

HOWARD
ROTAVATOR

Gem

Series III and IV

Insertion Sheet

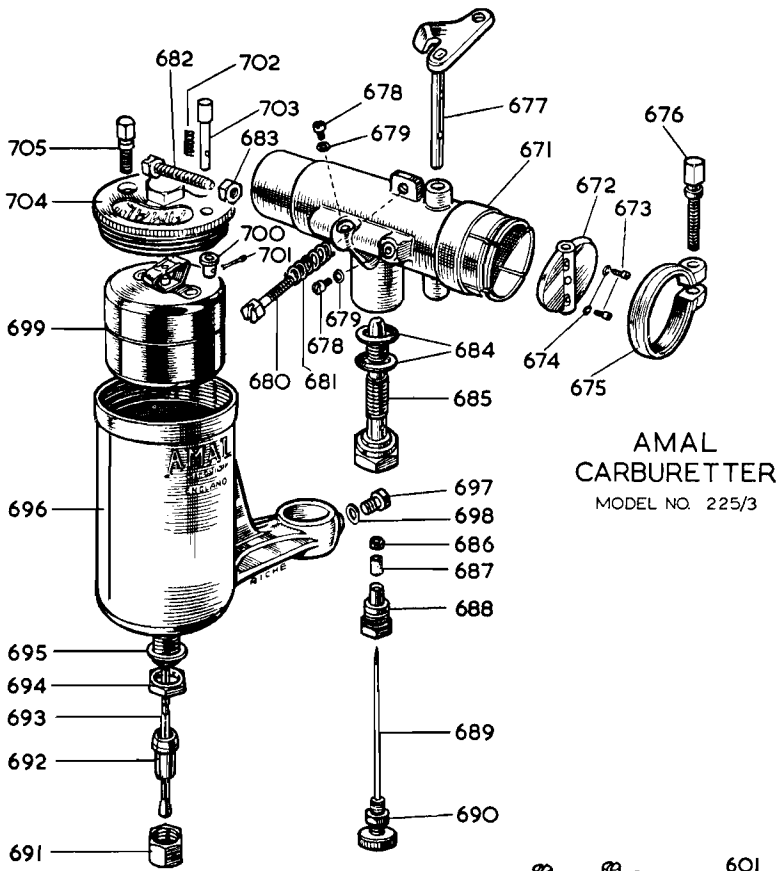
This insertion sheet should be used in conjunction with the Howard Rotavator Gem V Instruction Book—Publication Ref L 424

The items listed within are those parts on the Gem III and Gem IV that differ from the Gem V. Engine parts for the 600 c.c. J.A.P. Engine (Gem III), the 810 c.c. Howard Twin Cylinder Engine (Gem IV and Gem V) and the Sachs 500 c.c. Diesel Engine (Gem Diesel) are shown in their respective handbooks.

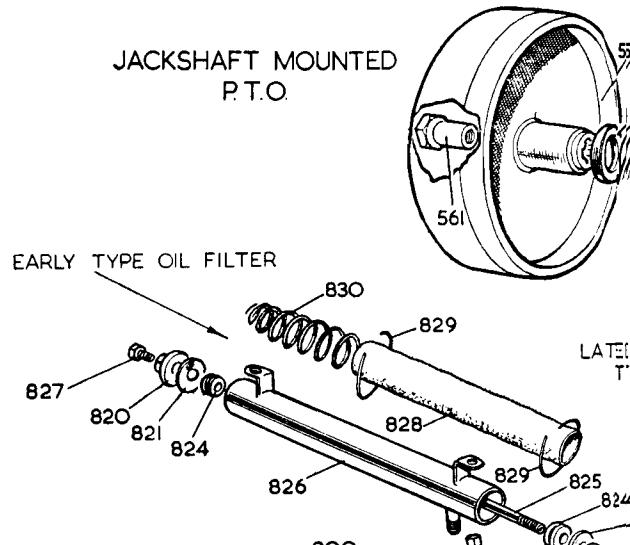


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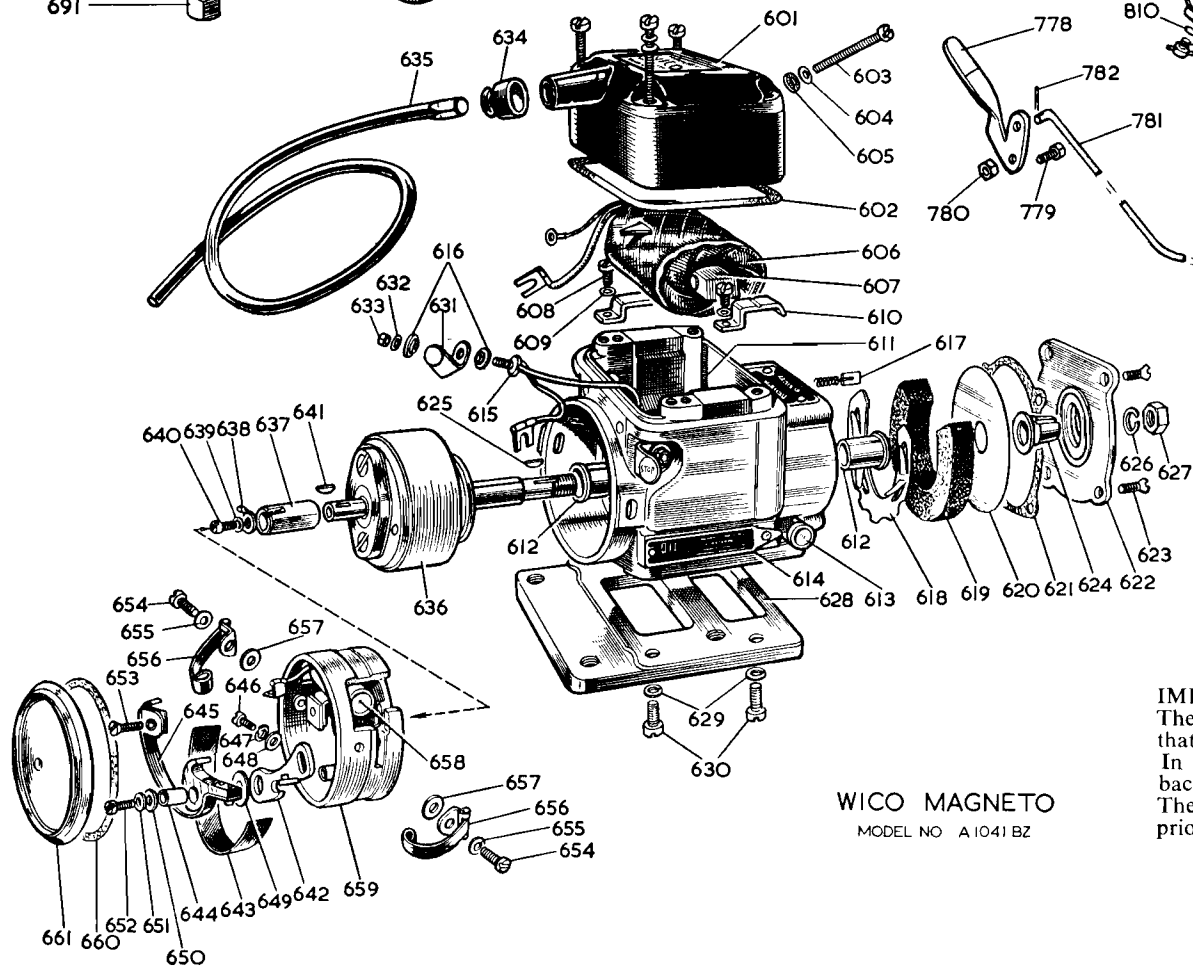
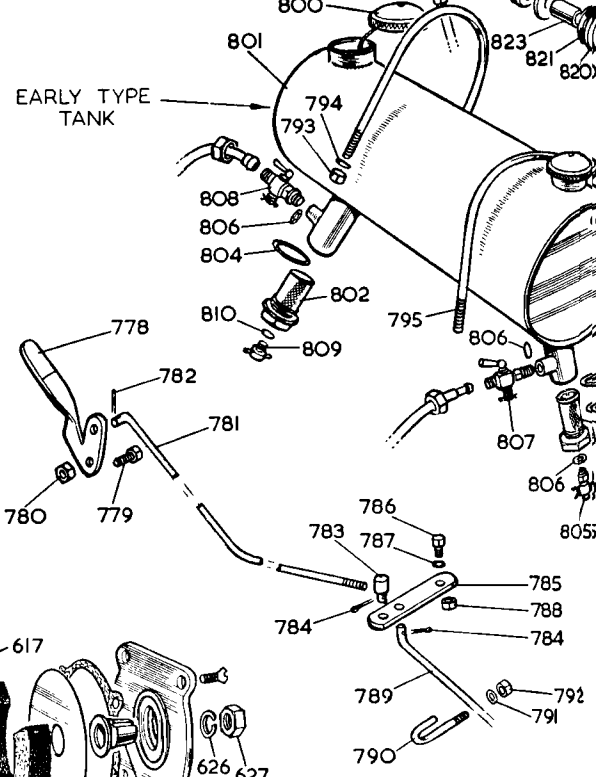
THE WORLD'S LEADING MANUFACTURER OF ROTARY TILLAGE EQUIPMENT
HOWARD ROTAVATOR CO. LTD. WEST HORNDON ESSEX
Telephone: HORNDON GREEN 361 Telex: 99217 Cables: ROTAVATOR BRENTWOOD
AUSTRALIA FRANCE GERMANY IRELAND ITALY NEW ZEALAND SOUTH AFRICA SPAIN U.S.A.



JACKSHAFT MOUNTED P.T.O.

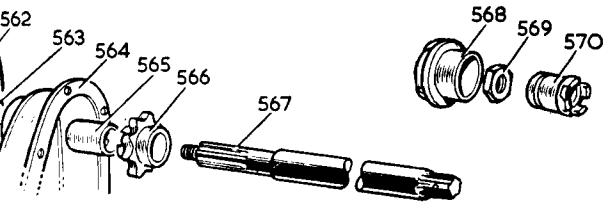


EARLY TYPE TANK

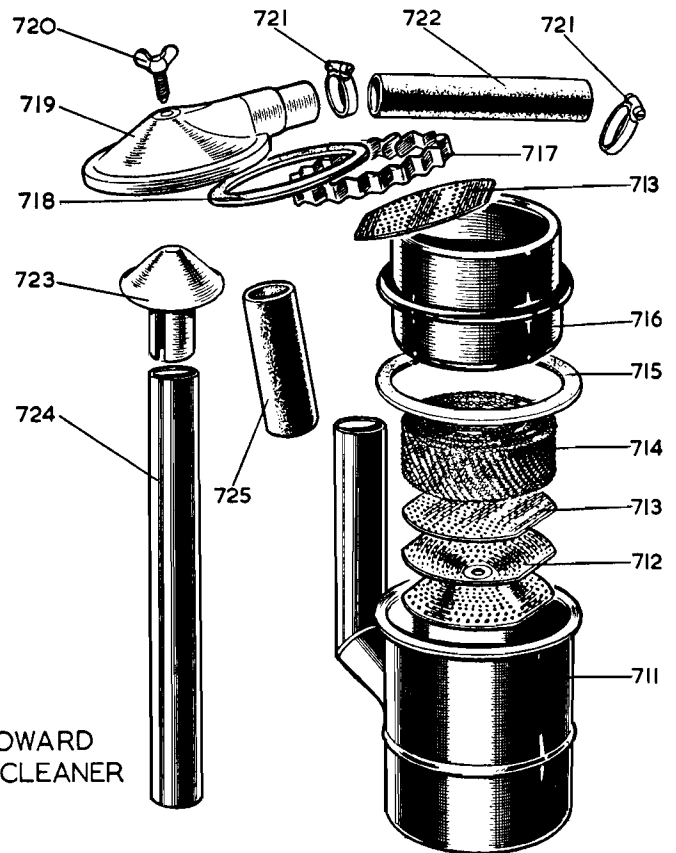
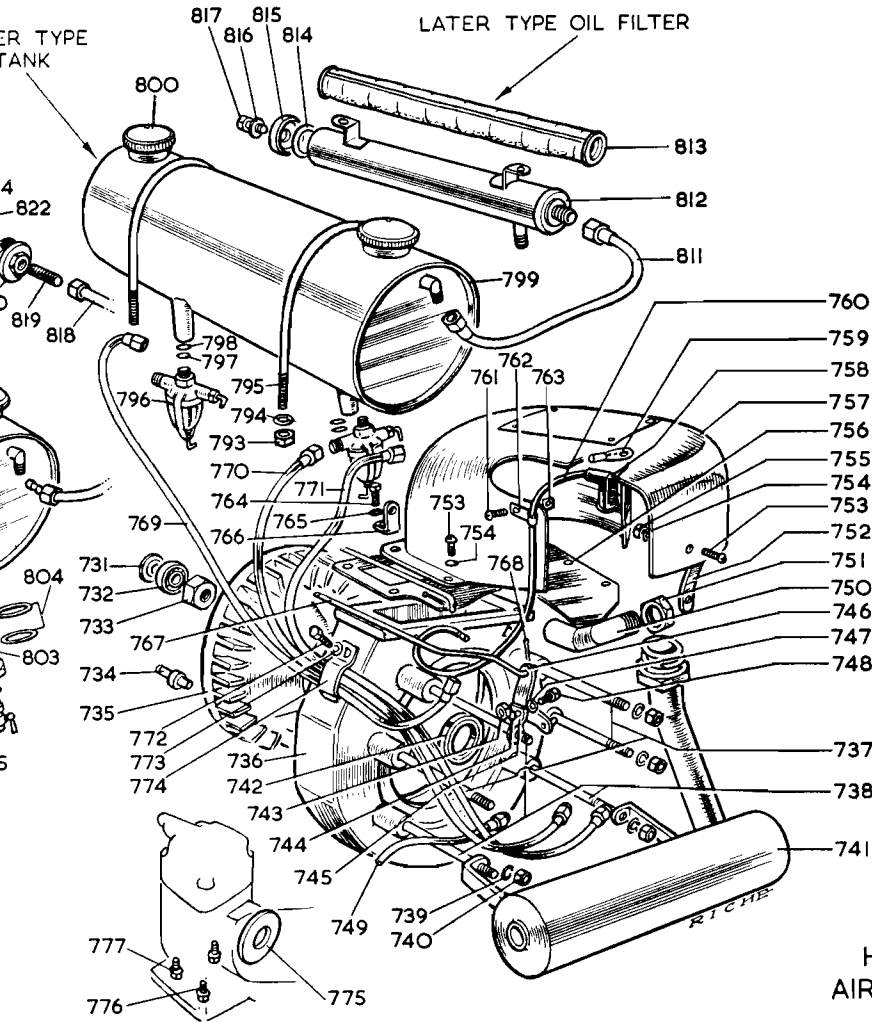


ENGINE AND TANK FITTINGS

IMPORTANT. When ordering spare parts, give the part number (not the name) that correct parts will be supplied. In the following parts list all direct and indirect parts back of the machine. The right to alter and/or amend this list without prior notice is strictly reserved.



Gem Series III and IV



HOWARD
AIR CLEANER

SETTINGS FOR GEM SERIES III. (J.A.P. ENGINE)

Parts List

When ordering parts always give the serial number of your machine. (Illustration number) and description. We cannot guarantee parts unless these numbers are quoted.

Directions are given left or right looking forward from the front of the machine.

Prices are given in dollars and cents unless otherwise specified. All designs, specifications and/or prices quoted without liability.

Illus. No.	Part No.	Description	No. off.
1	25048	Gearbox Casing	1
3	G.481	Selector Bush	2
17	25006	Single Pinion	1
24	25049	Gearbox Cover	1
30	25074	Reverse Selector	1
35	25027	Reverse Idler	1
44	25013	Small Gear	1
62	25009	Clutch Shaft	1
66	G.288	Thrust Sleeve	1
67	25794	Thrust Sleeve Spacer	1

GEARBOX PARTS—refer to 'GEM' V Handbook for illustrations

73	G.250	Special Bolt	...	...	...	...	4
75	G.255	Distance Piece	...	...	...	...	4
78	G.220	Friction Disc	...	...	...	...	1
543-560		not allocated.					

JACKSHAFT MOUNTED POWER TAKE-OFF—Optional							Fitment
561	25941	Retaining Nut	...	...	...	...	1
562	25936	Pulley	...	...	...	...	1
563	21916237	Oilseal 2 $\frac{1}{8}$ " o.d. x 1 $\frac{5}{8}$ " o.d. x $\frac{3}{8}$ " w.	...	...	...	...	1
564	25935	Chaincase	...	...	...	...	1
565	25943	Bush	...	...	...	...	1
566	25944	Jackshaft Sprocket	...	...	...	...	1
567	25946	Shaft 20" Model	...	...	...	...	1
	25947	Shaft 24" Model	...	...	...	...	1
	25949	Shaft 30" Model	...	...	...	...	1
568	25940	Cap	...	...	...	...	1
569	25948	Special Locknut	...	...	...	...	1
570	25937	Sleeve	...	...	...	...	1

'GEM' III WICO MAGNETO A.1041 BZ

	S.1792	Cover Group	...	...	...	...	1
		comprising:—					
601		Cover Unit	...	...	...	...	1
602		Cover Gasket	...	...	...	...	1
	S.2560	Fixing Set	...	...	...	...	1
		comprising:—					
603		Cover Screw	...	...	...	...	4
604		Cover Screw Washer	...	...	...	...	4
605		Cover Screw Leather Washer	...	...	...	...	4
	S.1788	Coil and Core Unit	...	...	...	...	1
		comprising:—					
606	S.1784	Coil Group	...	...	...	...	1
607	S.1783	Core Group	...	...	...	...	1
	S.2554	Fixing Set	...	...	...	...	1
		comprising:—					
608		Coil Core Clamp Screw	...	...	...	...	2
609		Coil Core Clamp Screw Lock Washer	...	...	...	...	2
610		Coil Core Clamp	...	...	...	...	2
	S.1850	Main Housing Unit	...	...	...	...	1
		comprising:—					
611		Main Housing	...	...	...	...	1
612	S.2550	Bearing Set	...	...	...	...	1
613	S.2549	Oiler Set	...	...	...	...	1
614	S.2551	Oil Instruction Plate Set	...	...	...	...	1
	S.2548	Ground Lead Set	...	...	...	...	1
		comprising:—					
615		Ground Stud Group	...	...	...	...	1
616		Earth Stud Insulating Washer	...	...	...	...	2
	S.1754	Oiling Disc Unit	...	...	...	...	1
		comprising:—					
617		Oil Scraper Assembly	...	...	...	...	1
618		Oil Pad Spring Group	...	...	...	...	1
619		Main Oil Pad	...	...	...	...	1
620		Oiling Disc	...	...	...	...	1
	S.1883	End Plate Unit	...	...	...	...	1
		comprising:—					
622	S.1484	End Plate Group	...	...	...	...	1
	S.0106	End Plate Fixing Set	...	...	...	...	1
		comprising:—					
621		End Plate Gasket	...	...	...	...	1
623		End Plate Screw	...	...	...	...	4
	S.1698	Taper Adaptor Unit	...	...	...	...	1
		comprising:—					
624		Taper Adaptor	...	...	...	...	1
625		Taper Adaptor Key	...	...	...	...	1
	S.0099	Fixing Set	...	...	...	...	1
		comprising:—					
626		Taper Adaptor Lock Washer	...	...	...	...	1
627		Taper Adaptor Nut	...	...	...	...	1
	S.1864	Adaptor Plate Unit	...	...	...	...	1
		comprising:—					
628		Adaptor Plate	...	...	...	...	1
	S.0041	Fixing Set	...	...	...	...	1
		comprising:—					
629		Adaptor Plate Screw Lock Washer	...	...	...	...	4
630		Adaptor Plate Screw	...	...	...	...	4

	S.1604	{	Stop Button Unit	2
			comprising :—	
616		{	Earth Insulating Washer	2
631			Stop Button Contact	2
632			Earth Stud Washer	2
633		{	Stop Button Contact Nut	2
634	S.2418		H.T. Lead Rubber Protector	1
635	S.1534		H.T. Lead Unit 17"	1
636	S.1827		Rotor Assembly	1
	S.1818	{	Cam Unit	1
			comprising :—	
637	S.1772		Cam	1
	S.2561	{	Fixing Set	1
			comprising :—	
638			Cam Screw Lock Plate	1
639			Cam Screw Lock Washer	1
640			Cam Screw	1
641			Cam Key	1
	S.1944	{	Breaker Box Unit	1
			comprising :—	
	S.1756		Contact Set	1
			comprising :—	
642			Fixed Contact	1
643			Insulating Strip	1
644			Breaker Arm Spacer	1
645			Breaker Arm Group	1
	S.2556	{	Screw and Lock Washer Set	1
			comprising :—	
646			Fixed Contact Screw	1
647			Screw Lock Washer	1
648			Fixed Contact Screw Washer	2
649			Breaker Arm Spacing Washer	1
650			Breaker Arm Clamp Washer	1
651			Breaker Box Screw Lock Washer	1
652			Breaker Box Cover Screw	1
653			Breaker Box Cover Screw	1
	S.2574	{	Cover Fixing Set	1
			comprising :—	
654			Breaker Arm Spring Screw	2
655			Breaker Arm Spring Screw Lock Washer	2
656			Breaker Box Clip Assembly	2
657			Breaker Box Screw Washer	2
658	S.2550		Condenser Set	1
659	S.1965		Breaker Box (only)	1
	S.1946	{	Breaker Box Cover Unit	1
			comprising :—	
660			Breaker Box Gasket	1
661			Breaker Box Cover	1
622-670			not allocated.	
			AMAL CARBURETTOR 225/3	
671	225/016		Body	1
672	225/005		Throttle Valve	1
673	227/005		Throttle Valve Screw	2
674	227/007		Throttle Valve Locking Washer	2
675	5/200		Outlet Pipe Clip	1
676	4/048		Outlet Pipe Clip Screw	1
677	255/055		Throttle Lever Spindle and Stop	1
678	13/177		Plug Screw for Mixing Chamber	2
679	116/147		Plug Screw Washer	2
680	225/007		Throttle Stop Screw	1
681	225/008		Throttle Stop Spring	1
682	225/010		Air Adjusting Screw	1
683	129/005		Air Adjusting Screw Locknut	1
684	4/053		Washer for Float Chamber Union	2
685	225/012		Adjustable Main Jet Body	1
686	124/022		Gland Washer	1
687	124/021		Cork Gland	1
688	124/035		Gland Adjusting Screw	1
689	225/045		Needle for Main Jet	1
690	124/063		Locknut	1
691	14/042		Petrol Pipe Union Nut	1
692	14/026		Petrol Pipe Union Nipple	1
693	14/024		Needle	1
694	14/178		Needle Seat Locknut	1
695	14/175		Needle Seat Locknut Washer	1
696	64/156		Float Chamber Body	1
697	64/353		Plug Screw	1
698	23/110		Plug Screw Washer	1
699	14/015		Float	1

700	14/210	Tickler Stop	1
701	14/289	Tickler Cotter Pin	1
702	14/032	Tickler Spring	1
703	14/209	Tickler	1
704	14/208	Float Chamber Cover	1
705	14/021	Cover Lock Screw	1
706-710		not allocated.	

HOWARD AIR CLEANER ASSEMBLY

711	G.185	Tank	1
712	G.273	Perforated Base Cone	1
713	G.272	Perforated Plate	2
714	G.274a	Gauze Filter	2
715	G.270	Tank Gasket	1
716	G.180	Gauze Container	1
717	G.182	Gauze Container Clip	1
718	G.271	Cover Gasket	1
719	G.181	Tank Cover	1
720	G.183	Air Cleaner Clamp Screw	1
721	G.276	Hose Clip	2
722	J.9530	Hose Connection to Carburettor	1
723	G.178	Inlet Pipe Cap	1
724	G.269	Extension Tube	1
725	G.268	Extension Tube Hose Connection	1
726-730		not allocated.	

ENGINE FITMENTS

731	BJ.8007	Special Washer	1
732	BRL.1/2	Ballbearing $\frac{1}{2}$ " i.d. x $1\frac{5}{16}$ " o.d. x $\frac{3}{8}$ " w. (Hoff.LS.5)	1
733	J.9511	Flywheel Nut	1
734	BJ.8002	Driving Pin	6
735	J.9509	Flywheel	1
736	J.9512	Flywheel Housing	1
737	J.9513	Short Stud	3
738	J.9514	Long Stud	3
739		Spring Washer $\frac{1}{2}$ " dia.	6
740		Nut $\frac{1}{2}$ " BSW.	6
741	25367	Exhaust Muffler	1
742	21915037W	Oilseal $1\frac{1}{2}$ " i.d. x $2\frac{3}{8}$ " o.d. x $\frac{1}{4}$ " w.	1
743		Nut $\frac{1}{2}$ " BSW.	1
744		Washer $\frac{1}{2}$ " dia.	1
745	J.9517	Exhaust Valve Lifting Bracket	1
746	J.9518	Exhaust Valve Lifting Crank	1
747		Thackeray Washer $\frac{1}{2}$ " dia.	1
748		Setscrew $\frac{1}{4}$ " BSW. x $\frac{7}{8}$ " long, Hex. Head	1
749	25373	Breather Pipe	1
750	J.9527	Induction Pipe	1
751	25387	Induction Pipe Nut	1
752	J.9526	Clip—Shroud to Tappet Cover	1
753		Setscrew $\frac{1}{4}$ " BSW. x $\frac{1}{2}$ " long, Round Head	6
754		Spring Washer $\frac{1}{2}$ " dia.	6
755		Nut $\frac{1}{2}$ " BSW.	3
756	J.9519	Base Plate	1
757	J.9520	Cooling Blast Shroud	1
758	8037	Terminal Cover	1
		Suppressor—Champion 10,000-15,000	1
		Sparking Plug KLG.18 mm.	1
		Sparking Plug Washer	1
759	8984	Spade Terminal—Chater Lea	1
760	8983	Lead—Cable 7 mm. x 15" long	1
761	25385	Magneto Lead Clip Screw	1
762	25384	Magneto Lead Clip	1
763	25386	Magneto Lead Clip Nut	1
764		Setscrew $\frac{1}{4}$ " BSW. x $\frac{1}{2}$ " long	1
765		Spring Washer $\frac{1}{2}$ " dia.	1
766	J.9532	Guide	1
767	J.9536	Valve Lifter Rod	1
768		Splitpin $\frac{1}{8}$ " dia. x $\frac{1}{2}$ " long	1
769	25376	Petrol Pipe (Old type—Copper)	1
769	26890	Petrol Pipe (New type—Flexible)	1
770	25375	Oil Pipe (Old type—Copper)	1
770	26889	Oil Pipe (New type—Flexible)	1
771	25377	Oil Return Pipe—Engine to Filter (Old type—Copper)	1
771	26888	Oil Return Pipe—Engine to Filter (New type—Flexible)	1
772		Setscrew $\frac{1}{4}$ " BSW. x $\frac{1}{2}$ " long, Hex. Head	1

For Export Machines only

773		Spring Washer $\frac{1}{2}$ " dia.	1
774	J.9522	Pipe Retaining Clip (Old type—for Copper Pipes)	1
774	26891	Pipe Retaining Clip (New type—for Flexible Pipes)	1
775	J.9534	Dust Excluding Washer	1
776		Setscrew $\frac{3}{8}$ " BSW. x $\frac{1}{2}$ " long. } Supplied by J.A.P.	3
		Hex. Head	3
777		Locking Washer $\frac{3}{8}$ " dia.	1
778	G.797	Hand Lever	1
779		Bolt $\frac{1}{4}$ " BSW. x $\frac{1}{2}$ " long	1
780		Nut $\frac{1}{4}$ " BSW.	1
781	G.795	Rod, Handlever to Frame Arm	1
782		Splitpin $\frac{3}{16}$ " dia. x $\frac{3}{8}$ " long	2
783	G.789	Trunnion	1
784		Splitpin $\frac{1}{8}$ " dia. x $\frac{1}{2}$ " long	2
785	G.799	Frame Arm	1
786		Setscrew $\frac{1}{4}$ " BSW. x $\frac{7}{8}$ " long, Hex. Head	1
787		Thackeray Washer $\frac{1}{4}$ " dia.	1
788		Nut $\frac{1}{4}$ " BSW.	1
789	J.9533	Rod, Frame Arm to Carburettor	1
790	G.798	Throttle Rod Hook Bolt	1
791		Spring Washer $\frac{1}{4}$ " dia.	1
792		Nut $\frac{1}{4}$ " dia.	1

FUEL TANK ASSEMBLY—NEW TYPE

793		Nut $\frac{1}{4}$ " BSW.	4
794		Spring Washer $\frac{1}{4}$ " dia.	4
795	G.175	Tank Strap	2
796		Petrol Filter—Wipac Type 50	2
797		Sealing Washer—Wipac Part No. 03178	2
798	26899	Fibre Washer	2
799	26881	Petrol and Oil Tank	1
800	G.172	Tank Cap	2

FUEL TANK ASSEMBLY—OLD TYPE

793		Nut $\frac{1}{4}$ " BSW.	4
794		Spring Washer $\frac{1}{4}$ " dia.	4
795	G.175	Tank Strap	2
800	G.175	Tank Cap	2
801	G.165	Petrol and Oil Tank	1
802	G.171	Petrol Filter Plug	1
803	G.168	Oil Filter Plug	1
804		Fibre Washer $1\frac{1}{2}$ " o.d. x $1\frac{1}{8}$ " i.d. x $\frac{1}{16}$ " thick	3
805		Oil Drain Cock $\frac{1}{4}$ " BSP.	1
806		Fibre Washer $\frac{3}{8}$ " o.d. x $\frac{3}{8}$ " i.d. x $\frac{1}{16}$ " thick	3
807	G.167	Oil Tap	1
808	G.166	Petrol Tap	1
809	25413	Petrol Drain Plug	1
810	25414	Petrol Drain Plug Washer	1

OIL FILTER—NEW TYPE

811	26887	Oil Return Pipe—Filter to Tank (New Type—Flexible)	1
	25720	Oil Filter Assembly	1
		comprising:—	
812	26540	Tube	1
813	26545	Filter Bag and Spring	1
814	26542	Fibre Washer	1
815	26541	End Cap	1
816	26543	Fibre Washer	1
817		Setscrew $\frac{3}{8}$ " B.S.W. x 1" long	1

OIL FILTER—OLD TYPE

818	25378	Oil Filter Pipe—Filter to Tank (Old Type—Copper)	1
		Oil Filter Assembly	1
		comprising:—	
819	G.885	Nipple	1
820	G.881	Tube End Cap	2
821	G.883	Fibre Disc	2
822	G.887	End Washer	1
823	G.886	Connecting Union	1
824	G.889	Bag Securing Disc	2
825	G.882	Centre Tube	1
826	G.880	Tube	1
827		Setscrew $\frac{3}{8}$ " B.S.W. x $\frac{1}{2}$ " long	1
828	G.890	Oil Filter Bag	1
829	G.892	Binding Wire	2
830	G.891	Bag Spiral	1