



Machine Dating

Where's it stamped?

A Guide to Ariel Engine & Frame Numbers

With a long history, it should be no surprise that Ariel frame and engine numbers vary somewhat throughout the years. This short document attempts to illustrate locations of frame and engine numbers and to have a look at typical forms, letter spacing and fonts.

Throughout this document, words are used to describe locations on the motorcycle. Given that Ariel owners are many and varied and all over the world, we will use this convention:

- Left – refers to left hand side of the machine when sitting astride in the riding position
- Right – refers to right hand side of the machine when sitting astride in the riding position

Basics

There are a few constants that apply to all machines:

- All engine and frame numbers are stamped. Anything that is raised is probably a casting number, though occasionally casting numbers are also stamped – usually on Mk2 Square Fours
- Engine and frame numbers consist of a letter or number of letters followed by a number.
- Engine and frame numbers do not usually match except in the case of the 2 stroke machines and the Pixie. Square Fours occasionally have matching numbers, since they do not share frames with other models – but this is not by design.
- Engine and frame numbers were recorded in the factory dispatch books. We have those dispatch books from 1927 until the end of production and so most machines can be found in the written record.

Where there is no entry for a machine in the despatch record, we will date it from numbers around the missing frame number or from design features compared to sales literature and other publicity.

Where to look

Veteran Machines

Early machines may have engine or frame numbers in a variety of locations if they have them at all. This 1920 White and Poppe Ariel has the engine number below cylinder block on the left side, which was to become the normal position for Ariel, and the frame number on the steering head also on the left side.





Machine Dating

On many machines the frame number is stamped on the lug above the gearbox and is not easy to see.



Black Ariels

1926-1930 machines begin the long Ariel tradition of locating the engine number on the left side of the crankcase below the cylinder block.

Often the engine number is repeated below one of the forward-facing engine lugs on the crankcase again on the left side.





Machine Dating

The frame number is located immediately below the saddle on the forged lug on the right side



1931-1955

Continuing previous practice, Ariel engine numbers in this period are located on the left side of the crankcase below the cylinder block.

The engine number is repeated below one of the forward-facing engine lugs on the crankcase, again on the left side, between the engine plates.





Machine Dating

Frame numbers for both rigid and Anstey frames continued in the same position under the seat on the right side



1954-1958

With the advent of the swinging arm frame, the location of the frame number moved a position on the left side of the steering head forging immediately above the front down tube.





Machine Dating

The Mk2 Square Four frames are an exception. Despite these continuing with the Anstey frame, the location of the frame number moved a position on the right side of the steering head forging immediately above the front down tube.



The engine number remained in the previous position.





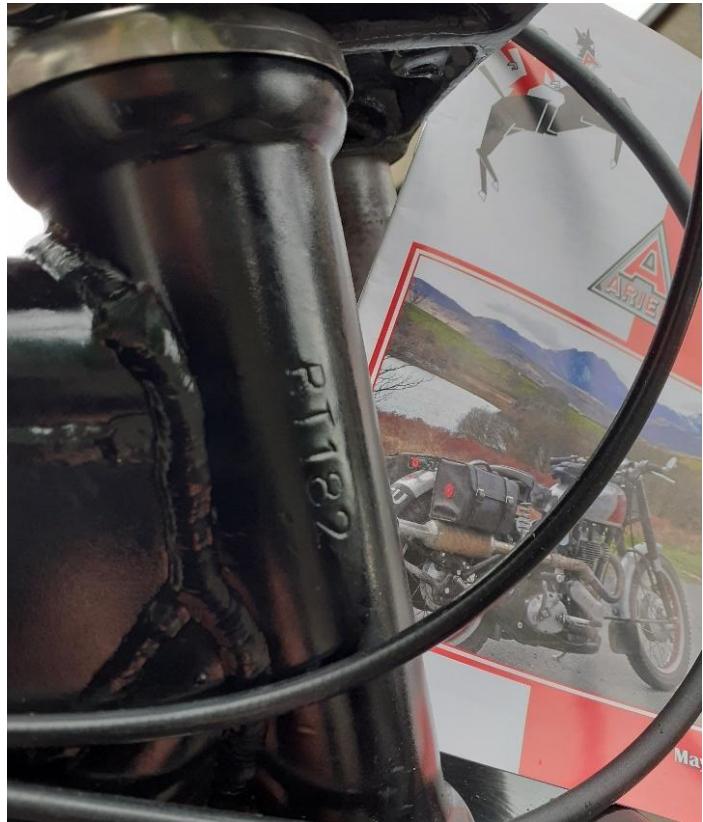
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HT

This unusual location might arouse suspicion – although the number is genuine and the font looks normal, it is in a very unusual location and the punch is very shallow.

However, it's not the only existing example of an HT frame numbered in this way.

I'll update this section when I am convinced that all HT frames were numbered like this!



HS

HS frames are stamped in the conventional position





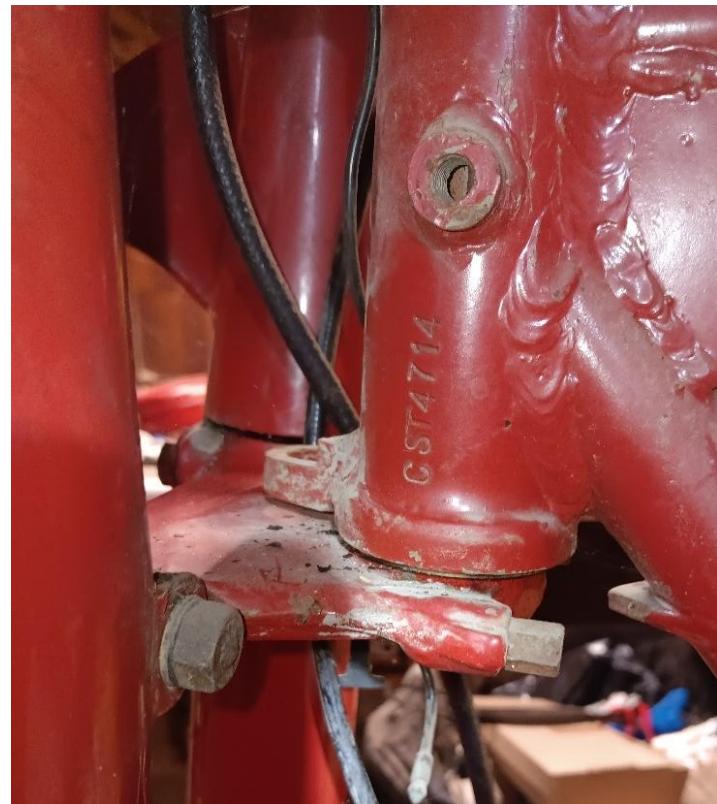
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HT & HS engine numbers are below the cylinder block on the left side in the usual position.



Post War Colts

Colts, as a 'cloned BSA' follow BSA practice in frame numbering in that the number is stamped on the left side of the steering head below the fuel tank mount.





Machine Dating

Colt engine numbers are below the cylinder block on the left side in the usual position.

Note the serif font used on this BSA-manufactured engine.



Leader and Arrow

Leader and Arrow frame numbers are not stamped directly on the frame. Instead, there is an alloy plate riveted beneath the seat which carries both the frame and the engine number.





Machine Dating

Leader and arrow engine numbers are stamped on the crankcase below the cylinder block on the near side.



Pixie

In a similar way to leaders and arrows, Pixie frame numbers are not stamped directly on the frame. Instead, there is an alloy plate riveted beneath the seat which carries both the frame and the engine number.





Machine Dating

Pixie engine numbers are stamped below the cylinder block on the right side of the machine



Ariel 3

A final word about the BSA 'Ariel 3' moped. These do not have a stamped frame number - the number is carried on a plastic sticker on the steering head, and these are often missing or damaged.

This is not a huge problem since there are no factory records to check them against anyway!

Refer to EACC; these machines are of BSA manufacture.



Fonts, Patterns and Number Forms

Engine and frame numbers consist of a letter or number of letters followed by a number; A summary of these and the associated gearbox numbering is shown later in this document.

Some observations:

- Fonts vary slightly between engine & frame stampings
- SQ4 engine numbers appear to use smaller fonts
- Punches held by hand – neat, but apparently not in a jig. There is often some variation in alignment, verticality and spacing.



Machine Dating

- There is rarely any punctuation
- Characters are deeply punched on iron lugs – perhaps done hot
- Characters punched on riveted aluminium plates (Leaders, Arrows & Pixies) are very shallow
- Engine and frame numbers do not usually match except in the case of the 2 stroke machines and the Pixie. Square Fours occasionally have matching numbers, since they do not share frames with other models – but this is not by design.
- Engine numbers have often been polished or ground such that appear less deep

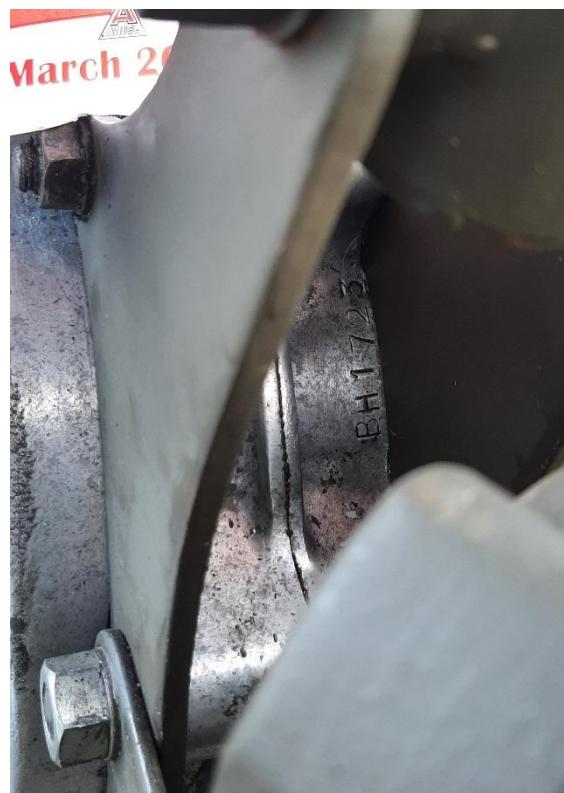
Many examples of legitimate Ariel stamped numbers are shown in the foregoing pages. Another, slightly more unusual example is shown below:



Small G is typical of Ariel practise. Its significance is not known – if it has any!

Letter spacing is usually quite neat, with no consistent grouping of numbers and letters except in the case of 'Star' engine suffix letters.

Here is an example of the second engine number stamping found on most machines – between the engine plates, facing forward. This can be very useful if your engine number has been polished out of sight from the conventional position.





Machine Dating

Suffixes to Engine Numbers

The despatch books record variations to standard specifications for each machine, including special finishes, optional items and changes to standard specifications. Engine numbers are occasionally provided with a suffix to reflect a change of specification, for example:

- HC = FH with 7.25:1 pistons, standard camshaft 10551-54
- HCS = FHS with 7.25:1 pistons and 67-356 camshaft 10552-54
- HC8 = 8:1 or higher pistons and 67-356 camshaft 10552-54

Suffixes are not usually shown as part of the engine number, more normally as a separate group.



Problems with numbers

Powder coating is the obvious issue – it's easy for numbers to get filled up to the point where they are partially or completely invisible. The best thing is to ask your painter to mask the area before coating – the Dating Officer will not issue a certificate if he cannot see the number on the day the machine is inspected!

Restamping is unusual but not unknown – in these cases it's much more difficult to date the frame, though if you have such a machine we will date from other features. The DVLA may take their own view and issue a modern VIN or a Q plate.



Engine numbers are a bit less prone to these sorts of problems, though engine numbers do get polished into oblivion occasionally.



Machine Dating

Ariel Engine, Frame & Gearbox Numbers

The following list has been developed over many years by AOMCC stalwarts Geoff Thomasson, Ralph Hawkins and Roger Gwynn, who maintains and improves this list today. Behind this simple list is a vast number of records of machines too complex to publish here.

The model year runs from the beginning of September of the previous year (usually).

Motorcycles despatched between 1926-38

Model	Year	Engine	Rigid	G'box	Notes
A, B, C, D	1926	P	P	SL	
A, B, C, D, E	1927	V	V	Q	
A, B, C, D, E	1927	V	V	Q	
A, B, C, D, E	1928	W	W	Q	S-A on A only
A, B, C, D, E - Frames	1928	W	W all	Q	
LB, LF	1929	L	L	R	
A, B, E, F	1929	H	H	S-A/Q	S-A on A only
LB, LF, LG	1930	M	L	R	
A, B, E, F, G	1930	K	K	S-A/Q	S-A on A&E only
A, B, E, F, G - Frames	1930	K	K 100-6304	S-A/Q	S-A on A&E only
LB, LF	1931	J	J	R	
MF	1931	A	J	R	
VF	1931	N	K or N	T	
VB	1931	N	K or N	S-A	
SB, SF, SG	1931	S	S or D	BA	Production continued to April 1932 using D frames from S2911. 1932 production started in Sep 1931
4F	1931	R	R	BA	
LB, LF	1932	E	B	R	
MA, MB, MF, MH	1932	B	B	R	
VB, VG, VH	1932	C	C	T	Frame nos. continue from 1931
SB, SG	1932	D	D	BA	
4F5	1932	R	T	BA	
4F6	1932	T	R or T	BA	Frame nos. continue from 1931
Fleet	1932	FL	FL	BAR	
LH	1933	DA	Y	C	
MA3	1933	BA	E	?	
NF3	1933	BA	Y	T	
NF4, NH	1933	BA	Y	C	
VA3, VF3	1933	CA	Y	T	
VA4, VB, VF4, VG, VH	1933	CA	Y	BA	
4F5,6	1933	TA	Y	BA	
Fleet	1933	FL	FL	BAR	
LF3	1934	EA	Y	TP	
LF4, LH	1934	EA	Y	C	
NF3	1934	FA	Y	T	
NF4, NH	1934	FA	Y	C	
VA3, VF3	1934	GA	Y	T	
VA4, VB, VF4, VG, VH	1934	GA	Y	BA	



Machine Dating

Model	Year	Engine	Rigid	G'box	Notes
4F6	1934	UA	Y	BA	
Fleet	1934	FL	FL	BAR	
LF3	1935	HA	Y	T	
LF4, LH	1935	HA	Y	C	
NF3	1935	JA	Y	T	
NF4, NH	1935	JA	Y	C	
VA3, VA4, VF3, VF4, VB, VG, VH	1935	KA	Y	T/BA	T on 3 speed +EX99
4F6	1935	WA	Y	BA	
Fleet	1935	FL	FL	BAR	
LG, LH	1936	AB	F	C	
NG, NH	1936	BB	F	C	
VB, VG, VH	1936	CB	F	BA	
4F6	1936	XB	Y	BA	
4G	1936	DB	P	BA	
Fleet	1936	FL	FL	BAR	
LG, LH	1937	AC	XF	C	
NG, NH	1937	BC	XF	C	XF numbers continue from 1936
VB, VG, VH	1937	CC	XF	BA	
4F	1937	EC	P	CP	
4G	1937	DC 101-650	P	BA	overlaps with 1938
LG, LH	1938	AD	XG	CP	
NG, NH	1938	BD	XG	CP	
VB, VG, VH	1938	CD	XG	BA	
4G	1938	DC 595-650	P	BA	overlaps with 1937
4G	1938	DD	P	BA	DD nos. run on from DC

Motorcycles despatched between 1939-45

Model	Year	Engine	Rigid	Plun	G'box < Jan	G'box > Jan	Notes
OG, OH	1939	AE	M		HP		
NG, NH	1939	BE	XG	BX	CP		
VA	1939	CE	XG	BX	CP		
VB, VG, VH	1939	CE	XG	BX	BA		
4F	1939	EE	P	AX	CP		
4G,4H	1939	DE	P	AX	BA		
OG, OH	1940	AH	M		HP		
NG, NH	1940	BH, BJ	XG	BX	CP	101-3299	There are 12 BJ numbers in BH 1424-39 sequence, presumably BJ was to be 1941 civvy, then re-used for 1948 'V'. The only BJ number from this sequence in the register is a 1948 BJ with matching 1948 frame.



Machine Dating

Model	Year	Engine	Rigid	Plun	G'box < Jan	G'box > Jan	Notes
VA, VB, VG, VH, W/VA	1940	CH	XG	BX	BA		
4F	1940	EE, EEH, EH	P	AX	BA		EEH engines are EE engines with H suffix added to denote 1940
4G,4H	1940	DH	P	AX	BA		
NH, NG (civilian)	1941 to 1945	BH 102-808	XG				
W/NG Army		BH 421----	XG	From	CP		
W/NG Navy		NBH	XG	BH	CP		
W/NG R.A.F.		RBH	XG	625	CP		

Motorcycles despatched between 1946-53

Model	Year	Engine	Rigid	Plun	G'box < Jan	G'box > Jan	Notes
NG, NH	1946	BK 101-3356	AP, BP		G6 J45	G6	Prefixes entered as AP/BP unless proved otherwise.
VG, VH, VB	1946	CK 101-2955	BP		G7 J45	G7	A few in 74
4G	1946	DH 268, 273-6	P		G8 J45	G8	
4G	1946	DK	P, XP		G8 J45	G8	

No summer changeover in September 1946. Production & numbering continued into 1947 & 48.

Singles - The AP sequence was used for W/NG frames, numbered separately from the BP sequence but generally prefix is not listed so prefix of AP/BP has been used unless confirmed, last confirmed is Aug 1946. There can be 3 frames with the same number due to many numbers being duplicated. BP frames start 1001 in August 1945. Approx year change 1947 BP 3920, 1948 10300

SQ - Some early 1946 SQ4 have 'P' frames but at least some 'P' frames were stamped 'XP' resulting in some duplicate 'XP' numbers, see DK 142/XP 1831. The 'XP' sequence began at 1000.

NG, NH	1947	BK	BP	BX	G6	G6	
VG, VH, VB	1947	CK	BP	BX	G7	G31 K46	
4G	1947	DK	XP	AX	G8	G32 A47	
NG, NH	1948	AJ	BP	BX	G30	G41 D48	
VG, VH, VB	1948	BJ, EX	BP	BX	G31	G48 D48	
KG, KH	1948	PT	DX	CX	G50	G67 D48, G76 G48	
4G	1948	CJ	XP, GR	AX	G32	G49 D48	Production continued to Jan 1949
NG, NH	1949	DJ	RF	SF	G75	G92 M48	



Machine Dating

Model	Year	Engine	Rigid	Plun	G'box < Jan	G'box > Jan	Notes
VG, VH, VB	1949	EJ	RF	SF	G77	G90 K48	
VCH	1949	CO 101-159	COM	SF	G70	G90	
KG, KH	1949	HT	HH	HS	G76	G89 M48	
MKI	1949	FJ	GR	GS	G78	G91 A49	Production did not start until Jan 1949
NG, NH	1950	KL	AB	AC	G92	G108 M49	
VG, VH, VB	1950	MN	AB	AC	G90	G107 M49	
VCH	1950	CO 144-215	COM, AB	AC	G70, G80	G90, 98, 107	
KG, KH	1950	OP	GD	LL	G90	G107 M49	
MKI	1950	JJ	TD	CW	G91	G106 M49	
NH	1951	RA	WA	SA	G108		
VH, VB	1951	RB	WA	SA	G107		
VCH	1951	CO	COM, WA	SA	G107		
KG, KH	1951	OP, RC	WB	SB	G107	G108	
MKI	1951	RD	WC	SC	G106		
NH	1952	TB	OA	SD	G108	GB5	
VH, VB	1952	TC	OA	SD	G107	GB6 M51	
VHA	1952	TCA	OA	SD	G107	GB6 M51	
VCH	1952	TR	OR		G107, GB6	GB9 GB10	
KH	1952	TE	OB	SE	G107	GB6 A52	
MKI	1952	TM	OC	SV	G106	GB7	
NH	1953	XA	AM	AS	GB5		
VH	1953	XC	AM	AS	GB6		
VHA	1953	XD	AM	AS	GB6		
VCH	1953	XE	MA		GB6 GB10		
VB	1953	VB	AM	AS	GB6		
KH	1953	XF	BW	BS	GB6		
KHA	1953	XFA	BW	BS	GB6		
MKI	1953	TM, XH	EJ	ES	GB7		
MKII	1953	XJ	EJ	ES	GB7		

Motorcycles despatched between 1954-58

Model	Year	Engine	Rigid	Plun	S'arm	G'box	Notes
LH	1954	PA		KN		GB30	
NH	1954	PB	KW		KS	GB5	



Machine Dating

Model	Year	Engine	Rigid	Plun	S'arm	G'box	Notes
VH	1954	PD			KS	GB6	
HSI, II, III	1954	PS			KSS	GB34	
HT	1954	PT-54, PD	KT, TF			GB11	
VB	1954	PE	KW	VS		GB6	
KH	1954	PH			KS	GB6	
FH	1954	PJ			KS	GB25	
MKII	1954	PL		KR		GB7	
LH	1955	LA		LS		GB30/33	
NH	1955	LB			DU	GB5	
VH	1955	LC			DU	GB6	
HSI, II, III	1955	LK			DUS	GB5/6/34	
HT	1955	LJ	TF, DU		EXP	GB11	
VB	1955	LD	RF-55		DU	GB6	
KH	1955	LE			DU	GB6	
FH	1955	LF			DU	GB25	A few have GB33 not the LH one!
MKII	1955	GL		PS		GB7	
LH	1956	ALA		MT		GB33	
NH	1956	MA			PR	GB39	
VH	1956	MB			PR	GB40	
HSI, III	1956	MH			PRS	GB45	
HT	1956	MJ			RT	GB47	
VB	1956	MC			PR	GB40	
KH	1956	MLE, MD			PR	GB40	
FH	1956	MLF			PR	GB44	
MKII	1956	ML 101-770		GM		GB7	
LH	1957	BLA		ST		GB33	
NH	1957	AMA			APR	GB39	
HT3	1957	AMA			RT	GB47	
VH	1957	AMB			APR	GB40	
HSI, III	1957	NH			PRS	GB45	
HT5	1957	NJ			RT	GB47	
VB	1957	AMC			APR	GB40	
KH	1957	AMD			APR	GB40	
FH	1957	NLF			APR	GB44	
MKII	1957	NML 646-1316		GM		GB7	
LH	1958	CBLA		CST		GB33	Some stamped BLAC
NH	1958	CAMA			CAPR	GB39	
HT3	1958	TH			CRT	GB47	
VH	1958	CAMB			CAPR	GB40	
HSI, III	1958	CNH			CPRS	GB45	
HT5	1958	CNJ			CRT	GB47	
VB	1958	CAMC			CAPR	GB40	
FH	1958	CNLF			CAPR	GB44	
MKII	1958	CNML		CGM		GB7	



Machine Dating

Numbers are in one sequence from 1956 to 1958, only the prefix changing to denote the year. There is a lot of overlap in some years.

Leader and Arrow

Model	Year	Engine & Frame	Gearbox
Leader	1958-60	T101 A - T17,441 A	GB55
Arrow	1959-60	T8,175 S - T17,440 S	GB55
Leader	1960-65	T16,708 B – T35,460 B	GB55
Arrow	1961-5/64	T16,796 T – T33,998 T	GB55
Arrow SS	1961-65	T20,384 G – T35,439 G	GB55
200 Arrow	5/64-65	T33,701 H – T35,506 H	GB58