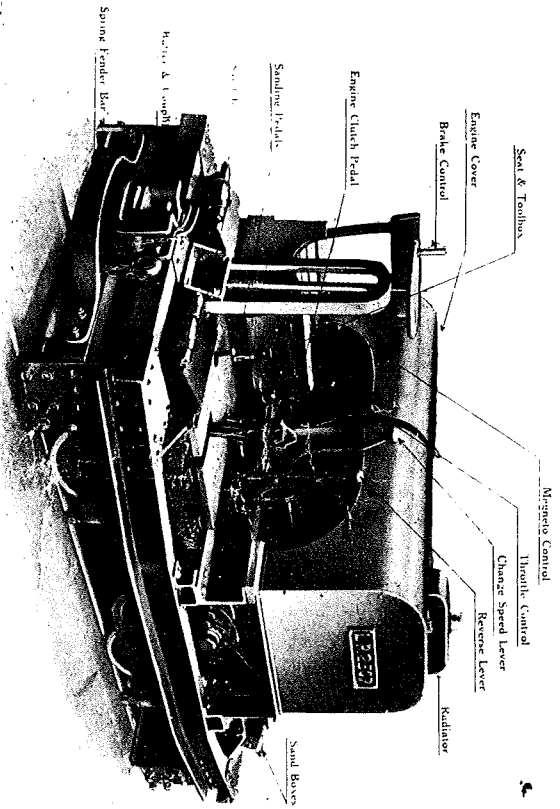
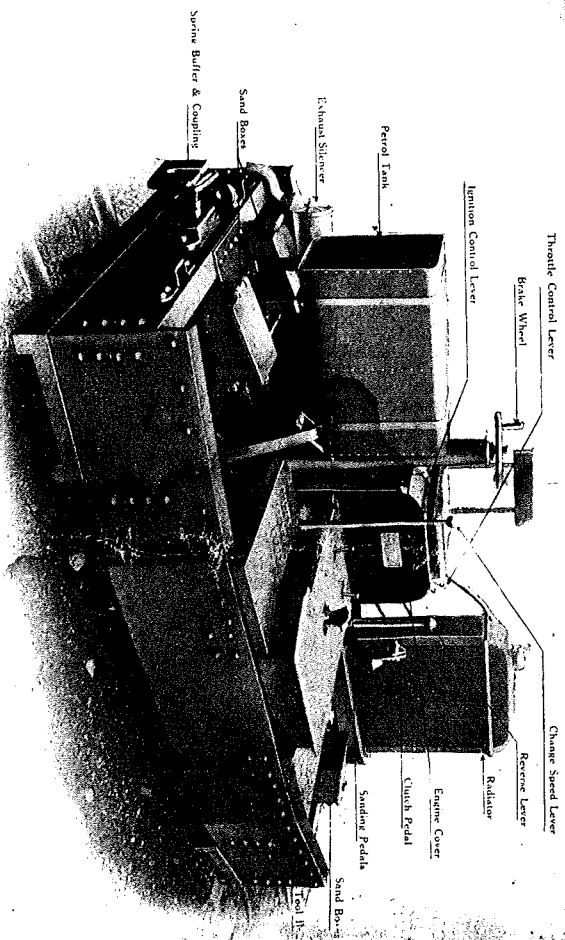


THE MOTOR RAIL & TRAM CAR CO. LTD.



20 B.H.P. SIMPLEX PETROL LOCOMOTIVE.



40 B.H.P. SIMPLEX PETROL LOCOMOTIVE.

SIMPLEX WORKS, BEDFORD, ENGLAND.

SELECTED CODED ENQUIRIES AND REPLIES.

To be used if necessary in conjunction with Standard Codes.

NOTE.—Cabled Orders for spare parts should be accompanied by the Work's No. of the Locomotive.

Code Word.	
Yaact	Telegraph your lowest price delivered f.o.b. English Port for 40 hp. Petrol Locomotive. Gauge _____ State when you can deliver, cost of freight and insurance to _____ and what is the gross weight, giving items in sequence mentioned.
Yaaff	Our price for 40 hp. Petrol Locomotives delivered f.o.b. is £ _____ delivery _____ weeks, freight and insurance £ _____ Weight _____ quotation is nett.
Yaalo	Telegraph your lowest price delivered f.o.b. English port for 40 hp. Paraffin (Kerosine) Locomotive. Gauge _____ State when you can deliver, cost of freight and insurance to _____ and what is the gross weight, giving items in sequence mentioned.
Yabds	Our price for 40 hp. Paraffin Locomotive delivered f.o.b. is £ _____ delivery _____ weeks, freight and insurance £ _____ Weight _____ quotation is nett.
Yaafs	Telegraph your lowest price delivered f.o.b. English Port for 20 hp. Petrol Locomotive Gauge _____ state when you can deliver, cost of freight and insurance to _____ and what is the gross weight, giving items in sequence mentioned.
Yacka	Our price for 20 hp. Petrol Locomotive delivered f.o.b. is £ _____ delivery _____ weeks, freight and insurance £ _____ Weight _____ quotation is nett.
Yacle	Telegraph your lowest price delivered f.o.b. English Port for 20 hp. Paraffin (Kerosine) Locomotive. Gauge _____ state when you can deliver, cost of freight and insurance to _____ and what is the gross weight, giving items in sequence mentioned.
Yacmi	Our price for 20 hp. Paraffin Locomotive delivered f.o.b. is £ _____ delivery _____ weeks freight and insurance £ _____ Weight _____ quotation is nett.
Yaapu	Forward by first mail quotation and full specification, with blue print in duplicate shewing general arrangement for _____ HP. Locomotive. Gauge _____ to consume _____ (Petrol or Paraffin). State when you can ship and give weight f.o.b. cost, packing, freight and insurance, as separate items.
Yadame	Call upon Agent for _____ in _____ relative to _____ HP. Locomotive.
Yaama	Ship by Mail Steamer _____ urgent.
Yaepi	Ship by Cargo Steamer _____ urgent.

NOTE.—As the foregoing phrases are coded to words of five letters it is possible by amalgamating two words (thus making one permissible word) to increase your enquiries, or orders, at a minimum expense.

Example:—A cable reading "Yactyaact, Sydney" would be interpreted to cover an enquiry for 40 hp. or 20 hp. Locomotive.

Code words applying to spare parts can also be dealt with in the same way.

In cases where more than one locomotive is required, state the number at the beginning of the cable.

Example:—"Six Yaaff Melbourne." We should read this as enquiring for Six 40 hp. Locomotives to be delivered c.i.f. Melbourne.

Yainz Ship by earliest possible steamer the following spare parts _____ and telegraph date you expect to forward same and name of steamer.

Yaiwo Your cable of _____ shipping in _____ weeks by steamer _____.

Yakwe When did you ship Locomotive (or parts) ordered by (letter) cable on the _____ Reply urgent.

SPARE PARTS RECOMMENDED FOR ISOLATED TERRITORIES.

NOTE.—Orders for Spares should carry the Work's No. of the Locomotive.

Number required	Description.	Code Symbol	Number required	Description.	Code Symbol
2	Pistons complete with rings ...	yaact	4	Felt washers ...	yalsh
1	Set of piston rings ...	yaaff	1	Ball thrust bearing for clutch ...	yamsp
1	Connecting rod ...	yatalo	1	Tube stack for radiator ...	yamxa
1	Set con. rod big end bearings ...	yabds	1	Male cone ferodo lining ...	yamst
1	Set inlet and exhaust valves complete with springs, cotters and washers ...	yafjs	100	Rivets for same ...	yaadt
12	Sparkng plugs ...	yacka	4 prs.	Back stop pads ...	yaolt
24	" washers... ..	yacle	12 ft.	High tension ignition cable ...	yaonh
1	Pump spindle and impeller ...	yaami	1	Assorted packet of Magneto spare parts ...	yaors
1	Assorted packet of split pins and taper pins ...	yapbu	1	Float for carburettor ...	yaowm
3 sq. ft.	Jointing material... ..	yadmne	1	Needle valve ...	yapbar
1	Set Crankshaft bearings ...	yaema	3	" seating ...	yaray
1	Timing wheel for crossshat (bronze) ...	yapchi	3	Main jets (various sizes permitting of adjusting for climatic conditions) ...	yarew
2	Complete sets of chains ...	yarinz	1	Compensating jet, various sizes ...	yarkh
12	Roller chain links (double) ...	yataro	1	Slow running tube, complete ...	yarnc
12	" pins and nuts ...	yakrae	2	Jet keys ...	yastw
1	Pin extracting vice ...	yakrai	2 Sets	Fan belts ...	yasoy
2	Chain sprocket wheels ...	yalclj	12	Brake shoes ...	yasts
1	Double " pinions ...	yalft	100	Assorted spring washers ...	yatow
4	Lubricating pads with springs ...	yalbf			

NOTE.—If the Locomotive is to operate in a locality, where sharp frosts are likely to occur at night, it would be advisable to include in the list of spares:

1 pair of Engine Cylinders.

The suggestion is made, in view of the possibility of the driver forgetting to drain the Cylinder Water Jackets when finishing up for the day, in which case, should the water freeze, cracked jackets are almost certain to occur.

SPARE PARTS LIST OF 20 H.P. SIMPLEX LOCOMOTIVES.

NOTE.—Orders for Spare Parts should be accompanied by the Works Number of the Locomotive.

Part No.	Description	Symbol	Part No.	Description	Symbol
POWER UNIT					
5018	Engine complete	<i>eigxa</i>	5050	Joint for outlet water cover	<i>eiyek</i>
5019	Cylinders	<i>eigaw</i>	5045	Stud for cylinder cover	<i>eiyrl</i>
5020	Side plate for cylinder	<i>eikew</i>	CRANKCASE		
5122	Screws for side plates	<i>eikw</i>	5325	Crankcase	<i>eiyek</i>
5022	Top joint	<i>eikw</i>	5074	Stud—cyl. to crankcase—long	<i>ekht</i>
5023	Side joint	<i>eikw</i>	5075	ditto —short	<i>ekhs</i>
5049	Cylinder cover	<i>eizt</i>	5326	Front cover for crankcase	<i>ekng</i>
5025	Check plug for cylinder	<i>einow</i>	5077	Setscrew for front cover	<i>eknc</i>
5024	Plug for water jacket	<i>einpt</i>	5076	Setscrew for front cover—long	<i>ekchy</i>
5026	Washer for check plug	<i>einny</i>	5327	Setscrew for front cover	<i>ekew</i>
5027	Valve cap	<i>einuw</i>	5078	Cap for water pump bracket	<i>ekshp</i>
5028	Washer for valve cap	<i>eipyv</i>	5079	Studs for ditto	<i>eksh</i>
5029	Valve	<i>eivbs</i>	5080	Setscrew for locating pump	<i>ekenc</i>
5030	Stem guide for valve	<i>eithe</i>	5328	Inspection cover for crankcase	<i>ekerb</i>
5031	Spring for valve	<i>eivle</i>	5096	Stud for inspector cover	<i>ekex</i>
5032	Cap for valve spring	<i>eivmi</i>	5083	Front crankshaft bearing—top	<i>ekew</i>
5033	Cotters for valve	<i>eivno</i>	5329	Front crankshaft bearing—bottom	<i>ekgli</i>
5034	Stud for exhaust pipe $\frac{1}{2}$ "	<i>eivry</i>	5087	Rear crankshaft bearing—top	<i>ekgwa</i>
5058	Cap nuts for water outlet	<i>eivxy</i>	5330	ditto —bottom	<i>ekich</i>
5320	Fibre washers for same	<i>eivrk</i>	5331	Front bearing cap	<i>ekihl</i>
5035	Stud for valve cover plate	<i>eivst</i>	5332	Rear ditto	<i>ekirn</i>
5036	Valve cover plate	<i>eivsh</i>	5091	Stud for main bearings	<i>ekinj</i>
5037	Locknut for valve cover plate	<i>eivtw</i>	5333	Bolts for rear main bearings	<i>ekiyw</i>
5038	$\frac{3}{8}$ " plain washer for ditto	<i>eivtk</i>	5092	Dowel pins for main bearings	<i>ekogd</i>
5039	Joint for exhaust pipe	<i>eivks</i>	5093	Gland for rear of crankcase—top	<i>ekpbl</i>
5040	Joint for induction pipe	<i>eivkt</i>	5094	ditto —bottom	<i>ekpno</i>
5041	Compression tap	<i>eivnt</i>	5103	Front Camshaft bearing	<i>ekpry</i>
5043	Joint for compression tap	<i>eivya</i>	5096	Stud for ditto	<i>eksmn</i>
5046	Studs for water inlet and carburettor	<i>eiofs</i>	5098	Stud for valve presser guide clamp	<i>ekene</i>
5044	Clamp for exhaust pipe	<i>eiogt</i>	5046	Stud for sump to crankcase	<i>ekspi</i>
5321	Water outlet	<i>eiope</i>	5077	Bolt for sump to crankcase	<i>ekumd</i>
5322	Water outlet bend	<i>eiovy</i>	5099	Top bush for oil pump driving pinion	<i>ekygs</i>
5046	Studs for bend	<i>eiove</i>	5100	Stud for same	<i>ekymn</i>
5323	Joint for bend	<i>eiovy</i>	5334	Lid for oil filler	<i>ekyrd</i>
5057	Studs for water outlet	<i>eiohm</i>	5335	Joint for oil filler lid	<i>ekysh</i>
5324	Exhaust pipe	<i>eiohd</i>	5336	Stud for ditto	<i>eksej</i>
5249	Drain tap in cylinder	<i>eiohb</i>	5101	Bottom bush for oil pump driving pinion	<i>ekags</i>
5250	Joint for drain tap	<i>eiohf</i>	5338	Wing nut for stud for oil filler lid	<i>ekhnt</i>

Part No.	Description	Symbol
5038	Plain washers for ditto...	<i>elawe</i>
5339	Bush for oil level indicator	<i>elbcu</i>
5340	Cover tube for indicator	<i>elbdy</i>
5341	Cap for ditto	<i>elcft</i>
5342	Indicator tube	<i>elcbl</i>
5343	Sump	<i>elcco</i>
5116	Drain plugs for sump	<i>elddu</i>
5096	Studs for oil filter and oil pump	<i>elcxa</i>
5102	Joint for cylinder	<i>elcxe</i>
5131	Joint for drain plug for sump	<i>elcti</i>
5344	Oil filter to crankcase filter	<i>elcgy</i>
5096	Studs for relief valve	<i>elcjd</i>
5345	Special rear camshaft bearing	<i>elctn</i>
5122	Screws for ditto	<i>elcxa</i>
5105	Plug for front cover	<i>elcxb</i>
5106	Joint for plug	<i>elctt</i>
5132	Front cover bush	<i>elcuk</i>
5346	Float	<i>elers</i>
5347	Wire for oil float	<i>elcwn</i>
5348	Guide tube for wire	<i>eljfo</i>

RECIPROCATING PARTS

5134	Connecting rod	<i>elgfu</i>
5135	Connecting cap	<i>elgji</i>
5136	Bolt for connecting rod big end	<i>elck</i>
5142	Zephyr piston	<i>elcww</i>
5143	Gudgeon pins	<i>eltrp</i>
5144	Piston rings	<i>elky</i>
5137	Bush for gudgeon pin	<i>elld</i>
5138	Connecting rod bearings—top & bottom halves	<i>elmda</i>
5139	Liner for connecting rod big end bearings	<i>elmya</i>
5140	Key for main pinion on crankshaft	<i>elng</i>
5147	Thrust washer for crankshaft	<i>elnhl</i>
5149	Thrust washer for crankshaft	<i>elnhu</i>
5148	Ball cage for thrust washer	<i>elnly</i>
5150	$\frac{9}{16}$ " balls for ball thrust	<i>elocs</i>
5349	Tube for oilways in crankshaft	<i>elodt</i>
5350	Collar for tube in crankshaft	<i>elbbe</i>
5351	Crankshaft	<i>elpha</i>
5352	Balance weights	<i>elphi</i>
5141	Distance piece	<i>elpny</i>
5153	CAMSHAFT & TIMING GEARS Crankshaft main driving pinion	<i>eltsy</i>

Part No.	Description	Symbol
5152	Camshaft driving gear—spiral	<i>elune</i>
5155	Slotted nut for ditto	<i>eluxt</i>
5156	$\frac{3}{8}$ " plain washer for ditto	<i>elvti</i>
5154	Magneto driving gear—spiral	<i>elvre</i>
5158	Locknut for crankcase main driving pinion	<i>elytg</i>
5159	Grub screw for crankshaft main driving pinion locknut	<i>elzoe</i>
5353	Camshaft thrust washer	<i>elzvi</i>
5354	Camshaft with extension	<i>emanzp</i>
5355	Pulley on camshaft	<i>emanz</i>

TAPPETS

5162	Valve presser guide	<i>emaph</i>
5163	Valve presser	<i>emarg</i>
5164	Roller for valve presser	<i>embta</i>
5165	Pin for roller	<i>embre</i>
5166	Adjusting screw for valve presser	<i>embvt</i>
5167	Locknut for same	<i>embdo</i>
5168	Clamp for valve presser guide	<i>emdcu</i>
5169	Collar for valve taper guide	<i>emddy</i>

OIL PUMP AND LUBRICATION

5356	Oil pump plate	<i>emcht</i>
5357	Body of oil pump	<i>emery</i>
5358	Tap of oil pump	<i>emesp</i>
5359	Bottom cover for oil pump	<i>emfje</i>
5207	Screws for oil pump covers	<i>emftu</i>
5096	Stud—pump to oil pump plate	<i>emfzx</i>
5360	Oil pump driving pinion	<i>emiew</i>
5178	Oil pump driven pinion	<i>emikt</i>
5361	Oil pump coupling	<i>emilt</i>
5170	Spiral pinion for driving oil pump	<i>emime</i>
5362	Oil filter plate	<i>emivw</i>
5363	Oil filter cage	<i>emmbt</i>
5364	Oil filter valve	<i>emmbt</i>
5365	Spring for oil filter valve	<i>emobn</i>
5366	Guide for oil filter valve	<i>emocwt</i>
5367	Joint for oil filter cage	<i>emoye</i>
5368	Joint for oil filter valve guide	<i>embya</i>
5369	Special union for 3-way body	<i>embye</i>
5370	Special 3-way body	<i>embyu</i>
5194	Union body for outside oil pipe, oil pump & filter	<i>emply</i>
5195	Nut for union body	<i>emrhe</i>
5196	Nipple for ditto	<i>emrhe</i>

Part No.	Description	Symbol	Part No.	Description	Symbol
5411	Setscrews for fan hub cap	<i>ewwhu</i>			
5412	Fan blades	<i>ewwya</i>	4998	TRANSMISSION	<i>ghlzl</i>
5413	$\frac{1}{8}$ " x $\frac{3}{8}$ " iron rivets...	<i>ewoxye</i>	c50510	Gearbox complete	<i>ghins</i>
5414	Grease cup $\frac{1}{4}$ " gas	<i>ewoyad</i>	410/4	Main casing	<i>ghnyk</i>
5415	Fan spindle	<i>ewoyef</i>	5286	Top cover and reverse casing	<i>ghnole</i>
5416	Washer for front end of fan spindle	<i>ewoyig</i>	A50386	End cover...	<i>ghont</i>
5417	Bearing for fan	<i>ewoyoh</i>	A50385	Driving shaft	<i>ghnds</i>
5418	Fan hub	<i>ewoyi</i>	w737	Driving shaft coupling	<i>ghngd</i>
5419	Fan centre	<i>ewoyak</i>	272/4	Chain shaft nut	<i>ghnja</i>
5420	Fan hub cap (pressing)	<i>ewpork</i>	107/4	Chain wheel Shaft	<i>ghnke</i>
w541	Silencer	<i>ewpork</i>	A50506	Intermediate shaft	<i>ghuno</i>
w473	Petrol tank	<i>ewpwa</i>	124/4	Change speed spindle end	<i>ghunu</i>
w476a	Radiator	<i>ewpwr</i>	A3926	Change speed striking fork	<i>ghuny</i>
5421	Water hose connection 1"	<i>ewpwr</i>	A3927	Change speed plug and lock nut	<i>ghurw</i>
5422	Water hose clips 1 $\frac{1}{2}$ "	<i>ewpwi</i>	374/4	Change speed plug spring	<i>ghybl</i>
5423	Fan belt	<i>ewpwi</i>	373/4	Change speed locking pin	<i>ghybn</i>
5424	Engine distance tubes	<i>ewpwi</i>	125/4	Change speed spindle end pin	<i>ghybe</i>
w534	Water outlet pipe 1 $\frac{1}{2}$ " o/d.	<i>ewpwi</i>	141/4	Change speed spindle gland nut (front)	<i>ghyri</i>
5425	Water inlet pipe 1" 1/d.	<i>ewpwi</i>	A3923	Change speed spindle gland nut (rear)	<i>ghyso</i>
5426	Petrol pipes	<i>ewpwi</i>	118/4	Chain wheel shaft thrust ring (rear)	<i>ghywy</i>
5427	Safety chain, starting handle and couplings	<i>ewpwi</i>	\$50567	Chain wheel shaft thrust ring (front)	<i>ghywk</i>
w473a	Petrol tank straps	<i>ewpwi</i>	A3897	Chain wheel shaft distance piece	<i>ghywk</i>
w535b	Silencer straps	<i>ewpwi</i>	A3910	Chain and driving distance piece	<i>ghyva</i>
w558	Engine packing pieces	<i>ewpwi</i>	A3895	Chain wheel shaft thrust plate	<i>ghyvs</i>
w476a	Fan bracket support	<i>ewpwi</i>	A3896	Chain wheel shaft thrust cover	<i>ghyvu</i>
5428	Starting handle chain connection	<i>ewpwi</i>	A3899	Chain wheel shaft packing gland	<i>ghyvs</i>
w544	Jockey pulley bracket	<i>ewpwi</i>	A3900	Chain wheel shaft second speed gear (59 teeth)	<i>ghysu</i>
w509	Radiator pipe support	<i>ewpwi</i>	A3903	ditto	<i>ghyxt</i>
w510	Radiator pipe clip	<i>ewpwi</i>	A3898	Chain wheel shaft thrust cover	<i>ghyxt</i>
w476c	Radiator guards	<i>ewpwi</i>	A3902	Chain wheel shaft second speed gear (56 teeth)	<i>ghyxt</i>
w526	Union nut for radiator	<i>ewpwi</i>	A3904	ditto	<i>ghyxt</i>
w527	Jockey pulley	<i>ewpwi</i>	A3901	Chain wheel shaft first speed gear (40 teeth)	<i>ghyxt</i>
w528a	Jockey pulley cap	<i>ewpwi</i>	276/4	Chain wheel shaft second speed dog	<i>ghyxt</i>
w535a	Fan bracket	<i>ewpwi</i>	S50566	Chain wheel shaft gear bush	<i>ghyxt</i>
5281	Silencer bracket...	<i>ewpwi</i>	5287	Chain wheel shaft thrust ring	<i>ghyxt</i>
w524	Jockey pulley greaser	<i>ewpwi</i>		Chain wheel shaft 120 x 55 x 29 mm. ball bearings	<i>ghyxt</i>
5280	Jockey pulley shaft	<i>ewpwi</i>	5288	ditto	<i>ghyxt</i>
5275	Water hose connection 1 $\frac{1}{2}$ "	<i>ewpwi</i>	A3919	Intermediate shaft gear wheel (59 teeth)	<i>ghyxt</i>
5283	Water hose clips 1 $\frac{1}{2}$ "	<i>ewpwi</i>	A3920	Intermediate shaft gear wheel (39 teeth)	<i>ghyxt</i>
5276	Water hose clips 1 $\frac{1}{2}$ "	<i>ewpwi</i>	A3915	Intermediate shaft covers (23 teeth)	<i>ghyxt</i>
5278	Magneto switch	<i>ewpwi</i>	3921	Intermediate shaft covers	<i>ghyxt</i>
5277	Petrol filter and tap	<i>ewpwi</i>	A3914	Driving shaft double spur (20 teeth)	<i>ghyxt</i>
			w418	Plug for gearbox	<i>ghyxt</i>
			166/4	Eye bolt	<i>ghyxt</i>

Part No.	Description	Symbol	Part No.	Description	Symbol
144/4	Nut for driving and chain wheel shafts	<i>gld</i>	w460	RUNNING GEAR & FRAMEWORK	
A3915	Driving shaft packing gland	<i>gleyf</i>	w437	Wheels and axles	<i>rhopf</i>
143/4	$\frac{1}{16}$ " bolts second speed gear	<i>glera</i>	5431	Laminated springs, 3 leaves	<i>rhufu</i>
S3912	Bolts— $\frac{1}{8}$ " \times $1\frac{1}{16}$ " 1st speed gear	<i>glese</i>	z119A	Volume springs	<i>rhup</i>
S3925	Bolts— $\frac{1}{16}$ " \times $2\frac{1}{4}$ " intermediate shaft spur	<i>gleit</i>	w540	Axleboxes and brasses	<i>rhunc</i>
286/4	Reverse spindle	<i>glevo</i>	5012	Buffer spring plates	<i>rhurb</i>
285/4	Reverse striking fork	<i>glewv</i>	w469A	Coupling links (Decaturville type)	<i>rhuhl</i>
A3923	Reverse spindle gland nut (rear)	<i>gleyx</i>	w491	Main side frames	<i>rhvty</i>
141/4	ditto (front)	<i>gllis</i>	w486A	Engine frames	<i>riaxy</i>
			w487A	Cross frame (break end)	<i>rieaj</i>
			w461A	Cross frame (opposite end)	<i>rieb</i>
			w489A	Gussets for cross frame	<i>riegt</i>
			w490A	Wheel bearer frames (R.H.)	<i>rihlt</i>
			w488	Wheel bearer frames (L.H.)	<i>riica</i>
			w462	Cleats for wheel bearers	<i>rilz</i>
			w563	Gussets for wheel bearer frames	<i>riwnt</i>
			w537B	Top buffer frames	<i>rims</i>
			w539	Side plates for buffer angles	<i>riwx</i>
			w539A	Centre gusset for buffer frame (brake end)	<i>rism</i>
			5432	Centre gusset for buffer frame (radiator end)	<i>rijev</i>
			w546	Flooring angles	<i>rikv</i>
			w546	Angle iron skid bars	<i>rikst</i>
			w546	Skid and supports	<i>rilow</i>
			w546	Gusset plates for skids	<i>riof</i>
			w357	Tension rods diam. "A"	<i>riom</i>
			w139	"U" Bolts, length for 2 ton	<i>rimrw</i>
			w440	Horn plates	<i>riob</i>
			w465	Combined cleat and tension rod bracket	<i>rioc</i>
			w439	Spring rubbing plates	<i>riof</i>
			w466	Supporting cleats for engine frame	<i>riom</i>
			w536	Lower buffer frames	<i>riof</i>
			w547	Coupling links for combined head	<i>rioug</i>
			w504	Tank strap support	<i>rioya</i>
			w545	Axlebox cap plates	<i>ripac</i>
			z138	Buffer heads	<i>ripad</i>
			w550	Safety catches	<i>ripif</i>
			w531	Tension spring washers	<i>ripog</i>
			w553A	Additional weights	<i>ripul</i>
			5433	Chain wheel keys	<i>rirad</i>
			5434	Chain pinion key	<i>riref</i>
			w467	Tension rod pins	<i>rifaf</i>
			w548	Keeper pins for combined head	<i>ring</i>
			w549	Coupling pins for Hudson link	<i>rimns</i>
			w729	Pins for safety catch	<i>riroh</i>

CLUTCH

CHAIN GEAR

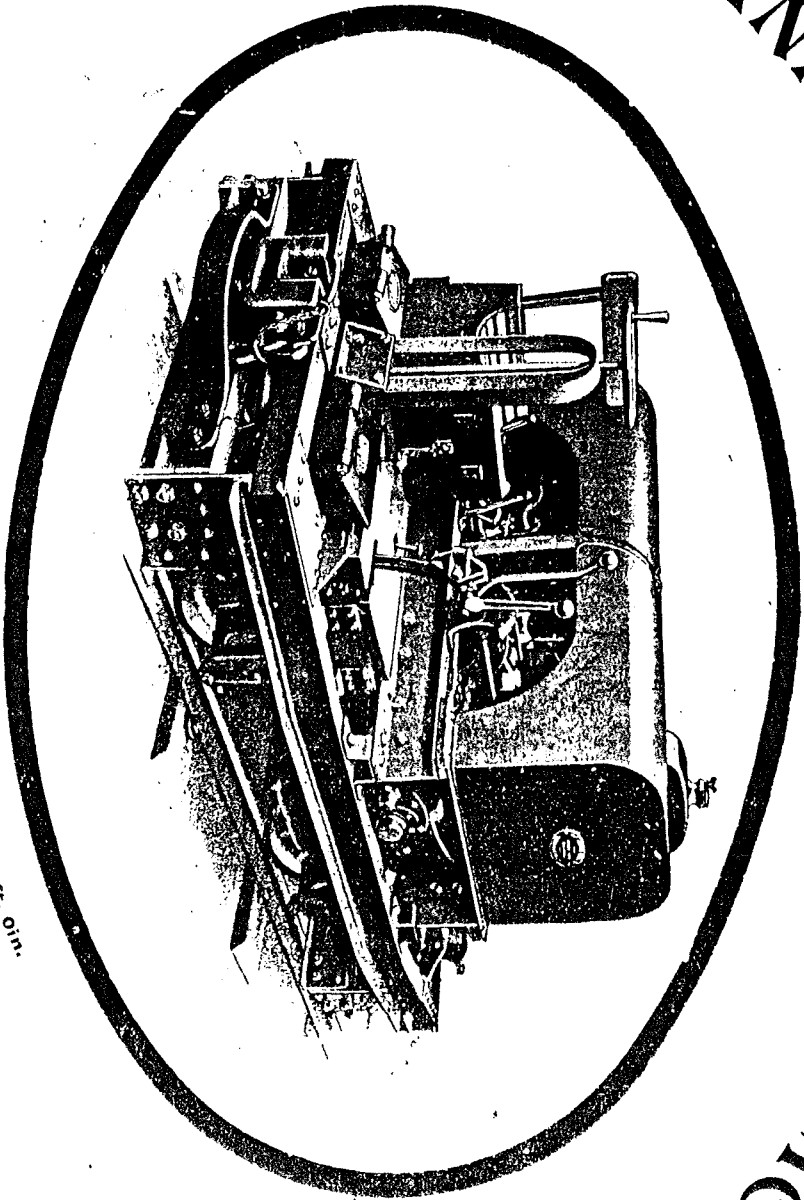
RUNNING GEAR & FRAMEWORK

Part No.	Description	Symbol	Part No.	Description	Symbol
w552	Upper coupling pins for combined head	risc	A225	Clutch backstop levers	obugs
w540	Ferrules for buffer spring	risaf	w506	Foot rest for clutch pedal	obuhm
5013	OPERATING GEAR—REVERSE GEAR	oayug	w456	Clutch rocking shaft 2' 8 $\frac{3}{4}$ "	oburd
w480A	Reverse and C.S. lever knobs	oazyg	w456c	Clutch pedal shaft 1' 8 $\frac{3}{4}$ "	obush
5448	Reverse rod collars	oazyg	w728	Pins for clutch compression rod	obuwel
w503	Reverse spring	obaew		SANDING GEAR	
w565	Reverse links	obakt	512	Sander tubes	sanayw
w455	Tank and reverse gear support	obalp	w570	Sander springs	sawye
w480B	Reverse and C.S. levers	obanc	5447	Sander pipe rubber spouts	sayhe
w459	Reverse operating handle	obarb	w511A	Sander pipes $\frac{3}{4}$ " gas	sbalg
w562	Reverse fulcrum bracket	obasz	w513	Sander striking levers	sbanf
w677	Reverse shaft rear bracket	obaws	w515	Sander pedals (engine end)	sband
w456B	Reverse rod end	obbmh	w515A	Sander pedals (outside end)	sbarc
	Reverse rocking shaft	obcli	w516	Sander rod ends	sbatu
	CHANGE SPEED		w572	Sander rod ends	sbarv
w458A	Change speed operating handle	obeann	w567A	Sander shaft bearings, radiator end	sbarw
w554	Change speed rocking shaft support	obecl	w568A	Sander compression rod bracket	sbarx
w468	Clutch rocking shaft bearings	obelh	w560A	Sandboxes	sbaaz
w456A	Change speed rocking shaft	oberm	w560B	Sandbox lids	sbeje
	THROTTLE & MAGNETO CONTROL		w569	Sander spring compression rod	sbeln
5016	Ball joints $\frac{1}{2}$ " Whitworth	obeyw	w571	Sander rod	sberk
w474	Throttle hand levers (long shaft)	obgho	5441	Sander shafts 2' 0 $\frac{3}{4}$ "	sbitw
w475	Magneto and throttle hand quadrant	obics	5442	Sander tube blanks	sblms
w478A	Throttle quadrant lever	obilt	w731	Pins for sander gear	sblum
w478B	Magneto ditto	obknn	w725	Pins for sander pedal bracket	sbrva
w477	Magneto rocking shaft lever (3 $\frac{3}{8}$ ctrs.)	obolb		BRAKE GEAR	
w477A	ditto	oborc	5443	2" brake cross bar collars	barack
w573	Magneto shaft bearings	obpre	w448A	Brake hangers	bareay
5435	Magneto rocking shaft	obpsi	w466A	Brake spindle links	bayby
5436	Magneto rods	obpto	w454	Brake pull rod	bayv
5437	Throttle rod	obssa	w499B	Brake column	bayvt
	CLUTCH GEAR		w417A	Bell crank lever	bayxo
w493	Ferodo pads	obste	w449A	Brake hanger brackets	baarb
5438	No. 8 taper pins 2 $\frac{1}{2}$ " long	obsvl	w451A	Brake anchor lever	baarc
5439	No. 3 ditto 1 $\frac{1}{2}$ " long	obswv	w442A	Brake blocks	baanf
5440	No. 6 ditto 2 $\frac{1}{2}$ " long	obswv	w444A	Brake handwheel	baann
w492A&B	Back stop springs for clutch	obswz	w441A	Brake cross bars	baecw
w494A	Clutch pedal shaft bracket, gear box end	obtby	w443A	Brake spindle	becvj
w494B	ditto	obtta	w444B	Brake wheel handle	beckt
w495/6	Clutch levers 12"	obtrv	w445A	Brake spindle nut	beels
w555	Clutch compression rods	obtwi	w507	Pins for brake gear	beeww
w498A	Clutch lever 4"	obtrv	w500c	Combined footstep and support	beftn
A224	Clutch jockey levers	obtrv	5000	Mechanical horn (klaxon)	befire

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SIMPLEX
INTERNAL COMBUSTION LOCOMOTIVES
INSTRUCTION BOOK.



20 H.P. 2½ TON TYPE—GAUGES 1ft. 3in. to 2ft. 0in.

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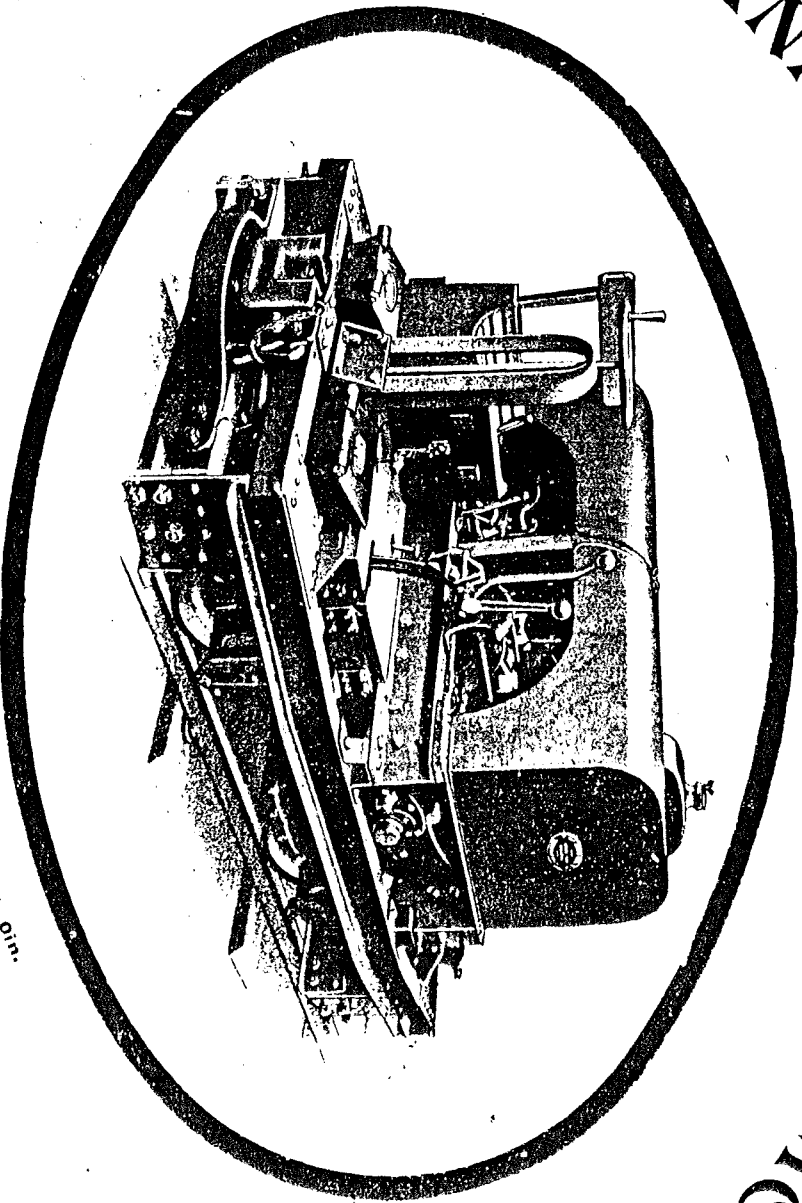
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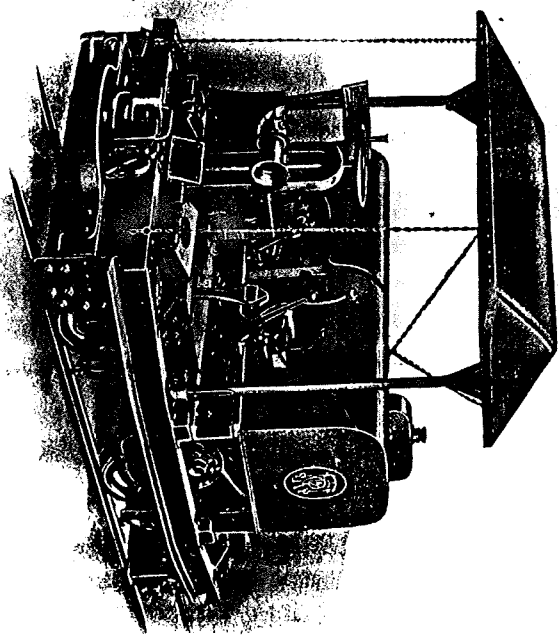
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20 H.P. SIMPLEX LOCOMOTIVE WITH AWNING.

WORKING INSTRUCTIONS.

Driving.

FIRST CARE.

See that the Radiator is full of clean water and the Petrol Tank is amply supplied with fuel.

Make sure that the Engine crank-case has plenty of oil. The green on the oil indicator indicates a sufficient supply, the red above the green indicates danger, *i.e.* "too much oil," the red below the green also indicates danger, *i.e.* "too little oil."

SIMPLEX WORKS, BEDFORD, ENGLAND.

Fill all grease cups.

Make certain that the brakes "pull on" with some screw to spare, if not tighten up the turn buckle on the pull rod between the axles.

Have a good look round the Locomotive, fill up sand boxes and tighten up any bolts that may appear slack.

STARTING UP THE ENGINE.

If you are satisfied that everything is right for starting up the Engine, then proceed as follows:—
Turn on the Petrol, Flood the Carburettor, and don't forget the switch.

Retard the Magneto, open the throttle very slightly and swing the starting handle with a good smart turn and the Engine will start.

If the throttle lever is open the correct amount, a gurgling suck will be quite audible. This is the slow running tube of the Carburettor sucking up Petrol from the "little well" which is provided for easy starting.

If the weather is very cold it will render starting-up easier if you drop a little Petrol through the Compression Taps.

Once the Engine is started allow it to run for a minute or two until thoroughly warmed up.

See that pressure is recorded on the oil plunger indicator near driver's seat.

When running, advance the magneto lever about two-thirds the distance of the quadrant.

GETTING YOUR 1st SPEED.

Release the Brakes, depress the Clutch Pedal, and throw in your low gear or 1st speed by pulling the change speed handle towards you.

Select your direction of travel by putting the reverse lever against the correct arrow. Gently raise your Clutch Pedal, and at the same time gradually open throttle lever, when the train will commence to move.

GETTING YOUR 2nd SPEED.

Once the train or Locomotive is well under way, and providing the load is not unduly heavy or the grade of the track too steep, you can now change your speed as follows:—

Close down the throttle and depress the clutch pedal about half-way, then immediately move the change speed handle smartly to the central position, then,

Depress the clutch pedal fully and push the change speed handle forward quickly, thus engaging your high gear.

Raise your clutch pedal and open the throttle, regulating the speed of the train by either steadily opening or shutting the same.

The stumbling block of the novice who has never driven a motor car is to successfully engage a 2nd speed gear when he pushes forward his change speed handle. The scheme is to slow the clutch cone down sufficiently by pressing home the clutch pedal before attempting to engage from the central position to the 2nd speed position.

On the other hand if it is delayed too long the clutch cone will stop entirely, and the results will not be satisfactory.

The feel of the levers will be quickly found if the operator will watch, or get another to watch the clutch cone, to ascertain whether he stops it too much or otherwise. No great force is required, for if applied it places heavy wear on this part of the Locomotive.

MAGNETO ADVANCE.

As the speed of the train increases, advance the Magneto Lever, but not to such a position as will cause the engine to knock.

It is a good practice to keep the Magneto lever as far advanced as possible without producing the knock referred to.

CLIMBING A GRADIENT.

If about to negotiate a gradient and you find the speed of the train decreasing, it will be necessary