



MORRIS

G18 to G21

SERVICE INFORMATION



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COWLEY, OXFORD





MODELS: ALL MODELS

No. OF SHEETS 2

SHEET No. 1

Date of issue: June, 1929

SPEED WRENCHES

Part No.	Code Word	No. Used	Description	Size across Flats of Nuts	Where Used	Price Each	
18934	EMQIP	1 set	Interchangeable socket wrenches, including valve-grinding socket for valves with "slots" and holes for "pin points"	.448" .525" .600" .710" .820" .920"	} General	s. d. 13 0	
18928	EMQIH	1	Box spanner with tommy bar ...			Rear hub nut ... 11.9 h.p. and 14/28 h.p.	5 9
18933	EMQIN	1	" " " " " " ...			Rear axle shaft nut ... 11.9 h.p. and 14/28 h.p.	2 9
18929	EMQIJ	1	Single-ended socket wrench710"		Cylinder head stud nut 11.9 h.p. and 14/28 h.p.	2 6
18855	EMPOV	1	" " " " " " ...	.820"	Shackle bolt nut, shock absorber bush pin and nut, engine fixing bolt nut.	2 9
18858	EMPOY	1	" " " " " " ...	1.010"	11.9 h.p. and 14/28 h.p. Drive gear pinion castle nut, magneto drive shaft nut, camshaft fan pulley nut, brake pedal stud nut ... 11.9 h.p. and 14/28 h.p.	4 6	
18930	EMQIK	1	" " " " " " ...	.600"	Steering gearbox bracket nut.	4 6
18931	EMQIL	1	" T " handle socket wrench with tommy bar ...		11.9 h.p. and 14/28 h.p.	4 6	
18857	EMPOX	1	Double-ended socket wrench ...	.710" & .920"	Enots lubricators.	4 6
18856	EMPOW	1	Double-ended offset wrench ...	.600" & .820"	Front spring clip nut, fan lever clamp bolt, clutch pedal adjusting stud nut; track rod and steering arm nut; dynamotor fixing bolt nut.	4 9
18860	EMPUB	1	Double-ended socket wrench (3 sockets) ...	.600" .710" .525"	11.9 h.p. and 14/28 h.p. Shock absorber bush pin and nut; track rod and steering ball nut; big-end bolt nut; differential carrier bolt nut; main bearing stud nut; clutch and brake pedal clamp bolt nut; gearbox bolt and nut.	5 0
18859	EMPOZ	1	Semi-universal joint wrench ...	.600"	11.9 h.p. and 14/28 h.p. Flywheel cover bolt; gearbox cover stud nut; starter cover bolt; cylinder block water flange bolt; radiator base plate domed nut; differential carrier and housing cover bolt nut; rear brake camshaft bracket bolt nut; differential case bolt and nut; step iron and bracket bolt; exhaust pipe and silencer clip nut; pinion adjusting sleeve lock plate bolt.	3 9
18853	EMPOS	1	Long shank brace speed wrench	.600"	As required.	13 6	
18854	EMPOT	1	" " " " " " ...	.710"	Connecting rod big-end, sump bolt, rear axle cover bolt, luggage grid bolt, bumper clamp bolt, body bracket bolt nut.	5 3
35961	IVJIL	1	" " " " " " ...	.448"	11.9 h.p. and 14/28 h.p. Cylinder head stud nut; rear spoke stud inner nut; front spring clip nut; differential bearing cap bolt ... 11.9 h.p. and 14/28 h.p.	5 6
30689	ETCOG	1	" T " handle socket wrench with tommy bar ...	.710"	Big-end bolt nut ... Morris Minor	4 0
36127	IVLAJ	1	Socket wrench ...	.338"	Cylinder head stud nut ... Morris Six	6 6
					Gudgeon pin clamp bolt ... Morris Minor	3 3	





Date of issue: December, 1929

SPRINGS ON 1925-26 MODELS

Model.	Body.	Position.	Part No.	Free Camber.	No. of Leaves.
Morris-Cowley 11.9 h.p. 48" Track, 4-cyl. S.V.	All without F.W.B. All with F.W.B. Van. 2-seater. 4-seater, Saloon, Coupé, C.T.S., Chummy.	Front	1276	4.5"	6
		Front	1613	3.5"	6+2 rebound
		Rear	1453	7"	9
		Rear	1278	7"	6
		Rear	1277	7"	7
Morris-Oxford 14/28 h.p. 4-cylinder, 48" Track. S.V.	All types. 2-seater Coupé. 4-seater, Cabriolet, Saloon Landaulet.	Front	1613	3.5"	6+2 rebound
		Rear	1437	7"	8
		Rear	1453	7"	9

SPRINGS ON 1926-27 MODELS

Model.	Body.	Position.	Part No.	Free Camber.	No. of Leaves.
Morris-Cowley 11.9 h.p. 48" Track, F.W.B., S.V.	All types. All types.	Front	1922	2"	6+2 rebound
		Rear	1921	4.25"	7
Morris-Cowley 11.9 h.p. 48" Track (Rear Brakes only), S.V.	All types. All types.	Front	2010	2"	6
		Rear	1921	4.25"	7
Morris-Oxford 14/28 h.p. 48" Track, 4-cyl. S.V.	All types. 2- and 4-seaters and Coupé Cabriolet, Sal. Landaulet.	Front	1922	2"	6+2 rebound
		Rear	1923	4.25"	7
		Rear	2204	4.25"	8
Morris-Cowley Van		Front	2010	2"	6
		Rear	2155	4.25"	8
Morris-Oxford 14/28 h.p. 56" Track, 4-cyl. S.V.	All types. 2- and 4-seaters and Coupés.	Front	1922	2"	6+2 rebound
		Rear	1923	4.25"	7

SPRINGS ON 1927-28 MODELS

Model.	Body.	Position.	Part No.	Free Camber.	No. of Leaves.
Morris-Cowley 11.9 h.p. 48" Track, F.W.B., 4-cyl. S.V.	All types. All types.	Front	2694	2.375"	5+2 rebound
		Rear	1921	4.25"	7
Morris-Cowley 48" Track (Rear Brakes only) 4-cyl. S.V.	All types. All types.	Front	2010	2"	6
		Rear	1921	4.25"	7
Morris-Oxford 14/28 h.p. F.W.B., 4-cyl. S.V. 48" Track.	All types. All types.	Front	2694	2.375"	5+2 rebound
		Rear	1923	4.25"	7
Morris-Oxford. 56" Track.	All types. Saloon. 4-seater.	Front	2694	2.375"	5+2 rebound
		Rear	3276	4.25"	8
		Rear	3270	4.25"	7
Morris-Cowley. 56" Track.	All types. All types.	Front	2694	2.375"	5+2 rebound
		Rear	3271	4.25"	7
Morris-Cowley Van.		Front Rear	2694 2155	2.375" 4.25"	5+2 rebound 8
Morris-Oxford 11.9 h.p. 48" Track, 4-cyl. S.V.	All types. All types.	Front Rear	2694 1923	2.375" 4.25"	5+2 rebound 7





Date of issue : December, 1929

SPRINGS ON 1928-29 MODELS

Model.	Body.	Position.	Part No.	Free Camber.	No. of Leaves.
Morris Minor 8 h.p. 4-cyl. O.H.V. 42" Track	All types.	Front	3623	Flat with 280 lb. load	4+2 rebound
	All types.	Rear	3624	Flat with 500 lb. load	5+2 rebound
Morris-Cowley 11.9 h.p. 4-cyl. S.V. 48" Track	All types.	Front	3307	2.25"	5
	All types.	Rear	3781	4.875"	9
Morris-Oxford 14/28 h.p. 4-cyl. S.V. 48" Track.	All types.	Front	3806	3.25"	5
	Saloon de Luxe.	Rear	3387	4.25"	8
	All other types.	Rear	3668	6.875"	11
Morris-Cowley 14/28 h.p. 4-cyl. S.V. 56" Track.	Home Trade.	Front	3307	2.25"	5
	Australian.	Front	2694	2.375"	5+2 rebound
	Chassis.	Rear	3278	4.25"	7
	4-seater and Saloon.	Rear	4657	6.75"	9
Morris Six 17.7 h.p. 6-cyl. O.H.V. 56" Track.	All types.	Front	3814	2.5"	6
	All types.	Rear	3810	7½" from centre of spring	11
Std. Van 11.9 h.p. 4-cyl. S.V. 48" Track.		Front	2694	2.375"	5+2 rebound
		Rear	2155	4.25"	8
G.P.O. Van.		Front	1922	2.00"	6
		Rear	3272	4.25"	8

SPRINGS ON 1929-30 MODELS

Model.	Body.	Position.	Part No.	Free Camber.	No. of Leaves.
Morris Minor 8 h.p. 4-cyl. O.H.V. 42" Track	All types.	Front	3623	Flat with 280 lb. load	4+2 rebound
	All types.	Rear	3624	Flat with 500 lb. load	5+2 rebound
Morris-Cowley 11.9 h.p. 4-cyl. S.V. 48" Track.	All types.	Front	3307	2.25"	5
	All types.	Rear	3781	4.875"	9
Morris-Cowley 14/28 h.p. 4-cyl. S.V. 56" Track.	All types.	Front	3307	2.25"	5
	Chassis.	Rear	3271	4.875"	9
	4-seater.	Rear	3781	4.875"	9
	Saloons.	Rear	4657	6.75"	9
Morris-Oxford Six 15 h.p. 56" Track, S.V. 6-cyl.	All types.	Front	4955	2.75"	6
	All types.	Rear	4260	6"	8
Morris 5-cwt. Van.		Front	4939	1"	5+2 rebound
		Rear	4940	2.5625"	7+2 rebound
Morris Light Van. (10 cwt.)		Front	2694	2.375"	5+2 rebound
		Rear	3160	4.25"	8
Isis Six 17.7 h.p. Track, O.H.V. 6-cyl.	All Home Trade.	Front	4046	3.1075"	9
	All Home Trade.	Rear	4893	6.3125"	10
	All Export.	Front	4046	3.1075"	9
	All Export.	Rear	4047	7.6875"	11





Date of issue : March, 1934

SPRINGS ON 1930-31 MODELS

Model.	Body.	Position.	Comm. Chassis Nos.	Part No.	Free Camber.	No. of Leaves.		
Morris Minor 8 h.p. 4-cyl. O.H.V. 41.5" Track.	All models.	Front	M27098	3623	1.3125"	4+2 rebound		
	All models.	Rear		3624	3.0625"	5+2 rebound		
Morris Minor 8 h.p. 4-cyl. S.V. 41.5" Track.	All models.	Front	SV101	3623	1.3125"	4+2 rebound		
	All models.	Rear		3624	3.0625"	5+2 rebound		
Morris 5-cwt. Van 8 h.p. S.V. and O.H.V. models.	Van and Fire Tender. Van and Fire Tender.	Front	M27126	4939	1.00"	5+2 rebound		
				4940	2.5625"	7+2 rebound		
Morris Cowley 11.9 h.p. 4-cyl. S.V. 48" Track.	All models. All models.	Front	341407	3307	2.25"	5		
				Rear	3781	4.875"	9	
Morris Cowley 14/32 h.p. Export.	All models. All models.	Front		3307	2.25"	5		
				Rear	3781	4.875"	9	
Morris Cowley 14/28 h.p. 56" Track.	All models Chassis and 4-Seater. Ditto All Saloons.	Front		2694	2.375"	5+2 rebound		
				Rear	3781	4.875"	9	
				Rear	4657	6.75"	9	
Morris 10-cwt. Van. 48" Track.		Front	342898	2694	2.375"	5+2 rebound		
				Front	345892	3307	2.25"	5
				Rear		2155	4.250"	8
Morris G.P.O. Van. 48" Track.		Front	345204	1922	2.00"	6+2 rebound		
				Rear	3272	4.250"	8	
Morris Major 15 h.p. 6-cyl. S.V. 48" Track.	All models. All models. All models.	Front	MJ101	3307	2.25"	5		
				Rear	2694	2.375"	5+2 rebound	
				Rear	3781	4.875"	9	
Morris Oxford 15 h.p. 6-cyl. S.V. 56" Track.	Home Trade. Home Trade. Export Trade. Export Trade.	Front	LA15546	4259	2.50"	7+1 rebound		
				Front	4260	6.00"	8	
				Rear	LA15640	5074	3.75"	7+1 rebound
				5311	6.875"	9		
Morris Isis 17.7 h.p. 6-cyl. O.H.V. 56" Track.	All models. All models.	Front	IS2731	4046	3.1075"	9		
				Rear	4893	6.3125"	10+1 rebound	





Date of issue : March, 1934

SPRINGS ON 1931-32 MODELS

Model.	Body.	Position.	Comm. Chassis Nos.	Part No.	Free Camber.	No. of Leaves.	
Morris Minor S.V.	All models. All models.	Front	SV5536	50185	1.5"	5+2 rebound	
		Rear		50028		5+2 rebound	
Minor Van S.V.	All models. All models.	Front	SV5636	4939	1.0"	5+2 rebound	
		Rear		4940		2.5625"	7+2 rebound
Morris Eight. 4-cyl. O.H.V.	All models. All models.	Front	M34700	50185	1.5"	5+2 rebound	
		Rear		50028		5+2 rebound	
Morris Cowley.	All models. All models.	Front	358193	50157	3.5"	8	
		Rear		3665		5.875"	9
Cowley Van 14/32 h.p.		Front	358245	2694	2.375"	5+2 rebound	
		Rear		2155		4.250"	8
G.P.O. Van.		Front	358229	1922	2.00"	6+2 rebound	
		Rear		3272		4.25"	8
Morris Major.	All models. All models.	Front	MJ4126	50157	3.5"	8	
		Rear		50158		6.0"	8
Morris Oxford.	All models. All models. All models. All models.	Front	LA23747	4259	2.5"	7+1 rebound	
		Rear		4260		6.0"	8
		Front		50159		3.0"	6
		Rear		50188		6.5"	8
Isis Six.		Front	IS4040	5990	3.250"	8	
		Rear		5992		7.375"	9+1 rebound





Date of issue : March, 1934

SPRINGS ON 1932-33 MODELS

Model.	Body.	Position.	Comm. Chassis Nos.	Part No.	Free Camber.	No. of Leaves.
Morris Minor, S.W.B. and L.W.B.	All models.	Front	20301	50185	1.50"	5+2 rebound
	All models.	Rear		50028		5+2 rebound
Minor Van.		Front	20600	50185	1.50"	5+2 rebound
		Rear		4940		2.5625"	7+2 rebound
Morris Ten.	All models.	Front	101	50632 O/S	2.625"	6
	All models.	Rear		50633 N/S		50634 O/S	4.6"	8
Morris Cowley 11.9 h.p.	All models.	Front	373500	50157	3.5"	8
	All models.	Rear		3665		5.875"	9
Cowley Van.		Front	373525	2694	2.375"	5+2 rebound
		Rear		2155		4.250"	8
G.P.O. Van.		Front	374952	1922	2.00"	6+2 rebound
		Rear		3272		4.25"	8
Major.	All models.	Front	13062	50157	3.5"	8
	All models.	Rear		50158		6.0"	8
Morris Oxford.	All models.	Front	28747	50159	3.0"	6
	All models.	Rear		50973		6.625"	9
Isis Six.	All models.	Front	5524	5990	3.25"	8
	All models.	Rear		5992		7.375"	9+1 rebound
Morris "25."	All models.	Front	5611	50857	3.25"	8
	All models.	Rear		5992		7.375"	9+1 rebound





Date of issue : March, 1934

SPRINGS ON 1933-34 MODELS

Model.	Body.	Position.	Comm. Chassis Nos.	Part No.	Free Camber.	No. of Leaves.	
Morris Minor.	All models (Home). All models (Home). Export models. Export models.	Front	33779	50185	1.5"	5+2 rebound	
		Rear		51320		5+2 rebound	
		Front		50185	1.5"	5+2 rebound	
		Rear		52687 52688	3.25"	6+2 rebound	
Minor Van.	G.P.O. and Export.	Front	34454	50185	1.5"	5+2 rebound	
		Rear		4940	2.5625"	7+2 rebound	
		Rear		52631 O/S	3.3125"	7+2 rebound	
				52632 N/S			
Ten Four.	All models (Home). All models (Home). All models (Home). Export. Export.	Front	14281	51644	2.625"	6	
		Front		21744	52626	3.375"	6
		Rear		14281	51791 O/S	5.25"	8
		Front		16731	51792 N/S		
Rear	52648 52649 O/S 52650 N/S	3.375" 5.25"	7 9				
Ten Six.	All models (Home). All models (Home). All models (Home). Export. Export.	Front	16190	51644	2.625"	6	
		Front		52626	3.375"	6	
		Rear		51791 O/S	5.25"	8	
				51792 N/S			
Front	52648	3.375"	7				
Rear	52649 O/S 52650 N/S	5.25"	9				
Ten Four Special and Ten Six Special.	Home. Home. Export. Export.	Front		52438	1.875"	6	
		Rear		52538 O/S	3.75"	8	
		Front		52539 N/S			
		Rear		52438 52538 O/S 52539 N/S			
Cowley Four and Cowley Six.	All models (Home). All models (Home). Export models. Export models.	Front		50157	3.5"	8	
		Rear		51605	4.375"	8	
		Front		52662	3.5"	9	
		Rear		52675	4.375"	9	
Cowley Van.		Front		2694	2.375"	5+2 rebound	
		Rear		2155	4.25"	8	
G.P.O. Van.		Front		1922	2.0"	6+2 rebound	
		Rear		3272	4.25"	8	
Morris Oxford.	All models (Home). All models (Home). Export models. Export models.	Front		51759	2.875"	8	
		Rear		51761	5.875"	10	
		Front		52674	2.875"	9	
		Rear		52676	5.895"	11	
Isis.	All models (Home). All models (Home). Export models. Export models.	Front		5990	3.25"	8	
		Rear		5992	7.375"	9+1 rebound	
		Front		52654	3.25"	9	
		Rear		52656	7.375"	10+1 rebound	
Isis "25."	All models (Home). All models (Home). Export models. Export models.	Front		50857	3.25"	8	
		Rear		5992	7.375"	9+1 rebound	
		Front		52655	3.25"	9	
		Rear		52656	7.375"	10+1 rebound	





Date of issue : May, 1935

ROAD SPRING DATA—1934-35 MODELS

Model.	Body.	Position.	Comm. Chassis No.	Part No.	Free Camber.	No. of Leaves.
Morris Eight.	All models (Home) except 2-Seater.	Front	901	53028	1½"	5+2 rebound
		Rear		38137 N/S 53027 O/S	3½"		5+2 rebound
	2-Seater.	Front	901	53028	1½"	5+2 rebound
		Rear		38329 N/S 53624 O/S	3½"		5+2 rebound
	Saloons (Export).	Front	901	53028	1½"	5+2 rebound
Rear		53478 O/S 53479 N/S		3¼"	6+2 rebound	
2-Seater and Tourer (Export).	Front	901	53028	1½"	5+2 rebound	
	Rear		53027 O/S 38137 N/S	3½"	5+2 rebound	
5-cwt. Van (Home and Export).	Front	1399	53679	1½"	5	
			53674 O/S 53675 N/S	3½"		7+2 rebound
Ten-Four and Ten-Six.	All models (Home).	Front	35185	52626	3½"	6
		Rear		53197 O/S 53198 N/S	5¼"		8
All models (Export).	Front	35185	52648	3½"	7	
	Rear		53388 O/S 53389 N/S	5¼"		9
8-10 cwt. Van.	Home and Export.	Front	7987	52662	3½"	9
		Rear		53437	4½"		10
Twelve-Four.	All models (Home).	Front	7721	50157	3½"	8
		Rear		51605	4½"		8
All models (Export).	Front	7721	52662	3½"	9	
	Rear		52675	4½"		9
Fifteen-Six.	All models (Home).	Front	7733	52662	3½"	9
		Rear		51605	4½"		8
All models (Export).	Front	7733	52662	3½"	9	
	Rear		52675	4½"		9
Oxford 16 h.p. and 20 h.p.	All models (Home).	Front	16 h.p.	52674	2½"	9
		Rear	35640 20 h.p. 35638	51761	5.895"		10
	All models (Export).	Front	16 h.p.	52674	2½"	9
		Rear	35640 20 h.p. 35638	52676	5.895"		11
Isis.	All models (Home).	Front	7501	41476	3¼"	8
		Rear		5992	7½"		9
All models (Export).	Front	7501	52654	3¼"	9	
	Rear		52656	7½"		10
Twenty-five.	All models (Home).	Front	7501	50857	3¼"	8
		Rear		5992	7½"		9
All models (Export).	Front	7501	52655	3¼"	9	
	Rear		52656	7½"		10





Date of issue : March, 1939

LIST OF SPECIAL SERVICE TOOLS

Every Dealer servicing Morris cars is recommended to maintain the special tools detailed in this list, as by their use damage to parts will be obviated and repairs generally will be greatly facilitated

PART NUMBERS

DESCRIPTION	PART NUMBERS									
	1935 and Series I and II Eight	Series II Ten and Twelve	Series II Sixes	Series III Ten and Twelve	Series III Sixes	Series "E" Eight	Series "M" Ten			
EXTRACTORS										
Valve spring ...	38378	65474	65474	56002	—	38378	—			
Valve spring (foot) ...	65481	65481	65481	67456	67456	65481	67456			
Valve spring (bench type) ...	—	—	—	—	—	—	—			
Gearbox sliding shaft ...	38587 (1935, S.1, S.2)	16561	16561	—	—	—	—			
Front and rear hub ...	19431	19431	19431	19431	19431	19431	19431			
Steering knuckle pin ...	55418	55418	55418	55418	55418	55418	55418			
Steel pegs for above ...	55461	55461	55461	55461	55461	55461	55461			
Steering wheel extractor attachment ...	56052	56052	56052	56052	56052	56052	56052			
Flywheel ...	—	65498	65498	65498	65498	—	65498			
REAMERS										
Main bearing line ...	38728 (1935, S.1, S.2)	46128	46129 (14 h.p.)	46129 (12 h.p.)	46129 (14 h.p.)	—	—			
Steering knuckle bush ...	39009	67193	47111 (14 h.p.)	67193 (10 h.p.)	47111 (25 h.p.)	39009	67193			
CUTTERS										
Valve seat ...	65925	65925 (10 h.p.)	30431 (12 h.p.)	67413 (Exhaust)	67413 (14 h.p.)	65925	67815 (Inlet)			
Clutch plate aligning tool ...	38461	65453	65453	67515 (12 h.p.)	65453	39371	67833			
Clutch dummy gauge plate ...	38446	—	—	—	—	38446	—			
Cylinder head distributor aligning gauge ...	38385	—	—	—	—	—	—			
Gudgeon pin assembly plugs ...	—	45382	45382	45382	45382	—	45382			
Rear main bearing plate alignment gauge ...	38806	—	—	—	—	67800	67800			
Screwed shackle adjusting thimbles ...	—	—	—	—	—	—	—			
BODY TOOLS										
Mono body jack ...	67797	67797	67797	67797	67797	67797	67797			
Metal case for mono body jack ...	67798	67798	67798	67798	67798	67798	67798			
Body repair tool kit ...	67804	67804	67804	67804	67804	67804	67804			
SPANNERS										
Clutch thrust race "C" ...	—	16565	16565	16565 (10 h.p. only)	16565	—	—			
Clutch front and gearbox selector screw ...	16563	16563	16563	16563	16563	16563	16563			
Cylinder head nut ...	46556	46556	46556	46556	46556	46556	46556			





Date of issue : March, 1939

Special Service Tools—continued

DESCRIPTION	PART NUMBERS						
	1935 and Series I and II Eight	Series II Ten and Twelve	Series II Sixes	Series III Ten and Twelve	Series III Sixes	Series "E" Eight	Series "M" Ten
SPANNERS continued							
Gearbox drive gear nut	38468 (1935 to S.2)	—	—	—	—	—	—
Gudgeon pin clamp screw	66243	36291	37475 (14 h.p.) 36291 (25 h.p.)	36291	37475 (14 h.p.) 36291 (25 h.p.)	66243	36291
Sparking plug (double-ended)	66604	66604	66604	66604	66604	66604	66604
Steering wheel nut	—	66242	—	—	—	—	—
Rear hub nut	36120	18928	18928 (14 h.p.) 46776	18928	18928 (14 h.p.) 46776	36120	36120
Lockheed bleeder screw wrench	38992	46746	46746	46746	46746	38992	46746
Tappet	45206	16959	16959	—	—	45206	—
Sump drain plug	38935 (S.2)	—	—	—	—	38935	—
Tappet head wrench	38932	—	—	—	—	38932	—
Socket for tappet head wrench	38933	—	—	—	—	38933	—
Rocker adjusting tool	—	—	—	56004	56004	—	56004
MISCELLANEOUS							
Valve (suction) grinder	66893	66893	66893	66893	66893	66893	66893
Feeler blade (.018 in.)	66435	66435	66435	—	—	66435	66435
Feeler blade (.017 in.)	—	—	—	—	—	39336	—
Feeler blade (.015 in.)	—	—	—	75178	75178	—	—



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SPECIAL SERVICE TOOLS

NOTES ON THEIR USE

In several instances the use of the tool is obvious and needs no explanation.

EXTRACTORS



35870

Tool No. 35870. Ball Race—Minor O.H.V. and S.V.

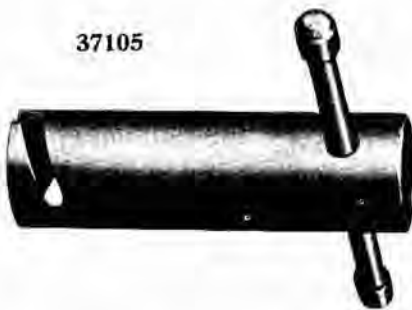
This tool is essential when removing the clutch mainshaft ball bearing from its housing in the crankshaft rear sleeve. It should be used in conjunction with the flywheel extractor, Tool No. 31695.



35869

Tool No. 35869. Pump Driving Gear—Minor O.H.V.

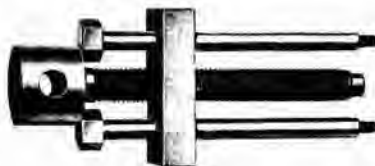
For withdrawing the bronze skew gear from the oilpump driving spindle. It will also be found useful as a general extractor tool.



37105

Tool No. 37105. Crankshaft Flange Nut Cotter—Morris Minor S.V. and O.H.V. and Morris Family Eight models

Since the crankshaft flange nut is situated behind the clutch shaft spigot bearing, its removal by pliers or punch becomes very difficult indeed. By inserting the two slots of the tool over the ends of the cotter and turning it in a clockwise direction, the cotter is removed easily and without damage.



35878

Tool No. 35878. Crankshaft Gear—Minor O.H.V.

This tool is used to withdraw the crankshaft bevel pinion and is particularly useful when it becomes necessary to fit replacements or shim-up the gear with the engine in place in the chassis frame. Two tapped holes are provided in the crankshaft gear, into which the two bolts of the extractor are fitted. To remove the gear the front end of the engine is partially raised, and the crankshaft nut, fan driving pulley and front housing cover removed. After the oilpump driving skew gear has been removed, the extractor can be placed in position.



37075

Tool No. 37075. Camshaft Gear—Minor S.V.

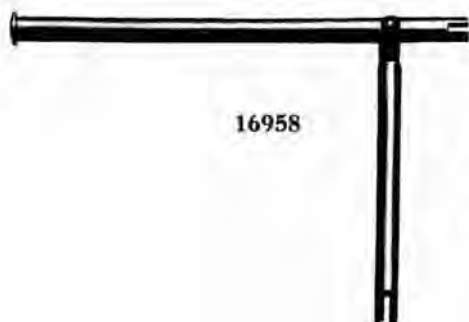
Two tapped holes are provided in the camshaft sprocket, into which the two screws of the extractor fit. The use of this tool will avoid damage to the sprockets and obviously save time during engine overhauls.

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Special Service Tools—continued



45207



16958



45826



36195



65498



65474

EXTRACTORS—continued

Tool No. 45207. Clutch Hub—11.9 h.p., 14/28 h.p., 15 h.p. Morris Oxford Six and Major models

When using this tool care should be taken to see that the 8 mm. screws are screwed an equal distance into the clutch hub. The large central screw should then be tightened hard against the end of the drive shaft. A smart tap on the end of the screw should release the clutch hub from the taper on the shaft. This tool may also be used for withdrawing the fan pulley (aluminium type), and on occasion, if not too tight, the crankshaft gear.

Tool No. 16958. Clutch Spring—11.9 h.p., 14/28 h.p., 15 h.p. Morris Oxford Six and Major models

This is a lever-operated tool, and is equally useful whether the power unit is in the car or not.

Tool No. 45826. Dynamo Extractor—14 h.p. Morris Major, 15 h.p. and 16 h.p. Morris Oxford

This tool supersedes Tool No. 45207, over which it has distinct advantages. The body of the tool is bolted firmly to the timing case cover by means of two bolts passing through the two tapped holes in the cover, enabling the timing chain sprocket to be held rigidly by another two bolts passing through the body of the tool into the tapped holes provided. It will therefore be seen that by having the timing chain sprocket fixed solidly against the tool the dynamo sprocket is held in position and the matter of removing and replacing the dynamo is greatly facilitated.

Tool No. 36195. Flywheel—Minor O.H.V. and S.V.

This tool is introduced to suit the taper type crankshaft rear sleeve which has no tapped holes for drawing purposes. Fitting on to the four flywheel bolts, it suits both the parallel and taper type sleeves. To avoid damage of parts and for speedy removal of the flywheel, the tool is essential and should be part of every Morris Dealer's equipment.

Tool No. 65498. Universal Flywheel Extractor—All models except Minor and Morris Eight

This tool supersedes Tool No. ET100 and Tool No. 45833, and is adaptable for all current and past models.

Tool No. 65474. Valve Spring Extractor—1933-5 Ten-Four, Cowley Four, Cowley Six, Oxford and 25 h.p. and all Series II 10 h.p.—25 h.p.

Due to the general adoption of the split valve cotter on side-valve models, a special valve spring extractor is necessary. The above is so designed that it may be used also for compressing valve spring models, in which the horse-shoe type of cotter is standard. A stop is provided to give assistance in keeping the valve spring retainer dead with the valve stem. A little grease should be used to hold the cotter in position on the valve stem.

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Special Service Tools—continued



65828



38378



16561



56002



38587



16567

EXTRACTORS—continued

Tool No. 65828. Valve Spring Extractor—Ten-Six

This is a similar tool to Tool No. 65474, and should be operated in a like manner.

Tool No. 38378. Valve Spring Extractor—Eight models

It has been found necessary to design a valve spring compressor, specially to suit the Eight model. It will be noted that it is sufficiently robust to prevent fracture in normal usage, and the foot is detachable, making it possible to fit a replacement if the original is damaged.

Tool No. 16561. Spline Shaft—11.9 h.p., 14/28 h.p., 15 h.p. Morris Oxford Six and Major models and Isis and Series II Sixes

By means of a differential thread, this tool extracts the spline shaft complete with ball bearing, etc., when the front universal joint fork is not in position.

Tool No. 56002. Valve Spring Extractor—Series III O.H.V. models

The tool foot, which is wedge shaped, is located below the steel dished washer which is situated below the valve springs. A few light blows from a hammer will assist the tool to take up its position below the washer. By tightening the centre spindle the springs are compressed to enable the cotters to be removed. When replacing, the valve springs complete with washer and retainer are placed into the body of the tool and compressed by tightening the centre spindle.

Tool No. 38587. Gearbox Sliding Shaft—Morris Eight

It is impossible to remove the gearbox sliding shaft without the use of a suitable extractor, since the rear journal race cannot be tapped out without damage to the oil retainer. After the speedometer housing, etc., have been removed, the centre bolt of the extractor is located to the tapped hole in the sliding shaft. The sliding shaft is then withdrawn by tightening the spindle cross bar, until the journal race is clear of the gearbox casing. Before the sliding shaft can be removed, it is necessary to withdraw the journal race and extract the shaft from the inside of the gearbox. Reference Service Information Sheet No. E/10.

Tool No. 16567. Layshaft—11.9 h.p., 14/28 h.p., 15 h.p. Oxford Six and Major models

This tool is similar to the reverse shaft extractor, but is lar method of use is identical. If layshafts are removed with hat drift, damage both to the shaft and gearbox is likely to occur.

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Special Service Tools—*continued*

35876



16566

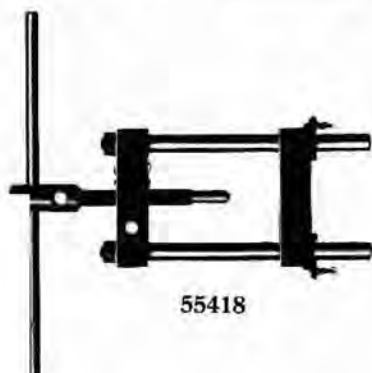
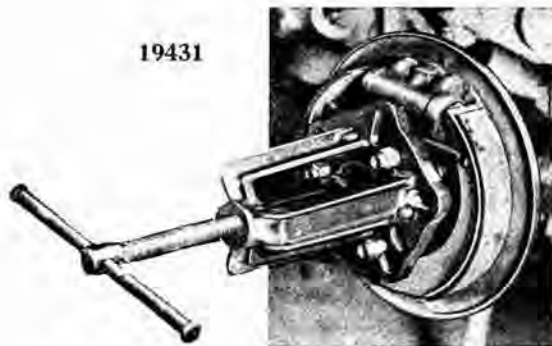


16564



16569

19431



55418

EXTRACTORS—*continued***Tool No. 35876. Reverse Shaft—Minor**

For withdrawing the gearbox reverse idler gear shaft from the gearbox. A tapped hole is provided in the centre of the shaft, into which the centre bolt of the extractor is fitted.

Tool No. 16566. Reverse Shaft—11.9 h.p., 14/28 h.p., 15 h.p. Morris Oxford Six and Major models

It is an extremely difficult matter to withdraw the reverse shaft without some kind of special extractor. The tool under notice somewhat resembles a "C" clamp, and is inserted through the large bearing hole in rear face of gearbox, and by applying pressure with the screw, the shaft is actually pushed out from the inside by means of the small plug in the end of the frame.

Note.—If the shaft is particularly tight, alternate tightening of the screw and tapping the head of same will force out the shaft bit by bit.

Tool No. 16564. Spline Shaft Assembly with Universal Joint in position—11.9 h.p., 14/28 h.p., 15 h.p. Morris Oxford Six and Major models

By placing the extractor in such a position that the claws engage under the universal joint ring, the spline shaft, complete with ball bearing and bearing retainer, can be removed without damage, which would certainly result without the use of a suitable extractor. In the case of the 15 h.p. Morris Oxford Six models it is necessary to take away the rear universal fork.

Tool No. 16569. Front Universal Fork—11.9 h.p., 14/28 h.p., 15 h.p. Morris Oxford Six and Major models

It is practically impossible to separate the spline shaft and universal fork without the correct tool, that is if distortion and bruising of these parts is to be avoided. The screw of this tool takes its thrust in the end of the spline shaft, while the hook-pieces pull direct on the universal fork trunnions.

Tool No. 19431. Front and Rear Hub Extractor—All models

This tool has been designed to suit the front and rear hubs of all models from the early Minor to the present Series range. Consequently every Morris Dealer should have at least one for the use of the Repair Staff.

Tool No. 55418. Steering Knuckle Pin Extractor—All models

In service the need of a sturdy extractor for removing steering knuckle pins without taking away the front axle from the car has long existed. This particular extractor has been designed to press out even the most obstinate pin without damage. It is also used to replace the knuckle pins, and is useful as a portable press. Care should be taken to see that the thrust pads provided are used, both when removing and replacing



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Special Service Tools—continued



38655



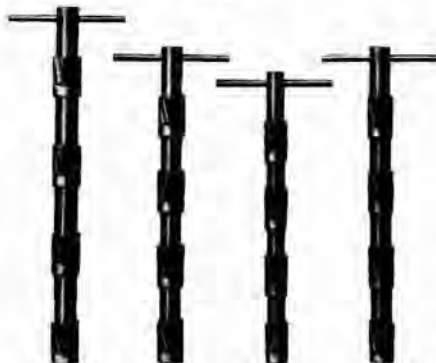
ET111



19935



46930



46128 46129 41257 41258



36051



ET323

EXTRACTORS—continued

Tool No. 38655. Steering Wheel Extractor—Minor and Morris Eight

The need has long been felt for a suitable extractor to remove the steering wheels on all Morris Minor and Morris Eight models. The screwed collar is turned back until the three legs can pass over the hub of the steering wheel. The collar is then tightened to keep the legs in position, and the steering wheel removed by tightening the centre bolt. Morris Motors Ltd. will accept no responsibility for steering wheels returned which show obvious signs of damage by use of unsuitable tools.

Tool No. ET111. Steering Wheel—11.9 h.p., 14/28 h.p. and Major models

The steering wheel being mounted on a taper, some form of extractor is necessary to withdraw it from the steering mast, since the aluminium hub is likely to sustain damage by blows from a hammer.

Tool No. 19935. Steering Wheel Extractor—Morris Ten, 11.9 h.p. and 14/32 h.p. Morris Cowley, and 14 h.p. Morris Major models

Due to the particular shape of the steering wheel fitted to the above models, a suitable extractor is essential if damage is to be avoided when extracting. Under no circumstances can Morris Motors Ltd. accept liability for wheels damaged by the use of an unsuitable extractor.

Tool No. 46930. Steering Wheel Extractor—Series II 10 h.p., 12 h.p., 14 h.p., 16 h.p., 18 h.p., 21 h.p. and 25 h.p. models.

As a spring steering wheel is fitted to the above models, it will be appreciated a special extractor is required for its removal if damage is to be avoided.

REAMERS

Tool Nos. 46128, 46129, 41257, 41258. Line Reamers.

In cases where main bearings have been adjusted by the reduction of the bearing caps, it is impossible to fit either a new or reconditioned crankshaft with bearings unless steps are taken to restore the bearing bores to the standard dimensions.

The line reamers have been introduced to ream out the main bearing bores in the cylinder block, thus restoring them to standard size.

The pilots of the line reamers should be placed between the cap and block, and the caps adjusted until it is still possible to turn the reamer.

Tool No. 36051. Camshaft Reamer and Test Bar—Minor O.H.V.

Some difficulty has been experienced in designing a suitable tool to reamer out the white metal camshaft bushes without adopting a costly jig to keep the reamer in line. This has been solved by machining the replacement bushes held in stock to within .002 in. of finished size, and supplying a test bar to line up the camshaft brackets. Before fitting the caps, the pilot portions of the reamer should be placed on the brackets so that the bushes will be kept dead in line whilst reamering.

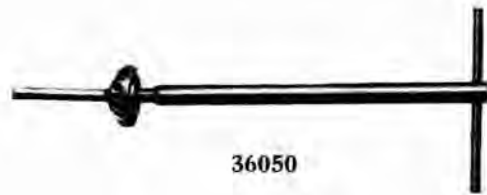
Tool Nos. ET323, 45355, 30630. Rear Brake Camshaft 11.9 h.p., 14/28 h.p. and 15 h.p. Morris Oxfo and 17.7 h.p. Morris Six

The brake camshaft rear bushes differing in size from each will be understood that a line reamer cutting dead to size is essent it is next to impossible to reamer both bushes in line using separate



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Special Service Tools—continued



36050



ET164



65453

35884—Minor O.H.V. and S.V.
38461—Morris Eight

ET370



30667



38446

CUTTERS

Tool Nos. 36050, ET122, 45376, 30431. Valve Re-seating Tool—
All models

These cutters are made large enough to avoid shrouding or masking of the valves after a seat has been re-cut several times. A valve seat cutter should only be used to skim up a seating, and as little metal as possible should be removed.

Tool No. ET164. Facing Cutter for Connecting Rod—11.9 h.p.
and 14/28 h.p.

This tool is supplied with the fixture complete for reamering big-ends, etc. (Tool No. ET332), but can be obtained separately on application. To compensate for slight tolerances which are allowed on crankshaft machining, the sides of the big-end bearings are left oversize, and, therefore, must be reduced to correct size to suit the individual crankshaft journal. It will be appreciated that a cutter is necessary to keep the flanges square with the bore of the bearing.

ASSEMBLY TOOLS

Tool No. 65453. Clutch Assembly Tool (Aligning)—Morris Ten,
Morris Major, Morris Oxford, Morris Isis and Series
II models

It will be appreciated that when assembling the single-plate clutch of the above models, an aligning tool is necessary to keep the driven plate dead in line with the cover-plate and tail end bearing. In view of the fact that the clutch fork does not come into engagement with its thrust race before the gearbox assembly is right home, it is impossible to release the tension of the clutch springs from the driven plate to enable the drive gear to line up with the plate and bearing when replacing the gearbox.

Tool No. ET370. Clutch Plate Hub—11.9 h.p., 14/28 h.p., 15 h.p.
Morris Oxford Six and Major models

Engages on clutch hub and anchors to gearbox joint flange and so prevents clutch from turning while tightening up clutch hub nut.

Tool No. 30667. Timing Chain—17.7 h.p. Morris Six and Isis Six

Replacement timing chains, although supplied unjoined for fitting purposes, must, when assembled to an engine, be endless. It should be distinctly noted that the makers deprecate the use of a split link and collar to join the chain when finally assembled. The tool referred to is used to force the pins of the joining link into its plate so that the heads of the pins can afterwards be riveted over.

Tool No. 38446. Clutch Dummy Gauge Plate—Morris Eight

This becomes an essential tool when servicing the Borg & Beck clutch, which is fitted as standard to the above model. It ensures that the driven plate is adjusted parallel with the friction face of the flywheel, and that the clutch springs have the correct amount of load. In carrying out this adjustment, the dummy gauge plate takes the place of the clutch driven plate. The pressure plate assembly is added to the flywheel so that each toggle arm comes opposite to the ground surface of the dummy gauge plate. Each arm adjusting nuts are then tightened or slackened, until each arm lies dead flush to a straight-edge placed across the group the gauge plate. This ensures equal throw on each arm, and pressure plate lies dead parallel with the flywheel.

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Special Service Tools—continued

38385



ET333



38806

ASSEMBLY TOOLS—continued**Tool No. 38385. Cylinder Head Distributor Shaft Alignment Gauge—Eight models**

This tool becomes essential when replacing the cylinder head on the Morris Eight model. As the distributor drive is taken from the camshaft through the cylinder block and cylinder head, it will be appreciated that the head must be in perfect alignment with the cylinder block. As the gauge in question is machined to accurate limits this is ensured. The gauge should be passed through the head and cylinder block before the cylinder head nuts are tightened.

Tool Nos. ET333, 45382, 36362. Gudgeon Pin Screw Assembly Plugs (Pairs)—All models

With the clip-end type of connecting rod it is essential that when tightening the clamp screw no strain shall be put on to the piston or connecting rod by holding in a vice.

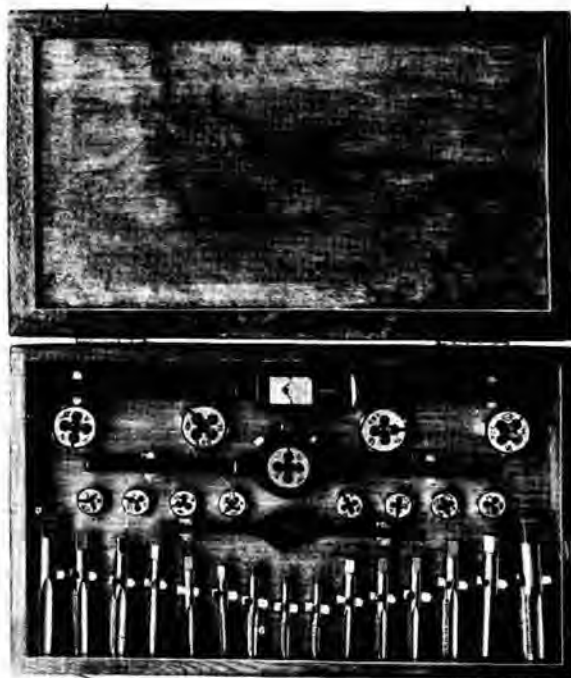
The above special plugs which slip into the ends of the gudgeon pin should be used to enable the vice to grip on the ends of the gudgeon pin.

Tool No. 38806. Rear Main Bearing Plate Aligning Gauge—Morris Eight models

The detachable rear main bearing plate can only be lined up correctly to the oil return thread of the crankshaft by the aid of this special gauge or mandrel. During engine overhauls the use of the tool is essential if oil leakages into the clutch are to be avoided.



16696



16907

SCREWING TACKLE**Tool Nos. 16696, 16907. Screwing Tackle for Power Unit and Chassis—All models**

Repairs to screwed parts on the Morris power units and chassis can only be correctly carried out if the special taps and dies required are available. Most of the threads used on the engine are of finer pitch than the common metric standards. The B.S.A. set covers all threads up to 12 mm., complete in an attractive wooden case. Many of the taps and dies supplied for the chassis will be found suitable for the Minor power unit.



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Special Service Tools *continued*



66893



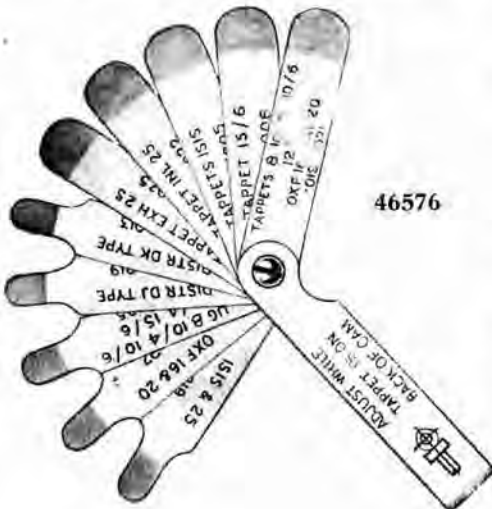
45227



19228



16846



46576

MISCELLANEOUS

Tool No. 66893. Suction Valve Grinder—All models

As valves on current models are not provided with a screwdriver grinding slot, it is necessary to use a rubber suction tool when grinding-in the valves. As it is exceptionally modestly priced, Dealers should purchase in quantities for resale to the Trade and Owners.

Tool No. 45227. Adjusting Tool for Luvax Shock Absorbers

This tool consists of a combined box spanner and screwdriver. Early shock absorbers had a lock nut provided to lock the adjusting valve, but this has since been superseded by a special ratchet attachment. On later shock absorbers, however, the box spanner acts as a guide for the screwdriver attachment.

Tool No. 19228. Flywheel Rotator—11.9 h.p. and 14/28 h.p.

A tool of this description is particularly useful to turn the crankshaft when taking up play in the bearings with the engine in the chassis frame. The jaws of the tool grip the flywheel flange at the front, and, therefore, the crankshaft can be turned in any direction.

Tool No. 16846. Propeller Shaft Adjusting Sleeve Thread Cleaning Tool—11.9 h.p. and 14/32 h.p. Morris Cowley, 14 h.p. and 15 h.p. Morris Major and 15 h.p. Morris Oxford models

After a propeller shaft sleeve has been running in a loose condition inside the differential carrier for any length of time, the thread invariably becomes damaged. The use of this tool for such cases enables a fresh thread to be cut in the differential carrier, making it possible to fit an oversize sleeve. It will be appreciated that a tool of this description is required for the operation, since the thread must be kept dead concentric with the bearing journals.

Tool No. 46576. Feeler Gauges for Tappets, Distributor Points and Sparking Plugs—Minor, Morris Eight, Ten-Four, Ten-Six, Twelve-Four, Fifteen-Six, Oxford 16 and 20 h.p. and all Series models

It will be appreciated that a combination set of stepped feeler gauges, giving the correct adjustment for the tappets, distributor and sparking plug points, on all current models, is indeed a most useful tool to be in the possession of every mechanic in the workshop.

Each blade is stepped to give a "go" and "no go" limit, which ensures that such adjustments are carried out with the utmost accuracy. Additionally, as each blade is suitably inscribed with the names of the various models which it covers, no mistakes can arise in making the vital adjustments which all make for good engine tune. This also saves unnecessary waste of time in referring to handbooks for correct clearances, etc.





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Special Service Tools—continued



66914



38879



47096



41247



16565



16563



46556



38468

MISCELLANEOUS—continued

Tool Nos. 66914, 38879, 47096. Valve Spring Clamps—4-cyl. Cowley and Oxford, Series I Eight, Series II 10 h.p., 12 h.p., 14 h.p., 16 h.p., 18 h.p., 21 h.p. and 25 h.p. models.

The replacement of valve spring split cotters has been simplified considerably by the introduction of valve spring clamps. By compressing the valve spring in the vice the clamp can be passed over, thus retaining the spring as illustrated. This leaves considerably more room for the cotters to be manipulated into position on the valve spring by hand.

SPANNERS

Tool No. 41247. Crankshaft Nut Box Spanner—11.9 h.p. and 14/28 h.p. Cowley and Oxford, 14 h.p. and 15 h.p. Oxford, Major, Isis and 1933-4 Ten-Four and Ten-Six and 25 h.p. models

A sturdy spanner, so designed that it can be applied with the power unit in position in the chassis.

Tool No. 16565. Clutch Race Nut—All models except Minor and Eights

This spanner should always be used to avoid disfigurement and damage caused by the use of hammer and punch.

Tool No. 16563. Clutch Fork and Gearbox Selector Screw—All models except Minor

A useful key which avoids damaging the heads of these small screws.

Tool No. 46556. Cylinder Head Nut—Morris Eight, Ten-Four and Twelve-Four, Fifteen-Six, Oxford Sixteen and Twenty and all Series II models

This spanner is specially cranked to clear the sparking plugs when undoing the cylinder head nuts, and becomes a most useful tool for inclusion in every mechanic's kit.

Tool No. 38468. Gearbox Drive Gear Nut—Morris Eight

The accompanying illustration will demonstrate that the gearbox drive gear nut cannot be removed by any ordinary spanner or key. The nut is left-hand threaded, and naturally is well tightened up at the time of assembly. It must not be removed by means of a hammer and punch.





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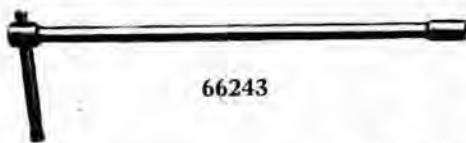
Special Service Tools—continued



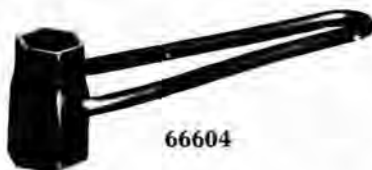
65601



35877



66243



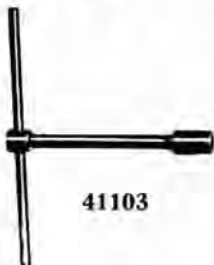
66604



66242



18928



41103



65941



SPANNERS—continued

Tool No. 65601. Differential Ring Spanner—Ten-Four, Ten-Six, Cowley Four, Cowley Six and Oxford

It is extremely difficult to adjust the crown wheel on any of the above models without the use of the specially designed spanner.

Tool No. 35877. First Motion Shaft Bearing—Minor

This tool takes the form of a "C" ring spanner, and should be used to avoid damage caused by a hammer and punch.

Tool Nos. 66243, 36127, 37475, 18859, 36291. Gudgeon Pin Clamp Screw Spanner—All models

Owing to the restricted space inside the pistons of the above models, an ordinary box spanner is unsuitable for removing or replacing the gudgeon pin clamp screw. The spanners for the various models are shaped specially to suit and are sufficiently long to clear the connecting rod big-end.

Tool No. 66604. Sparking Plug—All models

This spanner has been specially designed to remove No. 1 plug on the Morris Eight model, although it is extremely useful on all models, particularly on the Series II range. Being double-ended it suits both the $\frac{7}{8}$ in. and $\frac{1}{2}$ in. hexagons.

Tool No. 66242. Steering Wheel Nut Spanner—Ten-Four, Ten-Six, Cowley Four, Twelve-Four, Cowley Six and Fifteen-Six models

It will be appreciated that a sturdy spanner of this description is required when removing or replacing the steering wheel nut.

Tool Nos. 36120, 18928, 40383, 46776. Rear Hub Nuts—All models

The necessity of stocking a tool suitable for the rear hub nut will be fully appreciated. The only other alternative, namely a hammer and punch, is to be deprecated, since not only is damage caused, but it is impossible to tighten the nut sufficiently by this means and, therefore, it is unsafe.

Tool No. 41103. Main Bearing Wrench with Tommy Bar—Isis models

Owing to the design of the Isis crankcase a specially sturdy wrench is necessary to reach the main bearing cap nuts.

Tool No. 65941. Rear Axle Adjusting Sleeve Nut—Ten-Four, Ten-Six, Twelve-Four and Fifteen-Six models

Owing to the particular design of the adjusting sleeve nut, it is impossible to remove or replace it without damage unless a suitable tool is used. As it is necessary to remove this nut when replacing the drive pinion oil retaining felt, or dismantling the axle, it will be appreciated that the spanner should be present in every Dealer's Service equipment. It should be noted that this tool supersedes Tool No. 65600 when the modified nut is fitted.

Tool Nos. 35972, ET369, 16959. Tappets—All models Minor O.H.V.

These spanners are long enough to be very handy, but it should be borne in mind that no great force is required, or indeed must be tightened lock nuts.



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Special Service Tools—continued



30436



46244



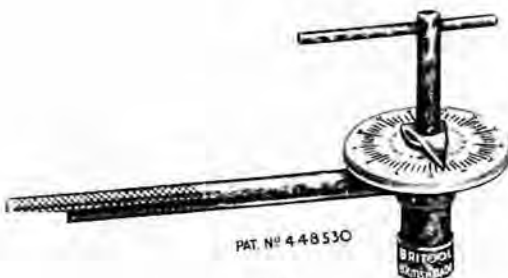
19100



45944



38932



PAT. No 448530

56004

SPANNERS—continued

Tool No. 30436. Spiral Gear Lock Nut—17.7 h.p. Morris Six and Isis Six

When dismantling the vertical shaft, this tool becomes necessary to undo the nut locating the spiral gear to its shaft. Owing to the position of the nut in the vertical shaft housing, it is difficult to reach it without the aid of a suitable key.

Tool No. 46244. Gearbox Drain Plug Spanner—1933-4 models except Minor

Owing to the peculiar design of the gearbox drain plug on the above models the adoption of a suitable spanner has become necessary.

Tool No. 19100. Sump and Gearbox Drain Plug—Ten-Four and Twelve-Four, Series I Eight and all Series II models

A useful box spanner which should form part of every mechanic's tool kit.

Tool No. 45944. Water Impeller Nut Spanner—Morris Major, Morris Oxford and Morris Isis models

This cranked spanner enables the water impeller nuts to be reached without difficulty.

In addition this tool is extremely useful in dealing with the two cylinder head stud nuts on the Morris Minor O.H.V. unit which are masked by the exhaust manifold.

Tool No. 38932. Tappet Head Wrench—1935 and Series I and II Eight models

This tool becomes exceedingly useful when the occasion arises to change the tappet adjusting screws on the Morris Eight model. It will be noted that the socket is detachable from the stem. Consequently the socket is placed on the tappet screw first and the "T" handled stem connected to it through the valve guide. It is claimed that a set of tappet screws can be replaced in less than ten minutes by the aid of this tool

Tool No. 56004. Tappet Adjusting Tool—Series III O.H.V. models

This tool has been designed to provide a quick and accurate means of adjusting the rocker clearances on the above models. The body of the tool fits over the rocker adjusting screw lock nut, whilst the centre spindle locates in the screwdriver slot of the adjusting screw.

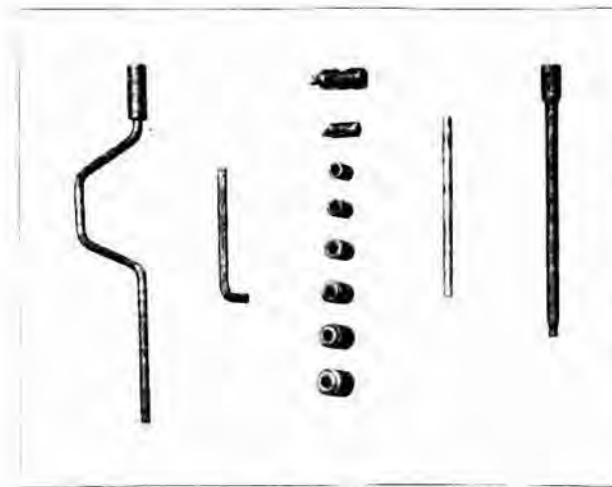
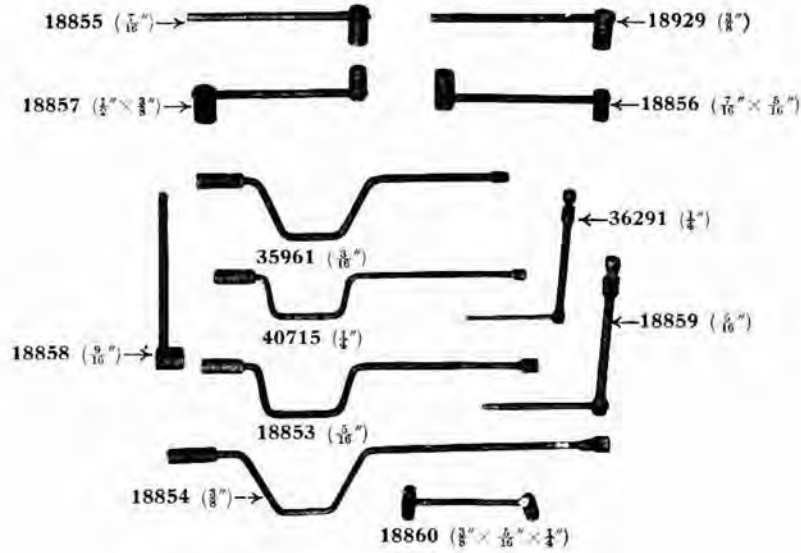
After the lock nut has been slackened by turning the tommy bar, the centre spindle is screwed down until the rocker clearance has been eliminated. It is then turned back until the correct clearance is registered by the pointer on the dial, which is marked in hundredths of an inch. Approximately .002 in. extra is allowed to compensate for the tightening of the lock nut.



Revised : August, 1937

Special Service Tools—continued

SPANNERS—continued



No. 18934





SPEED WRENCHES



18934



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18933



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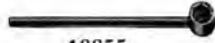
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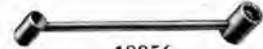
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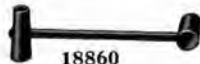
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Date of issue : March, 1939

SPECIAL SERVICE TOOLS

NOTES ON THEIR USE

In several instances the use of the tool is obvious and needs no explanation.

ASSEMBLY TOOLS



Tool No. 67515. Clutch Assembly Tool (Aligning)—Series III
Twelve-Four O.H.V.

This tool is designed for aligning the clutch driven plate with the clutch tail end bearing.



Tool No. 67800. Screwed Shackle Adjusting Thimbles (pair)—
Series "E" Eight and Series "M" Ten models.

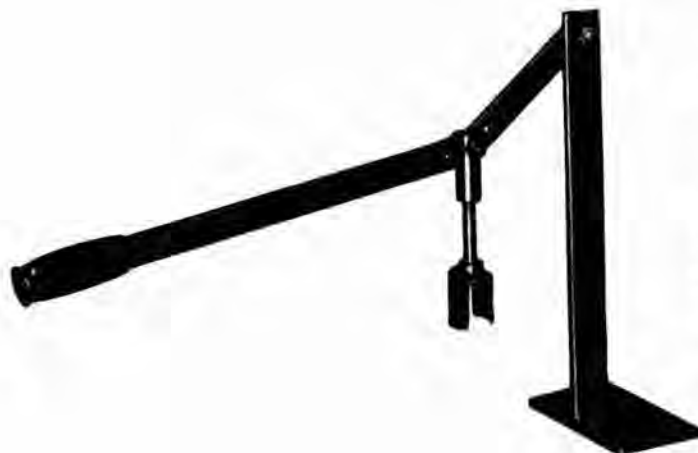
When assembling road springs equipped with screwed pattern spring shackles, the adjusting thimbles are essential in order to ensure the correct location of the shackle pins in their bushes. A thimble is placed on each tapered portion of the screwed shackle and the shackle adjusted until both thimbles touch the bush.



CUTTERS

Tool Nos. 36050, ET122, 45376, 30431, 65925, 30431, 56048, 67413,
19596, 67414. Valve Re-seating Tool—All Models.

These cutters are made large enough to avoid shrouding or masking of the valves after a seat has been recut several times. A valve seat cutter should only be used to skim up a seating, and as little metal as possible should be removed.



EXTRACTORS

Tool No. 67456. Valve Spring Extractor
(Bench Type)—Suitable for all
O.H.V. Models.

This tool is bolted to the bench. It is operated by placing the valve spring compressor on the valve spring retaining collar, when, with downwards pressure on the operating lever, the spring is compressed. The cutters are then removed and the pressure on the lever relaxed.

Date of issue: March, 1939

Special Service Tools—*continued*

EXTRACTORS—*continued*

Tool No. 56052. Attachment for Steering Wheel Extractor—All Models.



This tool has been designed for use with the steering knuckle pin extractor, Part No. 55418, and is suitable for all models, although primarily designed for steering wheels having a deep cowl in the centre. The extractor, which is in two parts, is secured round the steering column below the steering wheel by two studs and nuts provided for the purpose. The tool is then used in conjunction with the steering knuckle pin extractor in the normal manner.

REAMERS

Tool No. 39009. Steering Knuckle Bush Reamer—8 h.p. Model.
Tool No. 67193. Steering Knuckle Bush Reamer—Series II Ten and Twelve-Four Models.

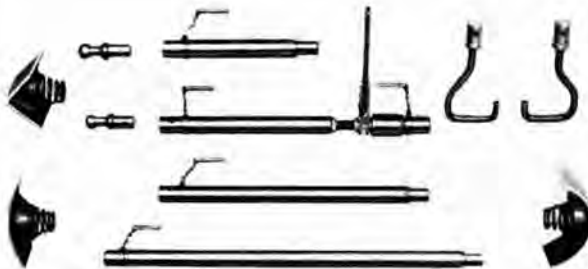


After the steering knuckle pin bushes have been fitted it is necessary that they should be reamed out to the correct size. To enable the split type knuckle pin bushes used on the above models to be reamed satisfactorily, the reamers are provided with spiral flutes.

BODY TOOLS

Tool No. 67797. The Morris Mono Body Jack.

The jack is a tool which has been designed to deal with repairs to bodies of all-steel construction. It is supplied complete with the various attachments and will be found capable of dealing with all normal requirements.



Part No. 67798. Metal Case for Body Jack.

This is a special metal container, enabling the Morris Mono Body Jack, complete with accessories, to be kept together, thus avoiding damage or parts becoming mislaid.



Tool No. 67804. Body Repair Kit.

The tools comprising this kit have been selected after careful thought and as the result of considerable experience. They will be found suitable for very wide range of repair work on bodies of all-steel construction. The kit should be regarded as an essential part of the Body Repair Shop equipment.

