Jaguars have the prefix 'GBN', the 'N' in the prefix denoting an overdrive-type mainshaft. Moss gearboxes fitted to the Mk2 also used the GBN prefix, the MkX carried the prefix

Inside this issue:

Editor's Views	1
Manual Gearboxes-I	1
On the Cover—33	2
IB78809DN	3
Early Changes	4
Speedometers	5
Letters—Wheel Arches—2	6

(Continued on page 3)

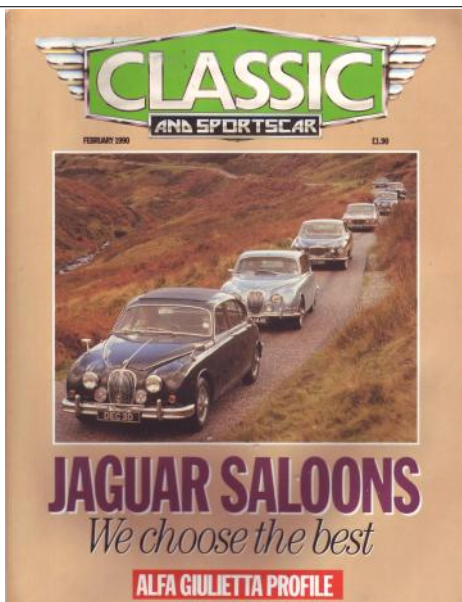
'S'-type On The Cover – 33

Classic and Sportscar, February 1990, Vol. 8, No. 11, is a good 'S'-type issue. Inside is a 10-page article 'comparing the best of the Jaguar saloons' accompanied by about 1/2 dozen excellent photos.

The magazine's editors gathered examples of the 'most significant Jaguar saloons that were powered by the XK (engine).' The article is an in-depth look at the development of the Jaguar sporting saloon and a rigorous group test of seven examples of Jaguar's post-war technological progress.

Fitting the 'S'-type into the development timeline, they wrote, "...the 'S'-type contained styling influences of both (the Mk2 and MkX), inside and out, but there was little shared external panel work, and numerous shell alterations were required to adopt the new suspen-

(Continued on page 6)



JAGUAR S-TYPE 3.8 1966

This 23-year-old S-type was more of a driver's car than the rest of them put together.

The engine was an absolute honey. From tick-over upwards it pulled sweet and strong, the gruff whine of the twin cam rising excitingly in pitch as the rev counter soared round the dial as freely as an Alfa's – I've never driven behind such a potent, tight-feeling XK engine before. Such instant, perfectly weighted throttle response too: tramp hard on the big organ pedal of most elderly Jags and you'll get a stifled splutter whereas this car just *goes*, whatever the gear, whatever the speed.

Controlling all this writhing Midlands muscle was perhaps the sweetest gearbox of the day, Jaguar's very own all synchro unit with Laycock overdrive on top, operated by a little electric lever on the steering column. Long in its movements, with strong synchromesh precluding really swift changes, it was a

pleasure to use in spite of the meaty clutch action.

Jockeying the 'S' along the glistening Buxton A-road I couldn't help thinking what an excellent compromise the small all-independent Jaguars were, and still are. The car's grip was much more secure than the wayward, slithering Mk2, the independent rear end putting the torque down far more convincingly out of bends. Having said that, the S-type was the only car I managed to provoke into a momentary twitch of oversteer, easily corrected with a flick of the wrists and an easing of throttle pressure.

The 'S' is a softly suspended car, so roll is considerable. That factor, along with the less than ideal power steering, limits cornering bravado: there's too much assistance and you get an insecure feeling when cornering fast as if the front end is just about to break away on a wet road – even when the surface is dry. Only the slightly crashy front end distanced the S-type ride from the masterful compliance of the XJ6. This car had uprated 420 brakes, almost Citroën sensitive and very powerful.

"These traits all helped confirm the 'S'-type as a car for the motorist in a hurry who wanted MkX luxury and Mk2 speed."

The Story of 1B78809DN

Peter Robinson, of Red Deer, Alberta, Canada contacted your Editors some months ago about a 'parts car' that was available and he was going to investigate.

Peter wrote, Last weekend I did the road trip to Manitoba and picked up the parts from the car I told you about. I got the cars ID for you 1B78809DN.

I have the engine and carbs,(it does not turn over), and the manual transmission. Mine is Automatic so that is spare.

I have all the doors, glass, boot, generator, starter, voltage regulator, wiper motor and gearboxes, lots of chrome

trim, some lights but they are not in good shape, heater radiator, heater motor, steering column, fuel tanks and pumps. I have lots of the wood but it is in poor shape. I also have the wiring harnesses and lots of screws and bolts and a few other misc. items.

One part I wanted was no good. My steering column switch covers are broken (upper and lower). Can you still buy those parts?

Sad to see the body is such rough shape. That will be all for now.

Peter Robinson
P1B78037BW



(Continued from page 1)

GZN, and the E-type prefix EB.

Suffix letters CR or LS after the gearbox serial number indicate close ratio gears. Suffix letters JS indicate shaved gears. The process of shaving gears improves the running, the noise generation characteristics and the stress behaviour of the gears, and makes a higher quality gearbox.

The Register has one 'S'-type fitted at the factory with a close ratio gearbox. The car is rhd 3.8 litre, Chassis No 1B5121236DN, manufactured 7 July 1964 and dispatched to Brysons (Australia) on 6 August 1964. The Gearbox No. is GBN81727CR, the 'CR', instead of the usual Moss box suffix of 'JS', clearly indicating close ratio.

The Moss gearbox ratios are:

	Std. Moss	C/R Moss
Fourth	1.00	1.00
Third	1.28	1.21
Second	1.86	1.75

First 3.37 2.98

First and reverse are the same ratios

Overdrive Unit

The maker of the 'S'-type overdrive units, Laycock de Normanville, was a relatively new company founded by an Englishman, Captain Edgar J. de Normanville (1884–1968) through a chance meeting with Ken Walker, an American transmission designer at Laycock Engineering Ltd.

Laycock de Normanville's first product, the A-type overdrive unit, was introduced to the Motor Industry in October 1948, fitted to a Standard Vanguard. The A-type overdrive was quickly adopted by many famous marques including Aston Martin, Ferrari, Austin Healey, Jensen, Bristol, AC, Armstrong Siddeley and Jaguar.

At Jaguars it first appeared on the Mk7 and Mk1. It was available on 'S'-types from the start of production

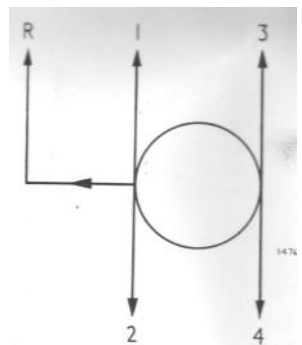
with the Moss gearbox. The overdrive unit operates in top gear only and reduces the engine speed in relation to road speed. This permits higher road speed with lower engine speed (rpm) and gives better fuel economy, reduced engine wear and often quieter operation on the highway. The A-type overdrive is renowned for its reliability and rarely produces problems.

There were two slightly different versions of the A-type overdrive attached to the Moss gearbox. The 3.4 litre 'S'-type unit is no. 28/61474 and the 3.8 litre unit is 28/63028. There were different front casing assemblies and some internal differences.

Overdrives were fitted to the Moss gearbox and a 3.77:1 differential ratio. This gives an effective differential ratio of 2.933:1 and reduces engine speed from 3409 rpm to 2652 rpm at 70 mph.

Next Newsletter – the Jaguar all-synchromesh gearbox and compact overdrive.

"The Moss gearbox was the only manual Jaguar gearbox until Brown's Lane developed its own, more refined, four-speed all-synchromesh gearbox introduced in 1965."



Moss Gearbox shift pattern

Originality—Early Changes

At first glance it appears that our beloved 'S'-type was unchanged during its nearly five years of production. But this is not so. Although the term had not yet been coined, Sir William Lyons believed in "continuous improvement." There were literally hundreds of changes and improvements 'under-the-skin.' These are well documented in Service Bulletins and Spare Parts Bulletins.

As an example of these improvements, *Spare Bulletin* Q.85, dated March 1964, documents a separate horn earth lead which was implemented to replace the earth lead incorporated in the forward wiring harness. How many 'S'-types were affected? The separate earth lead was introduced on the 2nd lhd and rhd 3.4 litre cars, the 29th lhd 3.8 litre and the 141st rhd 3.8 litre. At the same time rhd cars with power steering were fitted with different horn brackets to give more clearance between the horns and power steering hoses.

This is the first in a series of three articles documenting the more obvious changes – those that can be seen and determine the exact specification for a car's build date. In this issue we will cover 'early' cars, followed by 'late' cars and finally 'last' cars - those affected by the cost-cutting measures implemented when Jaguar was sold to British Leyland.

In April 1964, both Mk2s and 'S'-types were fitted with a longer (27 in.) battery tray drain tube to carry below the brake lines. This change commenced at chassis num-

bers:

	<u>rhd</u>	<u>lhd</u>
3.4 litre	1B1119	1B25046
3.8 litre	1B50550	1B75147

Dunlop's newly introduced SP41 radial tyres (185x15) replaced the original Dunlop RS5 6.40x15 bias ply tyres as standard equipment on 'S'-types in June 1964. While the tyre change is now moot as most 'S'-types will currently be fitted with radial tyres, what is significant is that the speedometer also changed to adjust for the difference in tyre rolling radius. See the 'Speedometer' article in this issue of the *Newsletter* for full information.

Engine lifting brackets were added to the XK engine in all Jaguar models ('S'-type, Mk2, MkX and E-type), in August 1964. Previously, removal of the engine/gearbox unit required the use of the Engine Lifting Plate. This change required longer cylinder head studs between cylinders 1 and 2 and 5 and 6. This change commenced at 3.4 litre engine number 7B1890 and 3.8 litre 7B52362. This means that 'S'-types before that should not have engine lifting brackets.

The 'Automatic' emblem on the trunk lid of cars equipped with an automatic gearbox was no longer fitted at chassis numbers:

	<u>rhd</u>	<u>lhd</u>
3.4 litre	1B1568	1B25172
3.8 litre	1B51247	1B75791

The new Jaguar 4-speed all synchromesh gearbox, with a new overdrive unit, was fitted from chassis numbers:

	<u>rhd</u>	<u>lhd</u>
3.4 litre	1B2192	1B25301
3.8 litre	1B52078	1B76310
Plus		1B52034 and

1B52036

Because of revised speedometer drive gears in the new overdrive unit, a new speedometer instrument is required. Again, see the 'Speedometer' article for full details.

In January 1965, both the 'S'-type and MkX were equipped with a re-designed jack. This change occurred at 'S'-type chassis numbers:

	<u>rhd</u>	<u>lhd</u>
3.4 litre	1B2399	1B25314
3.8 litre	1B52322	1B76554

The change from Lucas 2SJ to Lucas 5SJ Screen Jet windscreen washer in April 1965 was fully detailed in *Newsletter* Vol. 5, No. 11.

Also in April 1965, commencing with chassis numbers:

	<u>rhd</u>	<u>lhd</u>
3.4 litre	1B3232	1B25466
3.8 litre	1B53494	1B77354

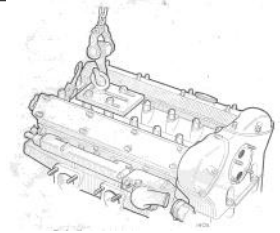
'S'-types were fitted with a revised gauze screen in the scuttle ventilator lid.

Coat hooks were fitted to the Cant Rail Rear Caping from chassis numbers:

	<u>rhd</u>	<u>lhd</u>
3.4 litre	1B4123	1B25555
3.8 litre	1B54457	1B77900

Dealers and distributors were told that the coat hooks could be fitted to earlier cars provided that all of the 22 parts listed as required were used.

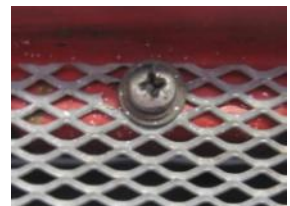
To comply with new laws in the state of New York, USA all Jaguars exported to the USA after September 1, 1965 were fitted with a traffic hazard warning device as standard equipment. The original 25 ampere in-line fuse (14 amps S.A.E. rating) was increased to 35 amperes (20 amps S.A.E. rating) in March 1967.



The Engine Lifting Plate (above) was required before lifting brackets were added to XK engines (below).



Early woven wire scuttle vent screen (above) - late expanded metal screen (below).



Coat hooks were not fitted to early cars



'Automatic' emblem on the trunk lid of early cars - not late cars

'S'-type Speedometers

It is surprising to see how many different speedometer instruments were fitted to 'S'-types – until you consider that the correct-reading speedometer is a function of: gearbox (2 versions); overdrive (fitted or not); differential ratio (2 offered); and tyre size (6.40x15 bias ply or 185x15 radial). 'S'-type speedometers all carry the Smiths code, S.N. 6326, followed by a 'slash' number, /xx, appropriate, to the variables above.

The table below will help identify which speedometer is correct for your car's configuration and, therefore, should give the most accurate reading.

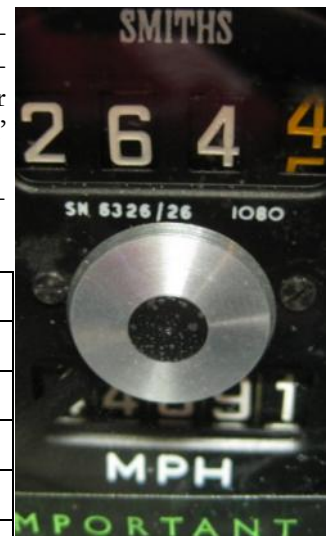
Gearbox	Diff. ratio	Tyres	Reading	Speedo No.
Moss	3.54:1	6.40x15 RS.5	miles	SN.6326/15
Moss	3.54:1	6.40x15 RS.5	kilometers	SN.6326/17
Moss	3.54:1	185x15 SP.41	miles	SN.6326/30
Moss	3.54:1	185x15 SP.41	kilometers	SN.6326/31
Moss	3.77:1	185x15 SP.41	miles	SN.6326/26
Moss	3.77:1	185x15 SP.41	kilometers	SN.6326/27
Moss/OD	3.54:1	6.40x15 RS.5	miles	SN.6326/09
Moss/OD	3.54:1	6.40x15 RS.5	kilometers	SN.6326/11
Moss/OD	3.54:1	185x15 SP.41	miles	SN.6326/26
Moss/OD	3.54:1	185x15 SP.41	kilometers	SN.6326/27
Moss/OD	3.77:1	6.40x15 RS.5	miles	SN.6326/12
Moss/OD	3.77:1	6.40x15 RS.5	kilometers	SN.6326/14
Moss/OD	3.77:1	185x15 SP.41	miles	SN.6326/28
Moss/OD	3.77:1	185x15 SP.41	kilometers	SN.6326/29
Synchro/OD	3.77:1	6.40x15 RS.5	miles	SN.6326/09
Synchro/OD	3.77:1	6.40x15 RS.5	kilometers	SN.6326/11
Synchro/OD	3.77:1	185x15 SP.41	miles	SN.6326/26*
Synchro/OD	3.77:1	185x15 SP.41	kilometers	SN.6326/27 ¹
Automatic	3.54:1	6.40x15 RS.5	miles	SN.6326/09 ²
Automatic	3.54:1	6.40x15 RS.5	kilometers	SN.6326/11
Automatic	3.77:1	6.40x15 RS.5	miles	SN.6326/12 ³
Automatic	3.77:1	6.40x15 RS.5	kilometers	SN.6326/14
Automatic	3.54:1	185x15 SP.41	miles	SN.6326/26
Automatic	3.54:1	185x15 SP.41	kilometers	SN.6326/27
Automatic	3.77:1	185x15 SP.41	miles	SN.6326/28
Automatic	3.77:1	185x15 SP.41	kilometers	SN.6326/29

*some cars may be incorrectly fitted with /28

¹some cars may be incorrectly fitted with /29

²not cars exported to USA

³cars exported to USA



'S'-type speedometers all carry the Smiths code, S.N. 6326, followed by a 'slash' number, /xx, ...

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**Next Issue:
'S's in Films**

JAGUAR
3.4 & 3.8 'S' MODELS



The International 'S'-TYPE Register

The International Jaguar 'S'-type Register is a non-affiliated Registry of 1963 - 1968 3.4 & 3.8 'S'-type Saloons. It was established to promote the preservation, maintenance and restoration – but mostly the enjoyment – of Jaguars 'Best Sports Saloon'. The Register endeavors to record details of every 'S'-type Jaguar produced. Since its founding in 1999, the Register has received data on 400+ cars from fifteen countries. There is no cost to register an 'S'-type.

The International Jaguar 'S'-type Register publishes an irregular *Newsletter* now in its fifth volume. The first four volumes, comprise 35 issues, of 205 pages with 246 'S'-type-specific articles. The Register also has an extensive reference library containing nearly 1000 pieces of 'S'-type information, articles, road tests, parts catalogues and sales literature, which are available to Register members – either in full colour hard copy or full colour .pdf format.

Letters

Rear Wheel Arches - 2

David,

This is an update. I expect the car from the painters about end May. It will take all next winter to put it back together again.
Mike O'Brien
1B77785BW



Jaguar 3.8 'S' Sedan

*“A different
breed of cat”*

Hello David,

Thank you for all the support and coverage in the most recent Newsletter! I just finished converting my '64 3.8 'S' to a pinion steering assembly out of a late model XJS.

Rather than buying the kit, which I found out is out of stock at XKs Unlimited right now, I made the needed parts myself. The kit uses the English-made rack that was used on the XJ6 and earlier than '93 XJS and is prone to leak. I bought a rebuilt, better quality German ZF-made unit, which is interchangeable with the earlier English made one. I fabricated the mounting bracket and made the other needed alterations to the lower steering column and tie rods. I retained the generator and stock power steering pump and had a hydraulic shop make the hoses to order.

What an improvement this project has made to the car's road feel! The steering is much more precise.

I am doing the same conversion on a customer's 'S'-type right now as well. Keep up the great work on the Newsletter!

Garrett Bourque

GB Services Auto Restoration

98 Bunker Hill Road

Jefferson, Maine 04348

<http://www.gbservicesusa.com/>

(Continued from page 2)

sion. Although at a glance similar to the Mk2, the 'S'-type's front end styling was substantially more modern, complete with wrap-around indicators and recessed lamps. Bumpers were slimmer – front and rear, and the new tail created a balanced proportion most consider more attractive than the Mk2's stumpy equivalent. Inside, the car shared more with the MkX than the Mk2. These traits all helped confirm the 'S'-type as a car for the motorist in a hurry who appreciated the luxury of the MkX with the speed of the Mk2... Indeed, the 'S'-type, remains probably the finest classic Jaguar

saloon of all, combining all the performance, luxury, and practicality criteria in the best of Jaguar packages.”

The full test report of the 'S'-type is reproduced on page 2. The editors' conclusion? They placed it first saying, “...the 'S'-type has always been everything a Jaguar saloon should be. Mean looking, not too big, it is a cocktail of the Mk1's fifties charisma and the sixties sophistication of the MkX and XJ.” Running a close second was the 420G, followed by the MkIX, then Mk1 and Mk2.

JAGUAR
3.4 & 3.8 'S' MODELS

