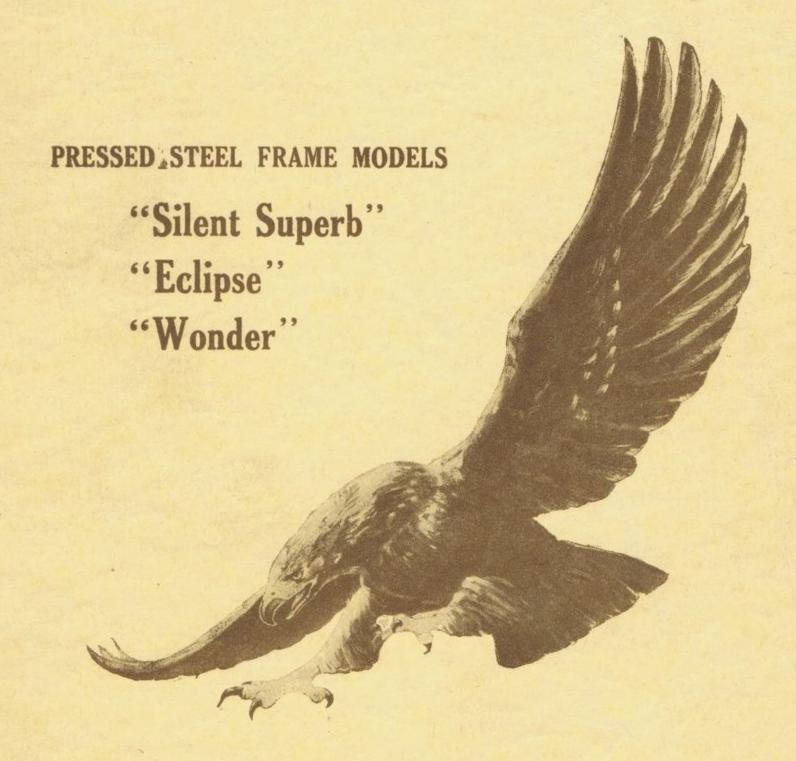
1932

INSTRUCTIONS AND PARTS CATALOGUE



THE COVENTRY-EAGLE CYCLE & MOTOR CO. LTD.

BISHOPGATE GREEN WORKS, FOLESHILL ROAD,
COVENTRY.

BEFRETOP FINE FREGO NZ

1932

INSTRUCTIONS AND PARTS CATALOGUE



THE COVENTRY-EAGLE CYCLE & MOTOR CO. LTD.

BISHOPGATE GREEN WORKS, FOLESHILL ROAD,

COVENTRY.

BEFFIRE FOR PONESFULVOS. NZ

Lors d'une commande de Pièces, il suffit de mentionner le numéro complet du moteur et les numéros des pièces détachées requises.

Bei Bestellung von Teile braucht man nur die komplette Motornummer anzugeben samt Nummern von den erwünschten Teilen.

Al transmitir pedidos de piezas de recambio, sirvanse Vds. indicar por completo el número del motor y los números de referencia de las partes que se necesita.

Nell'ordinazione dei pezzi di ricambio, pregasi quotare per intero il numero del motore ed i numeri di riferimento delle parti richieste.

Bij bestelling van onderdeelen, moet men enkel het motor-nummer aangeven en de lijstnummers der stukken of onderdeelen.

Ved Bestilling af Dele behøver man kun at angive det komplette Motornummer tilligemed Numrene paa de ønskede Dele.

BERNSFORMERS-CO-NZ

1932

OF EAGLE

WITH the introduction of an entirely new range of two-stroke machines we have endeavoured to illustrate the whole of the component parts as clearly and compactly as possible. By turning to the centre pages any detail item can immediately be recognised by the number given and the actual relation it bears to its particular unit. Being tabulated numerically it takes but a few seconds to locate both part and price.

Standardisation and interchangeability of parts enables us to supply spares and carry out repair work immediately, thus allowing us to offer that Service which it is the desire of every rider to obtain.

Detailed instructions are given on the efficient management of the machines, and it is hoped that even the experienced driver will derive benefit therefrom. The novice will find useful information and advice on general overhauling and adjustment.

The Company will at all times be pleased to offer help to its clientele.

THE COVENTRY-EAGLE CYCLE & MOTOR CO. LTD.

Bishopgate Green Works, Foleshill Road,

COVENTRY.

'Phone 4017-4018.

'Grams: "Eagle, Coventry."

WHEN ORDERING PARTS

QUOTE ALWAYS FRAME AND ENGINE NUMBERS IN FULL.

The Frame Number will be found stamped on the head of frame, underneath steering column, and the Engine Number on the crankcase immediately below the cylinder base, on near side.

Inland Parcel Post rates are :-

The minimum charge by post therefore is **10d.** and for small items it is economical to remit.

Parts too heavy for post can be sent by passenger train at above C.O.D. rates extra to the Railway charge. When goods are despatched in this way a receipt is sent by C.O.D. post to consignee who pays the postman and can then collect from nearest station.

DEPOSIT ACCOUNT.

Where it is preferred, we are prepared to open a Deposit Account if an amount of not less than Two Pounds (£2) is sent us. This ensures immediate despatch of parts to the value of credit outstanding. Balances of deposit accounts will be returned on demand. This system enables urgent orders to be sent by telephone or telegram and so dispenses with C.O.D.

ORDERS BY TELEGRAM.

When several parts are required, it is only necessary to quote the frame number, followed by article numbers, adding in the case of Engine, Carburettor and Gear Box parts only, column number at the end of first part No. to confirm model of machine.

e.g.—If you wish to order Piston, Rings, Gudgeon Pin, Small End Bush, Crankpin and Rollers for the 147 c.c. "Silent Superb" or "Eclipse" Engine the telegram will read:—

"Eagle, Coventry.

Frame 65000 send 30321, 3033, 3034, 3041, 3043, 3042. Sender."

For the 196 c.c. Engine and Carburettor, and the two-speed Box, use figure 2 after the first number.

Home Telegrams cost 1d. per word; minimum 1/-. Up to five figures are counted as one word.



SPECIAL REPAIR SERVICE.

It is generally the wish of the owner to have repairs and adjustments carried out at the factory. Arrangements have been made whereby machines sent to us have immediate attention, being dealt with by mechanics specialised in their work. When therefore more than minor adjustments are necessary it will be a distinct advantage both economically and for the rider's own satisfaction to have the machine sent to the works for attention.

ESTIMATES.

When a machine has been despatched, a letter of advice should be sent separately giving detail instructions of the work required. On receipt of machine an estimate is at once sent, including return carriage to client.

REGRINDING CYLINDERS.

Cylinders, providing they are not too badly worn, can be reground and oversize piston fitted complete with rings and gudgeon pin, at the following charges:—

147 c.c., 22/6. 196 c.c., 25/-. carriage extra.

CONDITIONS OF GUARANTEE.

If a defective part should be found in our motor cycles, motor cycle combinations or sidecars, or in any part supplied by way of exchange before referred to, it must be sent to us CARRIAGE PAID, and accompanied by an intimation from the owner that he desires to have it repaired or exchanged free of charge under our guarantee, and he must also furnish us at the same time with the number of the machine, the date of the purchase, or the date when the alleged defective part was exchanged, as the case may be.

Failing compliance with the above, such articles will lie here AT THE RISK OF THE OWNER, and this guarantee and any implied guarantee, warranty or condition shall not be enforceable.

We do not guarantee specialities, such as tyres, saddles, chains, lamps, etc., or any component parts supplied to the order of the purchaser differing from standard specification supplied with our motor cycle combinations, sidecars or otherwise.

Parts cannot be sent free of charge pending receipt of the old parts. If it is not convenient to release damaged parts until arrival of new parts, remittance should be made to cover value of the new parts, which will be refunded if the claim is substantiated.



PARTS LIST.

Part	Description.	1	2
No.		147 c.c.	196 c.c
	ENGINES:		
		s. d.	s. d.
2999	Cylinder. Single port	25 6	42 6
3000	Double post	37 6	
,001	,, 200010 Post		
3002	Release valve body		1 6
3003 3004	COVOR	1 6	- 650
3005	Stars		1 0
3006	,, ,, washer		1
3007	" " spring	—	3
3008 3009	clamp serow		2 2
3010	,, stem nut	—	2
3011	,, valve	6	-
3012 3013	,, ,, spring	2	
3014	,, ,, cover clamp	1 6	_
3015	,, ,, ,, fixing screw	2	-
3016 3017	" ,, cable fixing screw	1	_
3017	,, ,, lever	0	
	,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,,		
3019	Cylinder inlet stud	3	3
3020	,, ,, ,, nut	2	1
3021	,, ,, ,, washer	1]
3022	" " joint washer	3	(
3023	Crankcase stud	3	3
3024	,, ,, nut	2	1
3025	,, ,, ,, washer	1	1
3026	" Cylinder joint washer	3	4
3027 3028	,, bolt (long)	2	43
3029	,, ,, ,, washer	1	j
3030	" " " and washer	4	4
3031	" joint washer		
3032	Piston	8 6	12 (
3033	,, ring	1 2	1 3
2021			
3034 3035	Gudgeon pin	1 3	1 9
3333	" " сігспр	2	
3036	Crankcase each ha		17
3037 3038	" bearing bush	3 0	4
3039	,, drain plug		1
3040	Connecting rod with small end bush	9 0	10
3041 3042	,, ,, small end bush se	1 6 t 2 0	1 6
3042	,, ,, rollers se	2 0	2
3043	Crankpin	4 6	4 (
3044	,, nut	3	- 3
2045	Cuantahaft	16 47 0	
3045	Crankshaft each ha	lf 15 0	15 (
3046	Engine sprocket (double)	7 6	_
3047	" ,, crankshaft nut washer	1	
3048	nut	5	2
3049 3050	,, , , large 16T		3
3051	", ", lockring		
3052	,, ,, washer		7
	,, ,, centre		7
3053			1

3055 3056 3057 3058 3059 3059 3070 3071 3072 3073 3074 3075 3076 3077 3078 3079 3080 3081 3082 3083 3084 3085 3086 3087 3088 3088 3089 3090 3091 3092 3093	Engine " CARB Body " ca " ga " ga " so "	on pipe OURETT Our of the control	ntinu nut ,,, ORS.	cover spanner						s. d. 14 6 6 3 6 6 0	s. d. 14 6 6 6 3 6
3055 3056 3057 3058 3059 3059 3071 3072 3073 3074 3075 3076 3077 3078 3079 3080 3081 3082 3083 3084 3085 3086 3087 3088 3089 3090 3091 3092 3093	Engine " CARB Body " ca " " final " st	flywheel "" on pipe "" ourett	ors.	cover spanner	:::					14 6 6 6 3 6	14 6 6 6 3 6
3055 3056 3057 3058 3059 3059 3071 3072 3073 3074 3075 3076 3077 3078 3079 3080 3081 3082 3083 3084 3085 3086 3087 3088 3089 3090 3091 3092 3093	Engine " CARB Body " ca " " final " st	flywheel "" on pipe "" ourett	ors.	cover spanner	:::					14 6 6 6 3 6	14 6 6 6 3 6
3055 3056 3057 3058 3059 3059 3071 3072 3073 3074 3075 3076 3077 3078 3079 3080 3081 3082 3083 3084 3085 3086 3087 3088 3089 3090 3091 3092 3093	CARB Body , ca , ca , ga , fin , so , st	on pipe " GURETT ible adju	nut "" ORS.	cover spanner	:::					14 6 6 6 3 6	14 6 6 6 3 6
3055 3056 3057 3058 3059 3059 3071 3072 3073 3074 3075 3076 3077 3078 3079 3080 3081 3082 3083 3084 3085 3086 3087 3088 3089 3090 3091 3092 3093	CARB Body , ca , ca , ga , fin , so , st	on pipe " GURETT ible adju	nut "" ORS.	cover spanner	:::					3 6	3 6
3057 3058 3059 3070 3071 3072 3073 3074 3075 3076 3077 3078 3079 3080 3081 3082 3083 3083 3084 3085 3086 3087 3088 3089 3090 3091 3092 3093	CARB Body , ca , ca , fi , sc , st	on pipe " " " " " " " " " " " " " " " " " " "	ORS.	spanner				•••		3 6	3 6
3058 3059 3070 3071 3072 3073 3074 3075 3076 3077 3078 3080 3081 3082 3083 3084 3085 3086 3087 3088 3089 3090 3091 3092 3093	CARB Body , ca , ca , ca , ga , fin , sc	on pipe " " " " " " " " " " " " " " " " " " "	ORS.		:::			***			_
3059 3070 3071 3072 3073 3074 3075 3076 3077 3078 3080 3081 3082 3083 3084 3085 3086 3087 3088 3089 3090 3091 3092 3093	CARB Body , ca , ca , ga , fin	URETT ap able adju	ORS.	***	•••					6 0	6 6
3070 3071 3072 3073 3074 3075 3076 3077 3078 3080 3081 3082 3083 3084 3085 3086 3087 3088 3089 3090 3091 3092 3093	CARB Body , ca , ca , ga , fin , so	URETT	ORS.	•••		***		***		1	E3 F1
3071 3072 3073 3074 3075 3076 3077 3078 3079 3080 3081 3082 3083 3084 3085 3086 3086 3087 3088 3089 3090 3091 3092 3093	Body ", ca ", ca ", ca ", ga ", fib ", so	ip ible adju	 ister								0 0
3071 3072 3073 3074 3075 3076 3077 3078 3079 3080 3081 3082 3083 3084 3085 3086 3086 3087 3088 3089 3090 3091 3092 3093	Body ", ca ", ca ", ca ", ga ", fib ", so	ip ible adju	 ister								
3071 3072 3073 3074 3075 3076 3077 3078 3079 3080 3081 3082 3083 3084 3085 3086 3086 3087 3088 3089 3090 3091 3092 3093	Body ", ca ", ca ", ca ", ga ", fib ", so	ip ible adju	 ister								
3071 3072 3073 3074 3075 3076 3077 3078 3079 3080 3081 3082 3083 3084 3085 3086 3086 3087 3088 3089 3090 3091 3092 3093	", ca	ip ible adju	ster								
3071 3072 3073 3074 3075 3076 3077 3078 3079 3080 3081 3082 3083 3084 3085 3086 3086 3087 3088 3089 3090 3091 3092 3093	", ca	ip ible adju	ster					4.7		12 6	
3073 3074 3075 3076 3077 3078 3080 3081 3082 3083 3084 3085 3086 3087 3088 3089 3090 3091 3092 3093	", ca	, ible adju	ster		***	***					12 6
3074 3075 3076 3077 3078 3079 3080 3081 3082 3083 3084 3085 3086 3086 3087 3088 3089 3090 3091 3092 3093	,, ca	ible adju	ister							1 6	-
3075 3076 3077 3078 3079 3080 3081 3082 3083 3084 3085 3086 3087 3088 3089 3090 3091 3092 3093	,, ge ,, fir ,, so ,, st	auze								4	1 3
3077 3078 3079 3080 3081 3082 3083 3084 3085 3086 3087 3088 3089 3090 3091 3092 3093	,, gi	auze	99	and nu	t						6
3078 3079 3080 3081 3082 3083 3084 3085 3086 3087 3088 3089 3090 3091 3092 3093	", so	xing clip									3
3079 3080 3081 3082 3083 3084 3085 3086 3086 3087 3088 3089 3090 3091 3092 3093	,, so				• • •					1 6	1 6
3080 3081 3082 3083 3084 3085 3086 3087 3088 3089 3090 3091 3092 3093	", st	rew	scre		•••		***			6 2	9
3082 3083 3084 3085 3086 3087 3088 3089 3090 3091 3092 3093	", st		sher							1	_
3083 3084 3085 3086 3087 3088 3089 3090 3091 3092 3093	**	rangler	plate							6	_
3084 3085 3086 3087 3088 3089 3090 3091 3092 3093		,,,	"	spring	The same of the sa					2 2	
3085 3086 3087 3088 3089 3090 3091 3092 3093	"	,,	"	screw	•••		•••		**	4	
3085 3086 3087 3088 3089 3090 3091 3092 3093				-							4000
3085 3086 3087 3088 3089 3090 3091 3092 3093	Float								4	2 6	-
3087 3088 3089 3090 3091 3092 3093	22									-	3 (
3088 3089 3090 3091 3092 3093	,, cl	namber o								2 6	
3089 3090 3091 3092 3093	,,		ckle	r, comp						9	3 (
3090 3091 3092 3093	"	"		asher					***	2	1
3092 3093	"	,, (compe	ensating				***		1822	
3093	"	,, t		n nut	vaehor					_	
	,,	" f	uel n	eedle v	vasher		***	***	***		
2004	"	,, 1						•••			
2004											
3094	Throttle	cable c	ompl	ete						3 0	
3095	"	,	**							2	3 (
3096 3097	"	slide		•••	•••				•••	2 6	3 (
3098	"	,, sr	oring							3	
3099	"	"	29							-	3
3100	,,		1.	with bar							2 (
3101 3102	**	"		oar only lisc and		e peg	•••	•••	***	=	1 (
3103	17	99	,, e	expande	r	e peg					1 (
3104	"	slide s								-	4
										1	1771111
2105	0									Same	2
3105 3106		piece and	d jet sher			• • •			,	ins tilin	3 (
0100	**	", wa	31101								
											1
3107	Taper n	eedle						***			(
3108	99	" spi								_	2
	Main je	t	***							5	-
	Pilot jet									5	-
	Jet plug			•••				***		1 0	_
3112	11 11	washer	• • • • • • • • • • • • • • • • • • • •				•••		***	3	-
3113	Air filte	r									3 6
DIIJ	an titte			***		•••	***	***	***	550.00	3 (
		IOTTO :	ENTO	TATE T	****	DD T	N				1 5 5
		JOTE	ENG	INE N	UMB	EK I	N F	ULL.			4-
	. QI	1000	200	2-00	~	000	<u> </u>				

Part No.	Description:			0	Pr
	FRAME ASSEMBLY.				
3120	Frames with roses				s. 90
3119	, cable rubber				70
3121	" head race housing				1
3122	" ball race (3 per set and 1 fork column	1)		each	2
3123 3124	,, engine plate, front		***	•••	8
3125	,, main bolt (1 or 2)				1
3126	,, ,, ,, (3)				1
3127	" " Hex. nut				
3128 3129	" " " Dome nut " for foot rest		•••		2
3130	,, ,, distance pieces (1 or 3)			set	2
3131	,, ,, pieces (2)				2 2 2
3132	,, ,, ,, ,, footrest			•••	4
3135 3136	" Saddle peak arm bolt and nut			•••	*
3137	,, ,, spring				1
3138	,, ,, bracket				1
3139	" " " bolt and nut	•••	•••	•••	
3140	Rear mudguard, hinged				10
3141	" ,, stay, double				2
3142	,, ,, single				3
3143 3144	,, ,, with handle ,, ,, handle strap		•••		3
3145	,, ,, nandle strap ,, bolt and nut, top				
3146	hottom				
3147	" Carrier				8 2
3148 3149	" No. Plate			•••	2
3150	,, ,, Bottom bolt and nut				
3151	" " " Distance piece				
3152	" Stand				14
3153 3154	" , Fulcrum bolt and nut	•••			1
3155	,, ,, bolt and nut				1
3156	" " Buffer				
3157	,, ,, ,, bolt and nut				
7			2		
3158	Footrest hanger				2
3159	" bracket				1
3160	" rubber			•••	1
	TANK.				
2/19/19/19					02020
3161	Tank				45
3162 3163	,, filler cap			•••	2
3164	,, bolt, front				
3165	,, ,, ,, rubbers			pair	
3166	" and coil fixing bolt				
3167 3168	", Petrol tap (two level)	***			4
3169	, Petrol tap (two level)				
3170	,, ,, ,, pipe				1
3171	" " " " fixing nut	• • • •		•••	
3172 3173	,, ,, ,, fibre washer ,, ,, pipe connection				
3174	,, ,, ,, ferrule			each	
3175	,, ,, ,, carb. fixing				1
3176 3177	,, ,, ,, ,, nut		•••	•••	1
51//	" " " " " " " " washer				
	SADDLE.				
					-
3180	Saddle complete with springs and brackets	***		***	20
3181	" front fixing bolt and nut " top only	***	•••	•••	8
419		***		each	1
3182 3183	" elastics			each	

No.				Desc	riptio	n.				Price
	FRAM	IE ASSE	EMBLY (ontinu	ed).					
3185	Legshiel	ld I II								S. 0
3186		DH w	vith inflate		•••	• • •				7
3187	"	Bracke		7		•••		•••	each	7
3188	"	Diack.		bolt an	d nut	• • • •			each	1
3189	"	17	shield							
3190	Chain C	over, from	nt							8
3191	"	" rea								8 5
3192	"			vasher						.5
3193	99	" bol	t, rear	***			***			
3194	Tool has	g with I	ock							7
3195	19 9	half a	nd nut							1
3196	Footbra	ke pedal						***		6
3197	"	""	lever			***				1
3198	77	"	nut, and bush					***		2
3200	"	"		Transet						-
3291	"	rod	,, 100							1
3202	27		oke end							1
3203	"	***								
3204	99	h	humb scr		•••			***		
3205 3206	27	A 100 A	arrel n spring		**			****		1
3207	"	"		bolt an	d nut					1
3200	,,	"	,,			*	1031			
3210	Change	speed lev	ver with l							4
3211	"		, knob							1
3212	>>	,,	, fulcru	m bolt		•••				
3213 3214	99		yoke o		sher	• • •				1
3215	22			-1-						
3216	99		,, rod							
3217	"	"	, , , , ,	locknut		***				2
3218 3219	"	" ga	te , bolt an							2
- 1								1445 -	- 1 4 477	1
								147 c.single Port	Double	196 0
	EXHA	UST PI	PES.					Single	Double Port.	
3220								Single	Double Port.	196 c
3221	EXHA Exhaust							Single	Double Port.	
3221 3222	Exhaust	pipe ,,						Single Port	s. d. 7 6	
3221 3222 3223	Exhaust	pipe						s. d.	Double Port.	s. d
3221 3222 3223 3224	Exhaust	pipe ,, ,, bo ,, cli	it and nut					Single Port	s. d. 7 6	s. d
3221 3222 3223 3224 3225	Exhaust	pipe ", ", bo ", cli ", '	it and nut					s. d.	s. d. 7 6	s. d
3221 3222 3223 3224 3225	Exhaust	pipe ", ", bo ", cli ", '	it and nut	::: ::::				s. d.	s. d. 7 6	s. d
3221 3222 3223 3224 3225	Exhaust	pipe ", ", bo ", cli ", '	it and nut					s. d.	s. d. 7 6	s. d
3221 3222 3223 3224 3225 3226	Exhaust	pipe "" " " " NCERS. box cas	it and nut p bolt a					s. d. 7 6 1 6 4	s. d. 7 6 5	s. d
3221 3222 3223 3224 3225 3226 3226	Exhaust '' '' '' '' SILEN	pipe "" " " " NCERS. box cas Rear R	it and nut p bolt a	 t and nut				s. d.	S. d. 7 6 5 5 25 0 16 6	s. d
3221 3222 3223 3224 3225 3226 3226	Exhaust '' '' '' SILEN Silencer '' ''	pipe "" bo " cli "" NCERS. box cas Rear R " L	ting	and nut				s. d. 7 6 1 6 4	s. d. 7 6 5	s. d
3221 3222 3223 3224 3225 3226 3226 3227 3228 3229 3230	Exhaust '' '' '' SILEN Silencer '' '' ''	pipe " bo " cli " cli " L box cas Rear R " L	ting	and nut				s. d. 7 6 1 6 4	S. d. 7 6 5 5 25 0 16 6	s. d
3221 3222 3223 3224 3225 3226 3226 3227 3228 3229 3230 3231 3232	Exhaust '' '' '' '' SILEN Silencer '' '' '' '' '' '' '' '' '' ''	pipe " bo " bo " cli " L clip	ting	 and nut				s. d. 7 6 1 6 4	S. d. 7 6 5 5 25 0 16 6	s. d
3221 3222 3223 3224 3225 3226 3226 3228 3229 3230 3231 3232 3232	Exhaust '' '' '' SILEN Silencer '' '' ''	pipe " bo " cli " cli " L clip "	ting	 and nut				Single Port. s. d. 7 6 1 6 4	S. d. 7 6 5 5 5	s. d 9 - 2 - 16 - 1 -
3221 3222 3223 3224 3225 3226 3226 3228 3229 3230 3231 3232 3232	Exhaust '' '' '' '' SILEN Silencer '' '' '' '' '' '' '' '' '' '' '' '' ''	pipe " bo " cli " cli " L clip "	ting	 and nut				s. d. 7 6 1 6 4	S. d. 7 6 5 5 5	s. d 9 - 2 - 16 -
3220 3221 3222 3223 3224 3225 3226 3226 3230 3231 3232 3233 3234	Exhaust '' '' '' SILEN Silencer '' '' '' Undersh	pipe " bo " cli " cli " L clip fixing b	tingH olt and nut	and nut				Single Port. s. d. 7 6 1 6 4 7 6	S. d. 7 6 5 5 5	s. d 9 - 2 - 16 - 1 - 7 -
3221 3222 3223 3224 3225 3226 3226 3227 3228 3229 3230 3231 3232 3233 3234	Exhaust '' '' '' '' SILEN Silencer '' '' '' '' '' '' '' '' '' '' '' '' ''	pipe " bo " cli " cli " L clip fixing b	ting	and nut				Single Port. s. d. 7 6 1 6 4	S. d. 7 6 5 5 5	s. d
3221 3222 3223 3224 3225 3226 3226 3227 3228 3230 3231 3232 3233 3234	Exhaust '' '' '' SILEN Silencer '' '' '' '' Undersh ''	pipe "" bo " cli "" NCERS. box cas Rear R " L clip fixing b	tingH olt and nut	and nut				Single Port. s. d. 7 6 1 6 4 7 6	S. d. 7 6 5 5 5	s. d 9 - 2 - 16 - 1 - 7 -

	HAN	DLEBARS.							S.
250	Handle	ebar complete	(3 levers and ca			***			30
251	,,	home	with twist grips			***	* * * *		35 10
252 253	,,	bare						pair	1
254	"	" L.H.	with end plug						2
255	,,	, ", , ",	end plug						1
256 257	,,	twist grip	R.H			***		27.5	3 2
258	"	" "	runner key						1
264	,,	,, ,,	slide and key					***	1
259 260	"	" "	spring washer tongued washe						
261	"	" "	adjusting nut						
262	,,	,, ,, ,,							2
263 265	,,		ver complete ake or clutch)				•••		3 2
266	,,,	" Cor	npression releas						2
267	,,		and nut						2
268 269	",		ble with adjuster						1
270	"	"	" " spring						
271	"	" ad	,, ,, ferrule						
272 273	,,		juster and nut ble complete						3
274	"	11	" adjuster and						
275	,,	Comp rel	ease cable				****		1
	FRO	NT FORK AS	SEMBLY.						
280		Fork complete							65
281	"	" side (R.F	I. or L.H.)					each	10
282	"		juster arm		•••	***			
283 284	"	,, ,, an	chor pin						1
285	,,	" " "	thumb nut						
286	"	,, ,, ,,	enrind						
287 288	"	" " "	locknut						
289	,,	" top lug							4
290 291	"		bolt and nut speedo fixing bol	lt	***	• • • •		***	
292	"	" middle l							5
293	"	19 19 1	, bolt and nut						1
294 295	"	" top link " bottom l	ink		•••				1
296	",	" shackle							1
297	,,	" "	" nut						
298 299	,,	" column	" washer						8
300	"	" "	top nut						1
301	• ,,	head rac	e and handlebar	clip					10
302 303	**	100	,, Bolt ,, ,, distance	piece				pair	
304	"		,, ,, nut						
305	,,			lips ,, bo	1t			each	
306	" "		" " "	,, 00	41			•••	
320		Mudguard	tre fixing bolt						7
321 322	, ,,	,, cen							2
323	,,	,, ,,	halt and nut						-
324	"	Stand fixing			•••		•••	•••	5
325 326	"		a bolt and nut						1
327	"	No. Plate							1
328	"		ig screw	• • • •			***	•••	
		ONT WHEEL.							
330	Front	Wheel comple			• • • • •	•••			40 25
331	"	" only " hub sh	ell, with cups	***			•••		13
333	"								
334	"	6*	ip dust washer						1
335	17	,, ,, sı	oindle				•••		1
				525					

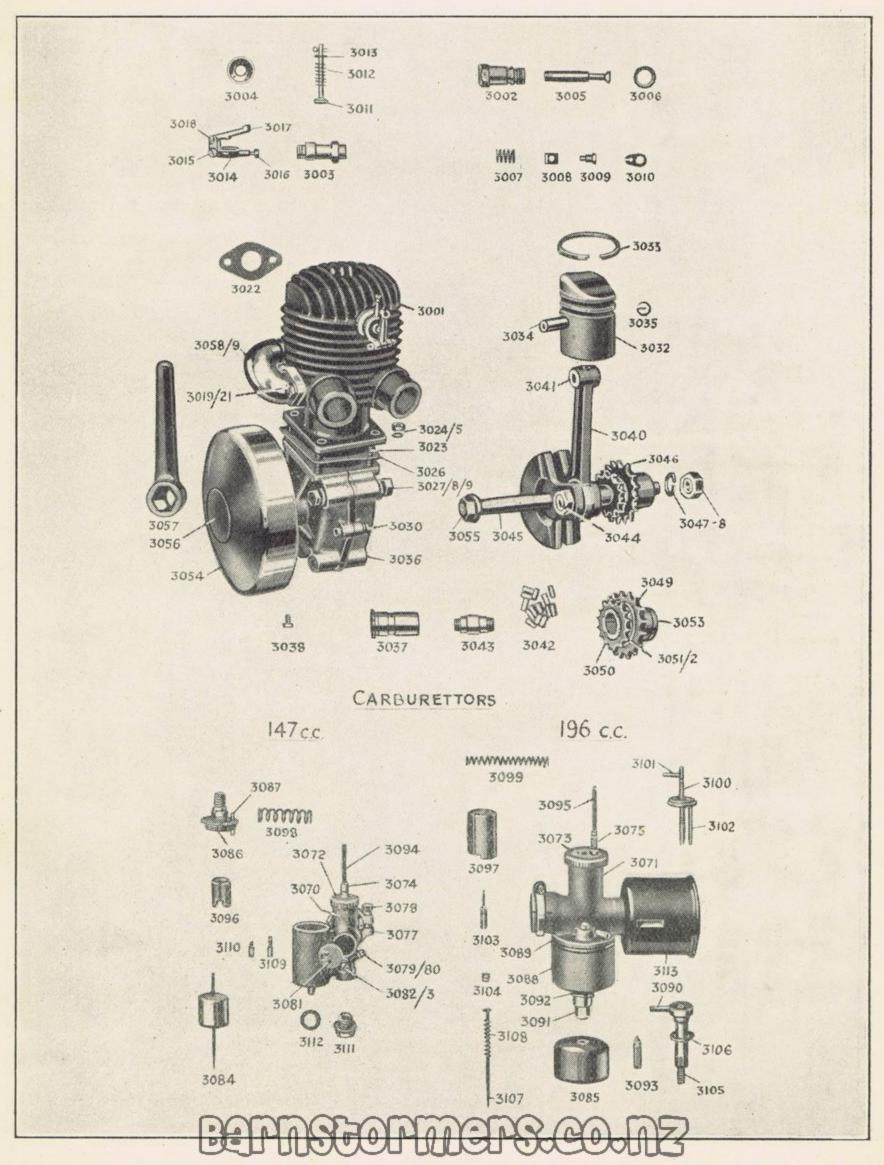
	EDO	NT W	HEEL	continued).							
	FRO	NI W	HEEL (continued).			- 1		T at at		S. (
336	Front V	Vheel		ndle nut							
337	17	59		ne, fixed , steel was	hor	***					1
339	"	"		lock nut	Mei						
340	, 29	"	,, ,	, adjusting	;						1
341	"	"	,,, ,	, adjusting	dista		iut			• • • •	
342	"	"		, plain was							5
345	"	39	Spokes	and Nipple	s (40)					set	5
346	"	,,,		anchor plate shoes with						pair	5
348	"	"		linings and						pan ,,	1
349	23	"	,, 5	spring						each	
350 351	"	"		cam, nut an		sher	***				1
331	,,	"	**	" lever	***	***	***			***	1
	SPEI	EDOM	ETER I	DRIVE FRO	NT V	VHEE	L.				
360	Front	Wheel	complet	te, less tyre							55
3361	"	"	only .								35
362	**	11	hub she	ell with cups	, and			•••			22
364	"	"	hub cu							12.	1
365	",	,,,	" du	st washer							-
3366	.,,	,,,	spindle	nut						***	2
367	",	"	cone fix	ced						1	1
338	,,	,,,	steel wa	asher						·	
368	,,	22	distance lock nu	4	***	****	***	111			
370	"	"		ng cone	***	*****		***		****	1
342	"	33	plain w	asher							
371 372	,, `	"		anchor plate shoes with l			***			pair	8
373	"	"		linings and						pan	2
374	17	. 17	77	spring						each	
375 376	, ,,	**		cam, nut ar			***		•••		1
377	"	77	speedo	gear box							5
3378	11	,,	"	gear wheel				***			2
3344 3379	,,	,,		ate tyre size and nipples						set	5
	"		Sportes	and implied	1207				7 30	23	
	REA	RWH	IEEL.								100
3380	Rear V	Vhool	comple	te, less tyre			77,441		1910001		65
3381	real v	viieei	only								32
3382	17	27	hub sh	ell, with cup							20
3364 3365	"	,,,	" cu	p ist washer			•••				1
3383	"	"		rocket							8
3384	,,	"	,,		and n	ut	***				2
3385 3386	"	"	spindle	end nut							4
3387	"	**	cone, fi	xed							1
3388	"	,,	steel w	asher						• • • •	1
3389 3390	,,	***	lock nu	e piece							1
3391	"	111	distanc	e nut							1
3392	"	"	plain w								5
3344 3393	,,	"		ate tyre size and nipples						set	5
3394	"	"		anchor plate							6
3395	"	77	"	", straj		• • • •				nair	8
3372 3373	"	"	1	hoes, with I inings and r						pair	2
3374	, ,,	"	,, S	pring						each	
3396	"	,,		am, nut an		her	***		2.5		1
3397 3398	***	"	chain a	" lever adjuster bod	v and	nut					1
3399	"	,,	"	" scr	ew an	d loc		10			1 72
	1					-					

o,	Description.	3 spd.	28
	GEAR BOX.		
		s. d.	S.
50	Case	. 15 0	45
51	" holding down stud	1 0	15
53	99 99 99 99		1
54	" " " nut and washer		
55 56	,, ,, bracket		1
57	", ", alum. plate		1 2
58	" cover stud short		
59 60	,, ,, ,, long	0 6	9
61	,, ball race	2	1
62	,, ,, ,, ,, cover	. 3	
63	" layshaft bush	. 1 0	1
64	" KS bush	1 0	1
66	99 99 99		3
67	Gear selector toggle only	. -	
68	,, ,, key		
69	Case gear selector holding screw		
70	,, ,, ,, bush	. 1 0	4
71 72	;; ;; lever	1 0	1
73	,, ,, ,, ,,	. -	2
74	" " " nut and washer		
75 76	,, ,, ,, spring box	2	
77	", ", ", spring	2	
78	Cover bare	12 0	
79	99 99		12
80	" K/S shaft bush	. 3 0	
81 82	" mainshaft bush	2 2	1
83	, manishatt bush		2
84	" adjusting screw		
85 86	,, filler plug ,, locknut	6	
87	" K/S stop pin and nut	6	
88	" clutch lever	2 6	
89	1) 1) 1) 1) 1	. -	2
90	,, ,, ,, fulcrum pin		
91 92	Mainshaft	1	
93	,, clutch key	6	
94	" rear drive sprocket 17.T	. 6 6	6
95 96	high door pinion	10 0	1
97	neacties waches	6	
98	" sliding pinion	. 6 0	
99	" low gear pinion	. 5 0	
00	envino	4 6	
02	,, ,, ,, split ring	. 6	
03	" " " plain washer	. 2	
04		. 8 0	
05	// G G A	. 5 0	
06	low dear pinion	6 0	
08	Coar appropriate fork	2.0	
09	Chutch much and	1 0	
10			1
11	K/S shaft	6 6	
12	59 49 *** *** *** *** *** *** ***		4
13		. 6 6	6
15	distant a tuba	. 3	0
16	own als	. 6 0	- 100
17			6
18	The state of the s	1 0	1
20	CONOR	1 6	1
1000000			
	000000000000000000000000000000000000000		1

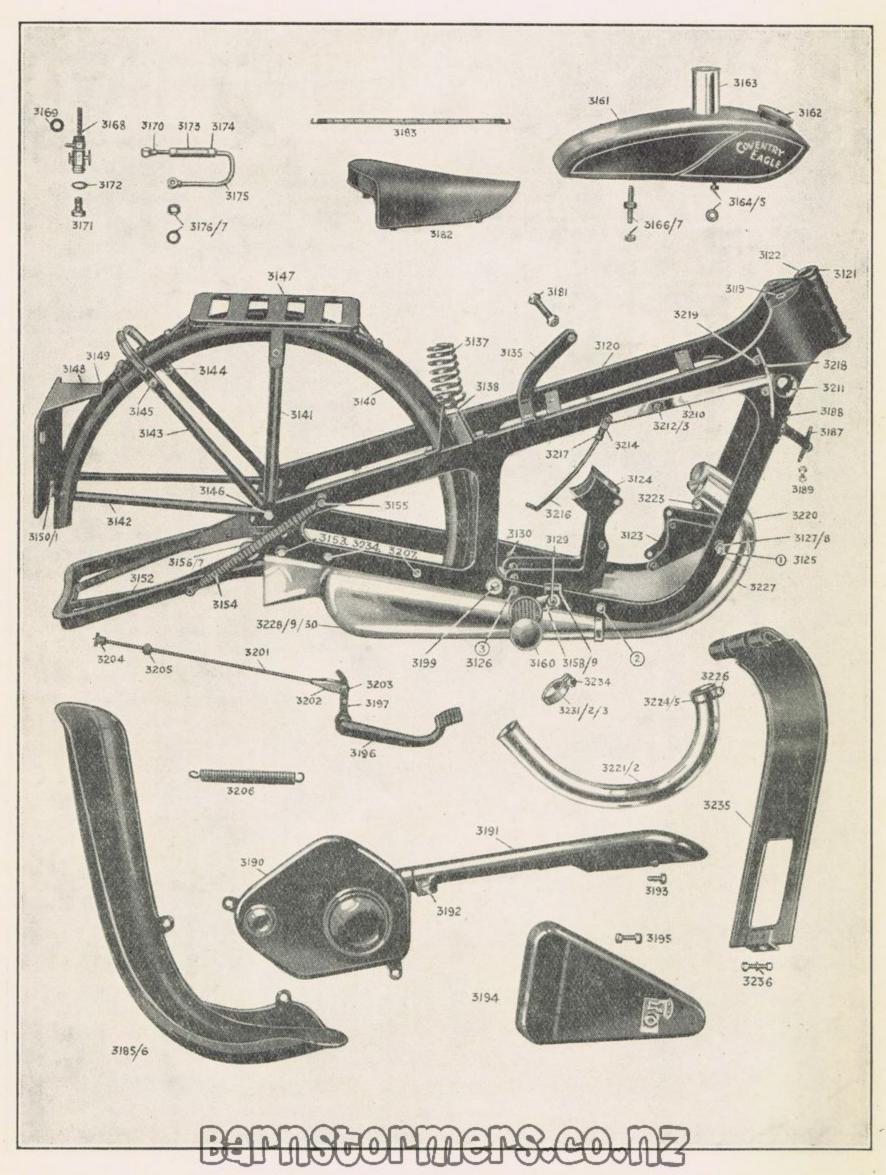
No.				-	scripti			- 111. w. 1			Pric
	GEA	R BO	K (conti	nued).							2 sp
3521	Mainsh	1084									s. 4
3522			oh oear	pinion	•••			***		•••	9
3523	99			pressure	wash	er				***	
3524	19	do	g clutch	n				***			3
3525	22		w pinio							•••	5
3526	19	K	S pinior							***	4
3527 3528	22	91		bush					• • • •	***	3
3529	**	**		et ring splined	huch				***	***	3 2
0027	"	22	99	spined	Dush						-
3530	Laveka	64									6
3531	Laysha		n gear p	ninion				***		•••	
3532	**	Low	,,	17							3 4
	**		.,,	**				***			
**				and 2 spee	ed).						
3533			plate				***	***		***	16
3334	99		et com						***	***	14
3535 3536	**	"		retainer a s (set)	nd riv		• • •		•••	•••	2
3537	"	Front		s (set)	***			• • • •	•••	•••	1 4
3538		Spring								each	*
3539	,,	"	cover								3
3540	"	"	"	plate							
3541 3542	99	Bolt "		pin		***					-
0011	***	DOL	••								
	LIGH	HTING	AND I	GNITION	Ι.						
3600	Head L	amp	complet	e							35
3601	37	,, :	shell .					***			9
3602	**			washer							
3603	19		Reflecto	r	***	***	***	***	***		9
3604 3605	11		bulb . rim with	h fly nut		• • • •	***				3
3606	"		M1	h fly nut		***		•••	***		5
3607	"	77		etainer							1
3608	17	,,	"	" Ru	bber						1
3609	**	22	,,,	" Sp	rings	(set 3)				
3610 3611	**	77	Fly nut		***			***		***	1
3612	99		Switch	complete rotor			4		• • • •		8 2
3613	22	99	99	cover						•••	2
3614	,,	22	"	" was							
3615	99	99	,,	lever							1
3616	59	,,	"	" scre							
3617 3618	99	**	"	resistance							1
3619	59	"	"	warning b cable scre		• • •	•••	• • • •	***		
3620	22	**	99	contact cli							
3621	99	27	19	77 71		. nut					
3622	99	"	99	22 23	,						
3623	99	99	99	thumb scr	ew						
2624	7771 1										
3624 3625	Wiring		lete set							***	7
3626	19	clami	mal !		***			•••		•••	
	79	COLAIII				***			***	***	
3627	Tail La	amn B	odv		ngagan		2000	1			2
3628		1)		ew and nu	t						2
3629		**	" bul	b holder							2
3630	100	"	" bu	lb							1
3631	Battery										14
3632	19	Lid									2
3633	99	Carri					• • •				3
3634 3635	29	99	strap	nuts and v				***	•••		
3636	25	99		packing pi							
3637	71	earth									1
	102477					CANAL				1000	
		200			-		-	-	_		

No.				772	escript						Pr
2.00	LIGH	TING AN	D IGN	OITIO	N (con	tinued	1).				
638	Ignition		h cove					200	-		21
639	ignition.		ng cli								1
640		" nut	and v	vasher			4.0	700		10 ***	
641		" cove		***			***	***	***		1
643		Cable	ng clip						***		1
010	, , ,	Cubiciii			***						
650	Dynamo										60
651 652	. ,,	Cover ba	hal	lt	•••	• • • •		•••			2
653	"	"	**	r (plair	a)						
654	,,,	99	79 91	(scre	The second secon						
655 656	,,	location l	oolt	•••		***		***		4	3
657	"	sprocket	shaft	nut an	d wash	er					3
658	***	end cove									6
659	,,	", ",	clip								1
660	"	Cable plu		ition w	ire		4				1
662	"	Fixing B		olt			***				2
663	"	19 9	bo	olt							
664	,,	,, ,		ar (pla		•••			• • •		1
666	"	Cut-Out		, (scr	ewed)						5
667	"	" "			d poin						1
668	,,	,, ,,	,,,	" st	rip and	screv	WS				
669	"	Carbon b			e and p						1
671	"	19 19	,,		spring						î
672	29	. , ,	"	**	23	R.H.					1
673	,,	**	,,	Regul					• • •		1
674	***	,,	"	,,		spring		*** #			1
675	Contact	break cor	nplete							11	7
676	15			d wasl	ners						
677 678	"		ker ar		spring						3
679	99	57 9 59 9		"	spring	flat					
680	,,	" fix	ed ₊ oi	nt and	l nut		-:				2
681	7.9	,, cor	itact s	crew	and wa	ishers	• • •	*****		***	
	CHAI	NS.		4.1.0							
700	Delvies	ohoin dra	10000								
700 701	Driving	chain, dyr	ing lin	nk		***					4
702	**	"								-:	
703	"	" fro	004	linka	(2)					• • • •	3
704 705	"	., rea	0.00	links	(3)						12
706	"	,, 160	ont	links							1 4
									14		
	ACCE	SSORIES								1	
707	Cable cli	р								7	
708	Inflator										3
709		ll and tool			***				****		8
710 711	Grease (spanner Gun									5
712	Spanner	s (set 3)									2
713	Screw di					•••					
714		g piug and	whee	l nut s	nanner						2
716		inner, 1/4 i		i iiui s	panner			/ ···			2
717	,	,, 5/16	in.					1		4	2
718	Tringe to d	,, 3/8 i	n			***					2
719 720	Electric	Gauge born		•••	•••			***			10
721	- 57	" Handl						****			2 5
722	Bulb Ho	rn								(: • • •	5
723		ootrests		1/11	4.4.4	***				pair	32
724 725	Speedo	Cable				***					12
726	"	complete (***				45
727	Tyre gau										6
				* Trip	5/- ex	tra.					
1		SOM	0	amo	-	ma	-	1	-		1

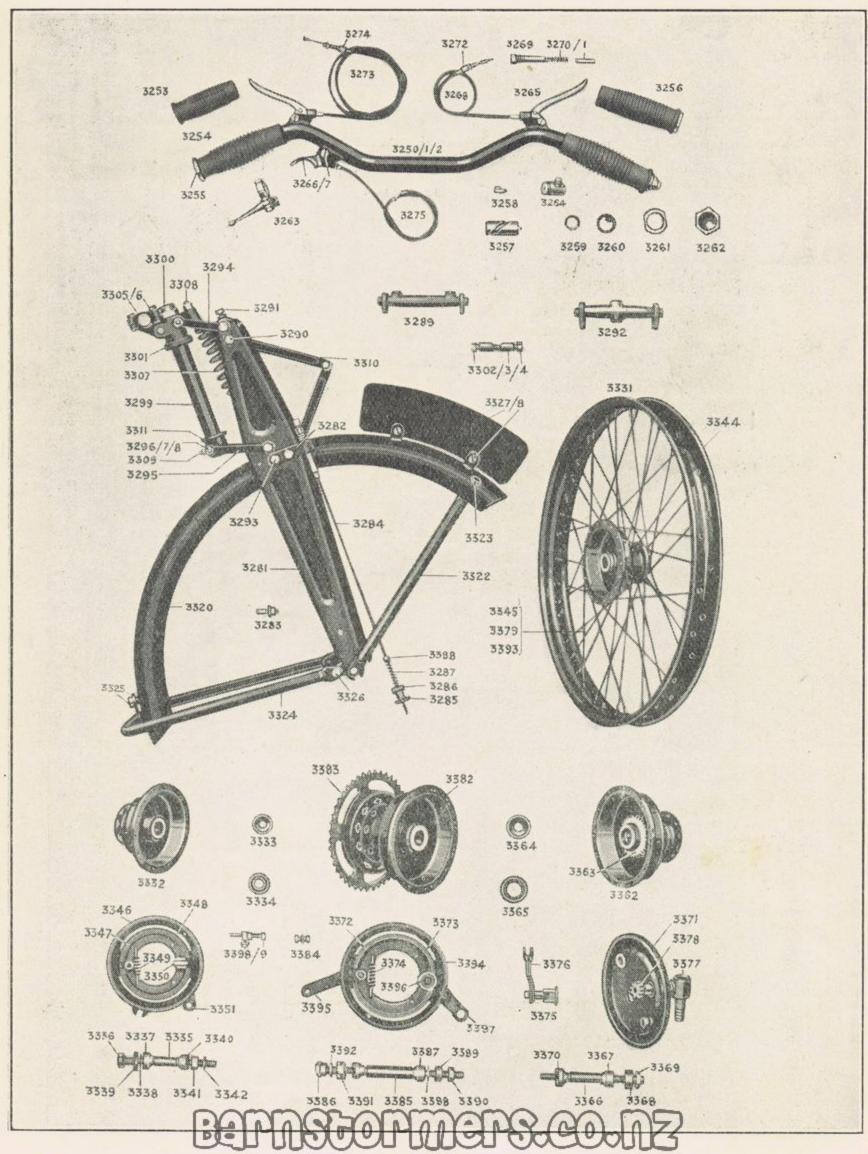
ENGINES AND CARBURETTORS.

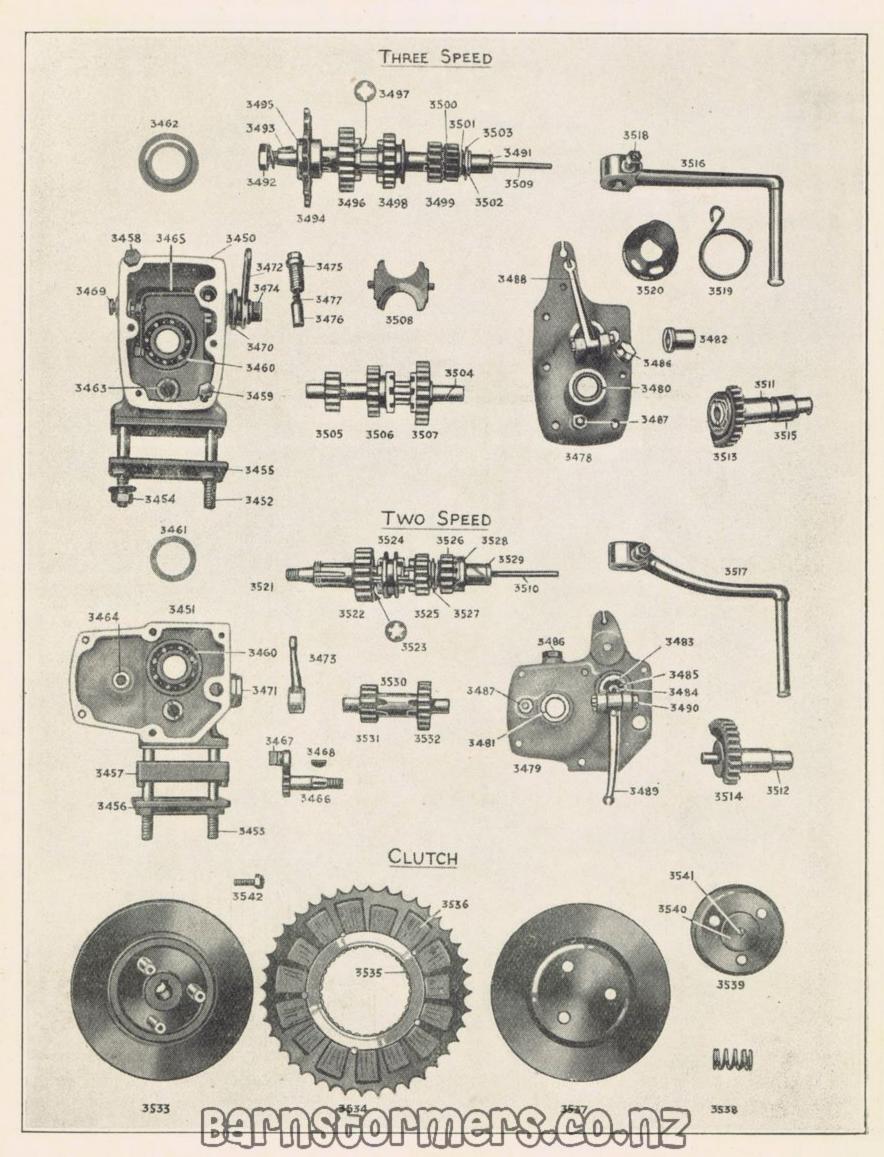


FRAME ASSEMBLY AND EXHAUST SYSTEMS.

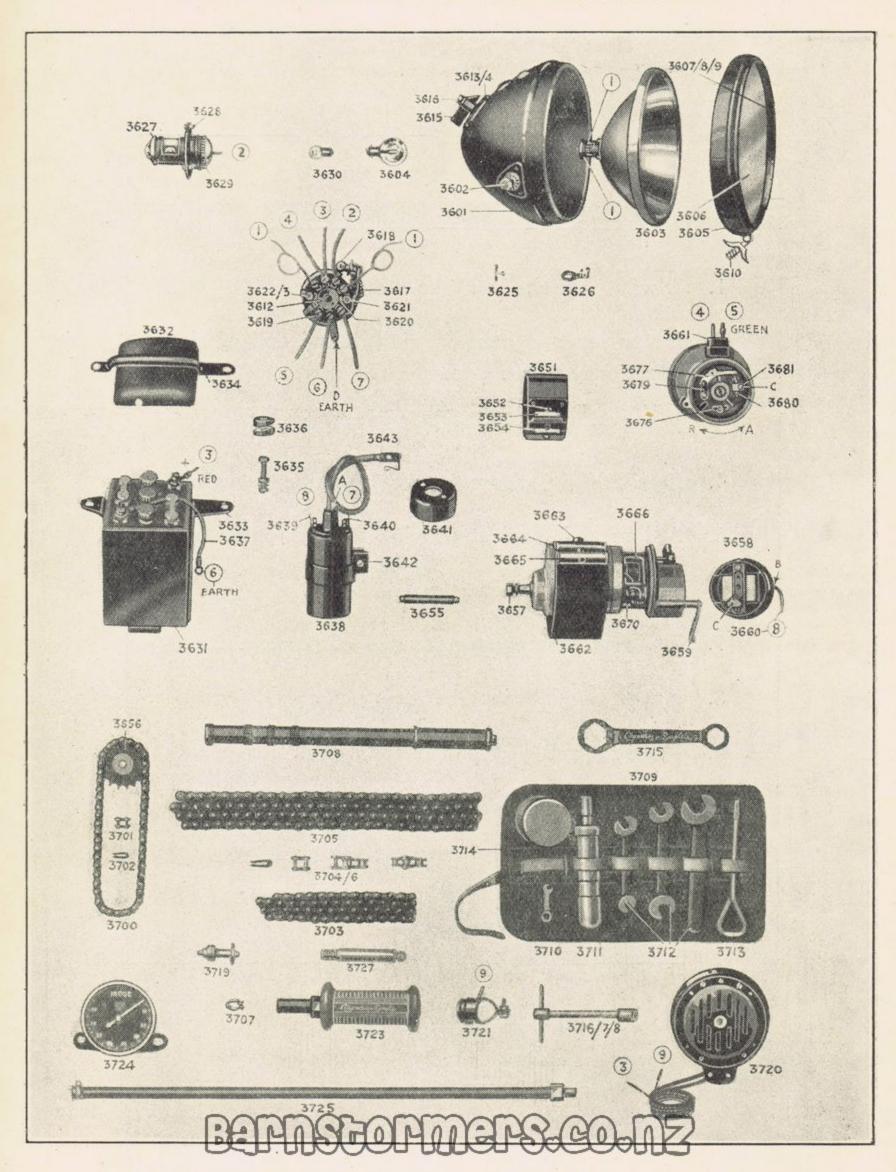


HANDLEBARS, FORK ASSEMBLY AND WHEELS.





LIGHTING, IGNITION AND ACCESSORIES.



POINTS TO REMEMBER

- 1. Always switch "off" to stop engine.
- 2. If tap lever is kept at right hand end of slot you always have a reserve of petrol.
- 3. Make sure petrol and oil are mixed thoroughly.
- 4. Don't flood carburettor when engine is warm.
- 5. Adjust and lubricate chains weekly.
- 6. Change gear when engine labours.
- 7. Use only best known brands of petrol and oil.
- 8. Never use inferior sparking plug.
- 9. Do not park with switch on "dim."
- 10. Contact breaker and sparking plug points must open .020".
- 11. When in doubt, write us.

RUNNING INSTRUCTIONS.

For the benefit of those owners who have had no previous experience of two-stroke machines it should be immediately pointed out that continual smooth and efficient running cannot be expected unless due care and attention is given when necessary. A little more than an elementary knowledge of the various working parts is desirable and for this reason the fault finding chart at the end of this book should be found particularly useful.

THE NEW MACHINE.

The machine when delivered has been tested and is ready for the road. It is always advisable, however, to examine carefully and try all controls, brakes, chain adjustment and lighting before setting off. Remember the engine is new and drive with reserve during the first 1,000 miles. Use a little more oil in the mixture during this period.

STARTING UP.

147 c.c. engine only.

- 1. Put petroil mixture in tank, first mixing thoroughly in a petrol can in proportions of one part of oil to sixteen of petrol (2 measures oil to 1 gallon petrol). First quality fuels only should be used.
- 2. Push on Tap.
- 3. See that gear change lever is in the "neutral" position.
- 4. Flood Carburettor, but do not let petrol run to waste. (DO NOT FLOOD when engine is warm.)
- 5. Shut air intake cover and open throttle (twist grip or lever) slightly.
- 6. Lift exhaust trigger and sharply depress K/S., to ensure a good charge of mixture in combustion chamber.
- 7. Turn switch to position "Ig. & Ch." on Lamp.
- 8. Again lift exhaust trigger, kick sharply on starter, at the same time releasing trigger. The engine should now be running and the air intake cover can be opened.

196 c.c. engine only.

For No. 5 item above substitute:—

Set jet control lever (situated on top of carburettor) as far as possible towards "rich." Return towards weak as engine warms up (read notes on carburettor, page 23).

CONTROL.

Get astride the machine, lift clutch with left hand, and place gear lever in low (downward). Accelerate by twisting grip, or opening lever as the case may be, and let in the clutch by slowly releasing the lever. The machine will then glide forward.

TO STOP.

Decelerate, lift clutch lever and apply foot brake, simultaneously. Starting and stopping should be practised until a complete feeling of safety is assured.

CHANGING GEAR.

Up. When engine appears to be racing in low gear, close throttle, declutch and pull gear lever smartly upwards to the next gate. After a little practice it will be found quite easy to locate each gear.

Down. When engine speed falls on hill, ease clutch to allow acceleration and change downwards. If clutch is pulled free altogether the engine will race, unless throttle is partly closed to compensate, making change harsh.

Do not use the compression release when shanging gear

GENERAL INSTRUCTIONS.

LUBRICATION.

The service a machine will give is based primarily on the attention given to the proper lubrication of the running essentials, viz.:—Engine, transmission chains, gear box, wheel bearings and fork shackles.

Engine.

This is automatically lubricated by the petroil mixture supplied by way of the Carburettor.

Front Driving Chain.

Considerable stretch is always experienced with new chains and adjustment of this chain cannot be too frequent. Examine after first 200 miles. Allow $\frac{3}{8}$ " slack, that is not more than $\frac{3}{4}$ " up and down movement. When, on turning the engine, the chain is found to be tight in places and slack in others repair or renewal is necessary. The chain makers cannot accept any responsibility for undue wear if obviously the cause can be traced to lack of lubrication or adjustment.

Rear Driving Chain.

Allow $\frac{3}{8}$ " slack or $\frac{3}{4}$ " up and down movement.

Dynamo Driving Chain.

This requires only periodical attention and should be adjusted to allow free movement. The armature shaft being eccentric enables adjustment to be made by turning the dynamo itself after slacking off the fixing band. After doing this, check engine timing.

Gear Box.

This is charged with grease when fitted to machine and can be replenished with the same type of oil as used with the petrol. It is advisable to occasionally remove the box complete and empty through the filler plug, refilling through the same aperture. The clutch ball race should also be oiled occasionally (see notes on clutch, page 26).

Wheel Bearings.

The hub is also charged with grease when wheel is assembled and lubricator is provided for use of grease gun. Riders would be well advised, however, to remove both wheels say every three months or so, when the cones, cups and bearings can be inspected and a new charge of grease applied. See that all nuts and washers are refitted in their original positions to ensure correct wheel and brake alignment. Cones must not be adjusted too tightly.

Front Forks.

Use the gun on grease nipples weekly and observe grease oozing out from each end of the form sharkers.

CARBURATION.

147 c.c.

The illustration on page 15 shows clearly the whole of the component parts of this carburettor. It will be noted that it is of the single lever type and the mixture is controlled by two jets—a pilot for easy starting and slow running, and a main for cruising speeds. The throttle slide or choke is machined specially so that the engine will function evenly under varying conditions. The standard setting is—pilot jet 20 and main jet 35. It should not be necessary to vary these fittings, unless through climatic conditions. Jets of varying sizes can, however, be supplied at cost of 5d. each.

Four-stroking is invariably caused either by rich mixture or excess of oil. If the latter is present even running is impossible. It is therefore obvious that a perfect petroil mixture is desirable and riders would be advised to "TURN OFF PETROL" tap a hundred yards or so before stopping. It will be realised that by allowing a carburettor to stand for any length of time filled with mixture that the petrol evaporates, leaving an excess of oil in the float chamber.

A gauze filter is fitted to the petrol tap, but should by any chance the jets become choked or stopped up the quicker way is to remove carburettor and induction pipe bodily. The long jet is fitted nearest air slide.

196 c.c.

Also illustrated on page 15, is specially suitable for this engine, but entirely different in operation to the 147 c.c.

When starting from cold, turn needle rod anti-clockwise as far as it will go. This opens jet needle setting and makes mixture rich. Then when engine has warmed up, turn rod back again to the setting which will best allow slow running. The engine will then accelerate at all throttle openings. Needle size 4.

Care in Dismantling.

The carburettor in this case must be taken off induction pipe. The nut at bottom of float chamber screws on to centre piece No. 3105. Both these parts are made from brass, therefore the bottom nut must be tightened with care, otherwise damage will result.

To remove jet needle from throttle slide take out screw at base. This, however, is only necessary in case of weak or broken needle spring.

Be sure and replace fuel needle, which rides loose on float, point upwards. If carburettor floods, needle is not seating correctly. It is essential that the compensating tubes Part No. 3090 are kept clear and screws must not be used instead.

See that carburettor is always tight on induction pipe or loss of power will result.

Timing.

The standard timing is with piston 3/16" before top dead centre with contact breaker points just beginning to open. This can be varied according to the requirements of the engine, by slacking off screw (3676) and turning the contact breaker complete in the direction of "A" advance or "R" retard, see illustration page 19.

Removing Engine Unic from frame (147 c.c. double port).

From the near side take off legshields, chain cover front, chains and carburettor. Then detach compression release, and plug wire, and exhaust system (see note pp. 25). Remove bolt No. 1, and two rear engine plate bolts, leaving dynamo in position.

Re-fitting.

Raise engine in position and insert rear top engine plate bolt, using this latter as a fulcrum. Fit bolt No. 2, with distance pieces and silencer. Now by holding the engine with the right hand, the silencer with the left, these components can be fitted in position. Still working from the near side of machine fit engine bolt nuts on offside end making use of screwdriver slots in each bolt, and adjusting so that bolt ends are flush with faces of nuts. The near side nuts can then be screwed home tightly. Fit dynamo chain and time engine. If dynamo is moved in this operation it is imperative the sprocket is re-set in correct alignment with engine sprocket. Fit up remaining parts and be sure that all nuts are perfectly tight. Box spanners Nos. 3717/8 are invaluable tools for this purpose.

Decarbonisation.

In cases where owners prefer to decarbonise the engine themselves the following instructions will no doubt be found useful:— 147 c.c. Single Port.

Remove petrol pipe, exhaust release cable and exhaust pipe. Take off carburettor complete with induction pipe. The four cylinder base nuts are then accessible and cylinder can be lifted off by raising carefully forward, at the same time turning flywheel to bring piston to bottom of stroke. The piston is held in position by two circlips, one at each end of the gudgeon pin. These are sprung into a recess in the piston boss and can be easily levered out. Make sure these are

refitted correctly, otherwise serious damage may result.

Do not twist the cylinder round the piston or possibly a ring will foul a port causing damage. Scrape all carbon deposit from both top and inside piston. Clean out ring grooves:—remove all carbon from inside cylinder head and ports, care being taken not to damage the cylinder in the process. The rings should be bright all round the faces that come in contact with the cylinder walls. Try the rings in cylinder and observe fit and also gap at joint. If the latter exceeds 1/32" or if the rings do not make good contact all round, replace. On refitting make sure the piston is on the correct way. This can be checked by referring to illustrations on page 15, which show all parts in their respective positions for assembling. The cylinder must be put on straight more printed in the operation.

ENGINES.

Decarbonisation (cont.)

147 c.c. Double Port.

Owing to the elaborate exhaust system fitted it will be necessary to first remove the whole of this. Commence by detaching the rear silencers. Slack off bolts holding pipes to cylinder, remove main bolt (ill. 2, page 16). Then proceed by removing exhaust wire and carburettor. Although this may seem a rather long process, it can be carried out quickly and is by far the better method.

196 c.c. Single Port.

Proceed as with the 147 c.c., first removing sparking plug. If any difficulty is experienced in clearing the cylinder, raise sufficient to expose gudgeon pin. Push out this latter which, as distinct from the other engine, has a floating pin with aluminium end pads. In this case the top of piston and rings can be inserted in cylinder before refitting.

Cylinder Compression Release.

This is a small hand operated valve used only for starting. No trouble whatever should be experienced with this, but it could be stripped and cleaned when decarbonising.

SPARKING PLUGS.

One of the chief causes of bad running of a two stroke engine is the sparking plug, and in many cases the trouble is rather difficult to locate. During the running in period the plug tends to oil up occasionally, owing to the extra proportion of oil used and where possible it is desirable to keep a spare plug in the tool box. A little home attention, however, to the original plug will work wonders, as it is very inconvenient of course to attend to matters of this kind by the roadside. The plug is easily taken to pieces for cleaning, but be careful not to damage any part in the operation. After stripping clean the central electrode end with fine emery paper or a sharp penknife, clean out the body of plug and point, if single prong type, or points if three prong type. The central insulator must be cleaned, but care taken not to damage. This is essential or the plug will probably short. Wash in paraffin or petrol, and set point or points with a gap of not less than .020" from electrode which must be set central in the plug.

Suitable Plugs.

Either single point or three point can be used and their efficiency relative to the engine varies according to the conditions required by the rider. For instance the single point plug is more suitable for high speed work, whilst the three point will no doubt be found to function better by riders not continually requiring the maximum speed from their machines. A plug when excessively hot becomes incandescent, causing pre-ignition or burning of the mixture continually instead of intermittent explosions.

A special plug for our 147 c.c. engines is now being supplied, costing 6/-.

GEAR BOX.

The gear box has now been brought to a very high standard of reliability and given the necessary periodical lubrication and adjustment no attention is likely to be required.

Dismantling.

We have, however, as in the case of the engine, on page 18, given full details of the components of the three and two speed boxes, showing the gears themselves built on their respective shafts and in correct position for assembling. It will therefore be simple for the owner who has stripped his box for the first time, to refer to the illustration should he have any difficulty in re-assembling correctly.

See that all holding down bolts are tight and that the gears run free and that the notches on the selector arm in the box engage definitely with the plunger. Do not forget to oil thoroughly each bearing when erecting, and insert one measure of oil when erected.

Control Adjustment.

It is most important to see that the gear control is kept properly adjusted and this should be checked over occasionally and always when box is moved for chain adjustment.

Set change speed lever in neutral position, adjust rod until rear wheel can be revolved freely, leaving an equal amount of movement between engagement of first and second gears.

Chain Adjustment.

Slacken both nuts underneath gear box and slide to the rear until the front chain has required tension. Tighten nuts. Adjust rear chain correspondingly by slackening rear wheel spindle and brake anchor bolt nuts, and screwing both adjusters equally.

CLUTCH.

Adjustment.

It is essential at all times to have correct clutch adjustment. Allow $\frac{1}{4}$ " free movement of clutch lever on handlebar and take up any play by means of adjuster provided on top arm of gear box cover. The ball bearing race in sprocket should be greased when clutch is taken down, care being taken to keep the corks clean and dry.

Clutch Slip.

Very seldom occurs with this type of box and would be caused by badly worn or greasy cork inserts, or a frayed wire. To remove clutch, take off front chain guard, remove small end screw and lock plate, three spring bolts and springs exposing parts as shown on page 18. New corks can be fitted to sprocket and reground on faces to ensure even surface at a cost of 2s., including postage. On refitting make the three starts are saved from tightly.

BRAKES.

Particular care must be taken in brake maintenance and application. The adjustment of both front and rear is by thumb screw nuts, so that immediate attention can be given at any time. Keep oil and paraffin away from the linings, and if either brake loses its efficiency remove wheel and examine. If linings are wornrenew, if only glazed by grease, scrub with wire brush or rough up with file. An alternative method is to cover linings only with petrol and allow to burn until all grease disappears. Rivet heads should be well sunk in new linings, otherwise drum is likely to get badly scored or grooved. New drums can be fitted to wheels at the works at a nominal cost. Both brakes should be used in conjunction on dry surfaces, such as when descending a steep hill, or in cases of emergency, but great care must be taken in the application of the front brake on greasy surfaces. Brake shoes must be re-lined carefully and if desired, can be done at the works at a cost of 3s. 6d. per pair, inclusive of postage.

WHEELS (to remove).

Front.

Use stand, first slacking off fulcrum bolts, remove brake thumb nut, slack off spindle nuts.

Rear.

Disconnect rear chain by bringing spring link to outside edge of sprocket to make accessible. Unscrew brake rod nut right off, remove brake anchor bolt nut, slack spindle nuts. The rear guard is specially hinged and by removing the two lower rear stay end bolts, can be turned up allowing full clearance for the wheel. On refitting wheel bring chain round sprocket so that the connecting link can be easily replaced with the fingers.

FRONT FORKS.

These should be kept fully adjusted. Each of the four links is screwed at one end, allowing two shackle bolts to be fitted from either side. The links should be adjusted so that no side play occurs and then locked by means of the hexagon nuts. If the machine is ridden with loose fork bearings undue wear will take place, which will affect the steering and consequent stability of the machine. When overhauling the machine, strip the fork shackles, clean and re-grease when replacing and see that the links are adjusted correctly.

The head nut on fork column should be screwed home tightly, leaving the frame races free in operation, without any perceptible up and down movement of the column itself.

FRONT STAND.

This acts also as a guard stay and therefore the bolts at fork end must be sacked before wing 13 CO 12

TANK.

The tank has a capacity of $1\frac{3}{4}$ gallons. It is fitted to the frame by two bolts at front with rubber packing washers and one central bolt at rear. If it is necessary at any time to detach the tank the ignition coil must first be removed as this is clipped to the rear central tank bolt.

Petrol Reserve.

So that the rider may not be held up for fuel, a two level petrol tap is fitted. The small lever at base of tap should be turned to the opposite end of slot marked "RES" that is to the right. This allows sufficient mixture to be retained in the tank to carry rider for a number of miles, thus enabling him to reach without difficulty the next garage. When short of fuel, therefore, switch lever arm to "RES" and remember to refill tank without further delay.

Petrol Pipe.

To avoid the annoyance of a leaking petrol pipe, frequently observed with the old type of solid pipe having taper nipples, a double pipe has been arranged with rubber connection. This removes any possibility of fracture through road shock. Also leakproof tap and carburettor connections are included to render this important fitting trouble free.

Filler Cap.

When replacing in tank press down firmly so that washer in cap makes good contact with rim of filler base. Then turn clockwise. Leakage will occur if cap does not seat correctly.

HANDLEBARS.

The illustration on page 17 shows the Twist grip bar assembled complete with levers and wires. The twist grip is very simple and efficient in operation and can be dismantled to examine by unscrewing the end cap and lock ring and removing two washers. The twist grip will then come away with spiral leaving guide key exposed in groove along which it travels.

TYRES.

A most important factor in the life of a tyre is the maintenance of an even inflation pressure relative to the load it is requested to carry. A good plan is to keep a pressure gauge at hand such as the one on page, 19, Part No. 3727, and test frequently. For solo riding the front tyre requires 18/20 lbs. pressure and the rear 22/24 lbs. Never ride with a tyre brick hard or under inflated as this is liable to cause a concussion burst of the inner canvas, which is fatal to the cover itself.

LIGHTING AND IGNITION.

To ensure trouble free running, it is advisable to make a practice of inspecting frequently all points of contact, to see if any wires are loose or worn, which are liable to cause a short. Particular offenders are likely to be (see illustrations, page 19):—

- (a) Ignition cable.
- (b) Cable connection to condenser cover.
- (c) Spring in condenser cover and contact breaker points.
- (d) Switch earth contact in headlamp.

DYNAMO.

The dynamo generates the lamp and ignition load at 20 to 25 m.p.h. At higher speed a margin is available for charging the battery. The discharge with main bulb on is approximately $2\frac{1}{2}$ amps.

Commutator and Brushes.

Should be examined periodically and cleaned when necessary. The brushes should press firmly on the commutator, but be free in their holders. There are two main and one regulating, brushes. Renew brushes before actually worn out or if sparking occurs.

Cut-out.

Consists of an electro magnet with contact points which close when dynamo is charging. Clean occasionally.

Contact Breaker.

Fitted in end of dynamo. Points must be kept clean and correctly adjusted—020" when open fully. The lever bearing should be highly polished and the cam smeared lightly with vaseline. Keep pivot spindle lubricated to ensure free movement. Contacts should present a clear grey frosted appearance. If burned and surrounded by a white powder coating the condenser is faulty or imperfectly connected (see spring contact). Keep contacts smooth—use fine emery—wash with petrol soaked waste.

C.B. End Cover.

Contains condenser, the SPRING CONTACT, of which must press firmly home on screw "C." Wire connection "B" must be perfect, and kept dry, otherwise short will occur with body of dynamo.

IGNITION COIL.

If kept firmly in position needs no attention. Is used to intensify battery voltage for sparking plug. Keep high tension cable inlet socket dear section apply in this socket.

BATTERY.

Charged automatically by dynamo when engine running. Inspect weekly and keep acid in each cell just above top of plates. Pure distilled water must be added for this purpose.

Important.

Under no circumstances should battery be allowed to discharge fully. Lowest specific gravity permissible, 1180.

Test.

See that lights are in perfect order before starting up. Switch on Head Lamp. Start engine and accelerate. If light brightens considerably the battery is low or a loose or dirty battery circuit connection exists—examine these points, especially where wires are earthed to frame—connection 6.

HEAD LAMP.

Focussing.

Insert but in usual manner. By giving an extra turn to the right the holder can be moved backwards or forwards, giving sufficient alternative positions to obtain focus desired. Correct bulb 6v. 9w/3w.

Warning Light.

Operates when kickstarting to show circuit in order. Continues at all speeds, but brightens as engine slows down. The circuit remains intact if filament broken, but new bulb should be fitted immediately. Bulb 2.5v. screw cap flash lamp type.

Important.

Should the warning light remain bright at fairly high speeds, it is a sign that the ignition demands are excessive and the C.B. clearance should be checked. When the points are opening less than .020" the ignition current will increase and there will be a reduced margin for charging and lighting purposes. Watch this point if trouble is experienced in maintaining battery charged.

Switch.

Use with care and always to stop engine. If overstrained in operation damage will occur which is not obvious and may be very difficult to locate.

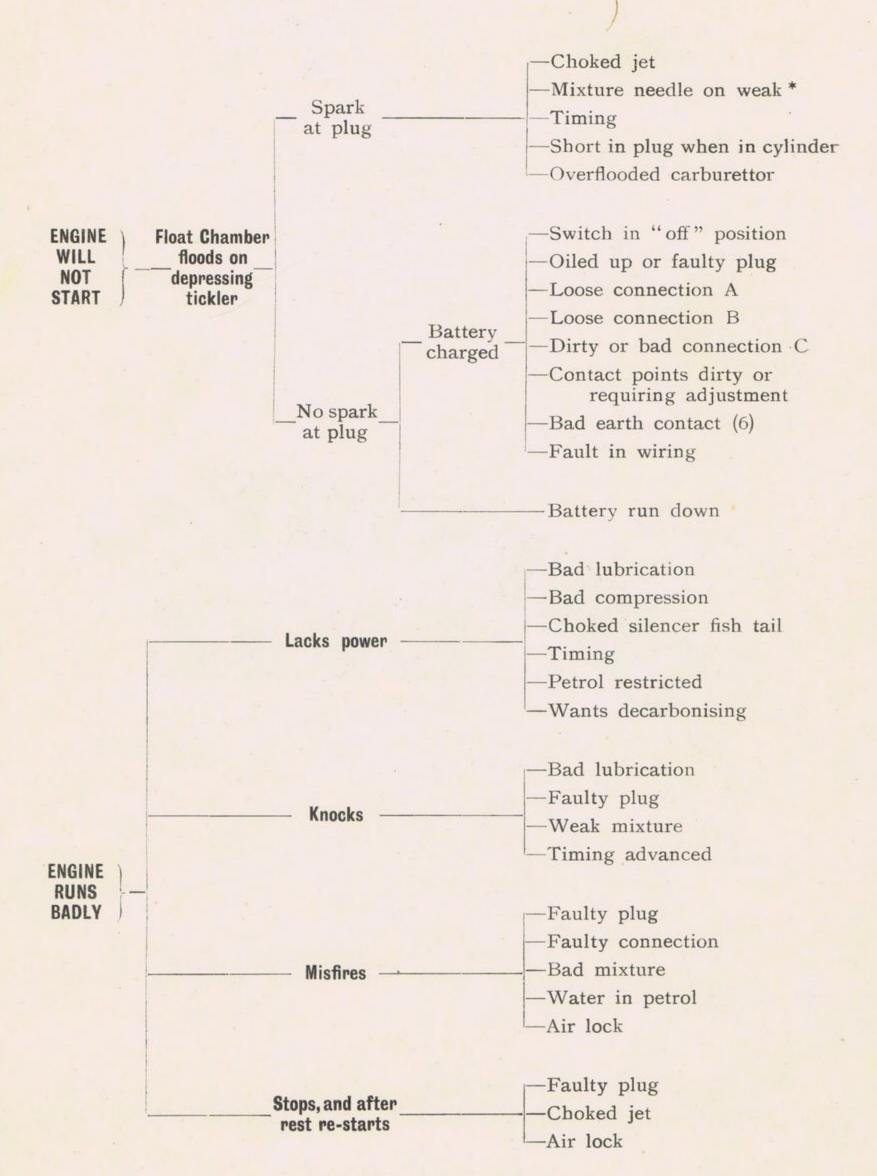
WIRING.

This can be checked by referring to illustrations on page 19. The various connections are all numbered for simplicity.

ELECTRIC HORN.

Difficult to adjust Sem to Works where out of brder.

FAULT FINDING CHART.



* 196 c.c. carburettor only.

BEFNSTOPMOPS-CO-NZ

O EAGLE