

# CITROEN

FRONT WHEEL DRIVE  
"Twelve" & "Fifteen" Models

# REPAIR MANUAL

ILLUSTRATIONS

1938



1950

REPRINTED OCTOBER 1956

CITROEN CARS, LIMITED,  
TRADING ESTATE,  
SLOUGH, ENGLAND.

INDEX OF ILLUSTRATIONS IN REPAIR MANUAL

SECTION	PAGE NO.	DESCRIPTION
ENGINE	1	Lifting engine.
	2	Various tools.
	2A	Stand for engine when removed.
	3	Clutch control.
	4	Timing distributor.
	5	Cylinder head : sequence of tightening nuts.
	7	Engine assembly : longitudinal section.
	8	Engine assembly : cross section.
	9	Replacing valve seat or guide.
	10	Oil pump assembly.
	11	Fan and water pump assembly.
	12	Spring testing.
	12A	Fitting sparking plug housings.
	13	Adjustment of oil pump.
	14	Water pump bush.
	14A	Fitting bearings by means of shims.
	15	Boring and alignment of oil baffles.
	15A	Fitting of oil baffle packing.
	16	Fitting gudgeon pin circlips.
	17	Precautions when assembling (sump gaskets).
	17A	engine stands.
	17B	Fitting pistons into barrels.
	18	Gauging height of barrels.
	19	Setting timing wheels.
	20	Water pump and dynamo driving shaft.
	21	Carburettor : section and external views.
	22	Air intake silencer : sectional views.
22A	Petrol pump : assembly and vertical section.	
22B	Petrol pump : checking for air leaks.	
CLUTCH	6	Adjustment of gear locking device (light).
	23	Clutch : assembly and section.
	24	Toggle adjustment.
	24A	Toggle adjustment (simplified method).
GEARBOX	25	Stand for dismantling and re-assembling gearbox.
	26	Gearbox assembly : longitudinal section.
	27	Extractor for removing coupling flange. Bar for keeping opposite flange in position.

INDEX OF ILLUSTRATIONS IN REPAIR MANUAL

SECTION	PAGE NO.	DESCRIPTION
GEARBOX (Continued)	28	Extraction of differential bearing.
	29	Gearbox cover, forks, gear lock (light type).
	30	Mounting of fixing plates.
	31	Fitting synchromesh gear.
	32	Assembling gearbox : various mandrels and spanners.
	33	Rectification of satellite thrust faces.
	34	Stop tool for tightening layshaft front bearing lock nut.
	35	Adjustment of crown wheel and bevel pinion.
	35A	Adjustment of crown wheel and bevel pinion (simplified method).
	36	Adjustment of differential bearings.
FRONT AXLE	37	Extraction of ball pins.
	38	Assembly of silentbloc and torsion bar.
	39	Mounting lower arm.
	40	Fitting of torsion bars.
	41	Vertical section through hub and swivel centre-line.
	42	Dismantling hubs and ball-races.
	43	Dismantling steering arm and outer ball-race retaining ring.
	44	Dismantling upper and lower swivel balls.
	45	Section on centre-line of upper link.
	46	Dismantling and assembling serrated shaft.
	47	Dismantling and assembling nut for stub axle inner ball-race.
	47A	Fitting drive shafts.
	48	Removing stub axle and inner ball-race.
	48A	Extractor for outer ball-race (outer groove broken). Extractor for inner ball-race.
	49	Brake back plate assembly.
	50	Fitting or removing brake shoe return spring.
	51	Flaring adjusting cams of brake shoes.
	52	Replacement of wheel studs.
	53	Rectification of brake drums.
	54	Assembly of shafts.
	55	Dismantling drive shafts.
	56	Dismantling drive shafts.
	57	Assembly of drive shafts.
	58	Assembly of drive shafts.
	59	Reboring spline housing of coupling.
60	Assembly of stub axle end and ball-race into swivel. Tool for dismantling stub axle.	
61	Checking concentricity of brake linings.	

INDEX OF ILLUSTRATIONS IN REPAIR MANUAL

SECTION	PAGE NO.	DESCRIPTION
STEERING	62	Removing and refitting steering wheel.
	63	Steering assembly : longitudinal section.
	64	Assembly of ball pins.
	65	Holding rack and pinion gear in vice.
	66	Various tools
	67	Adjusting length of track rod.
REAR AXLE	67A	Raising rear axle.
	68	Dismantling early type axle.
	69	Positioning rear axle.
	70	Rear axle assembly : plan view
	71	Removing torsion bars.
	72	Rear link arm.
	73	Assembly of brake back plate.
	74	Checking camber and toe-in of rear axle.
	75	Checking carber and toe-in of rear axle.
	76	rectification of brake drums.
	77	Dismantling and assembling silentblocs of support brackets.
	78	Setting rear link arm in relation with flange of rear crossmember when adjusting torsion bars.
	79	Checking lateral adjustment of axle.
80	Checking concentricity of brake linings.	
SUSPENSION	81	Refitting 'Spicer' shockabsorbers.
	81A	Refitting 'Spicer' shockabsorbers.
GEAR CHANGE ASSEMBLY	82	Selector assembly.
BRAKE	83	Removing and fitting master cylinder.
	84	Master cylinder assembly.
ELECTRICAL EQUIPMENT	85	Automatic advance ignition curves.
	86	Dynamo assembly.
	87	Dynamo assembly.
	88	Assembly of induction coils and pole-pieces, dynamo and starter motor.
	89	Starter motor assembly.
	90	Starter motor assembly.
	98	Wiring diagram.
99	Wiring diagram.	

INDEX OF ILLUSTRATIONS IN REPAIR MANUAL

SECTION	PAGE NO.	DESCRIPTION
ADJUSTMENTS	91	Checking caster angle.
	92	Checking lengths of track rods.
	93	Checking steering lock.
	94	Checking wheel camber.
	94A	Weight distribution.
	95	Checking wheels.
	96	Checking balance of wheels.
BODYWORK	97	Adjusting headlamps.
	100	Realignment of hull.
	101	Realignment of hull.

— ENGINE —

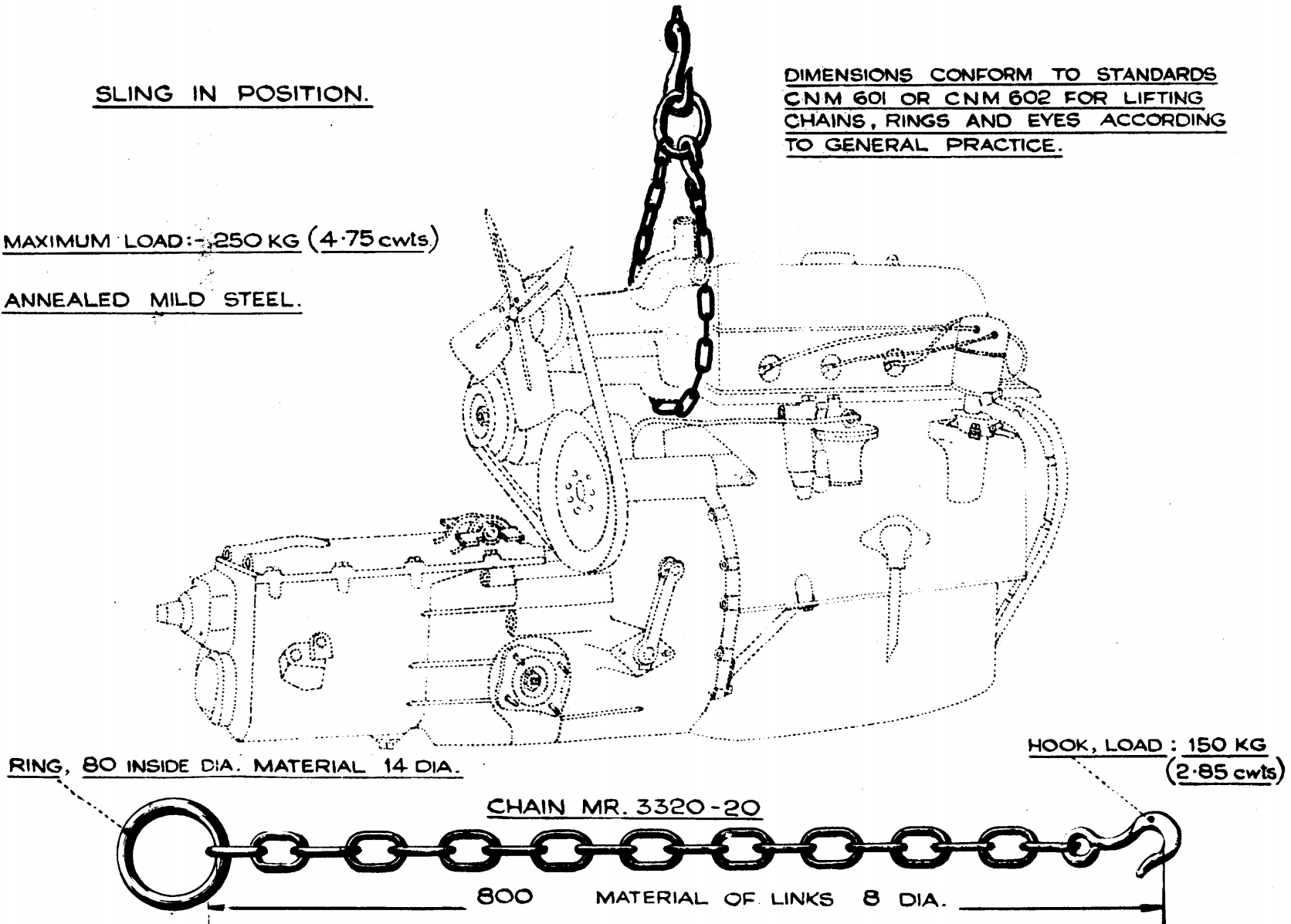
— LIFTING ENGINE —

SLING IN POSITION.

DIMENSIONS CONFORM TO STANDARDS  
CNM 601 OR CNM 602 FOR LIFTING  
CHAINS, RINGS AND EYES ACCORDING  
TO GENERAL PRACTICE.

MAXIMUM LOAD: 250 KG (4.75 cwt)

ANNEALED MILD STEEL.



RING, 80 INSIDE DIA. MATERIAL 14 DIA.

HOOK, LOAD : 150 KG  
(2.85 cwt)

CHAIN MR. 3320-20

800 MATERIAL OF LINKS 8 DIA.

— ENGINE —

— VARIOUS TOOLS —

Fig.2. - PLUG SPANNER  
1601-T

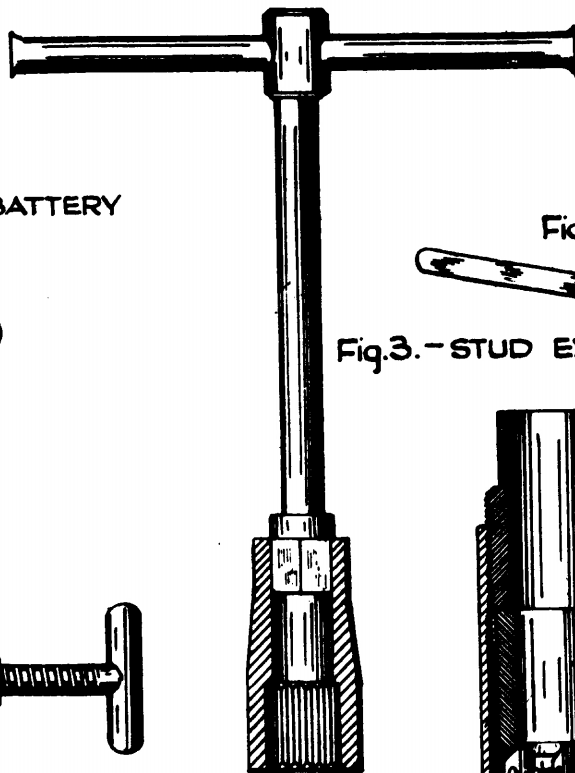


Fig.1. - EXTRACTOR FOR BATTERY  
TERMINAL  
2200-T

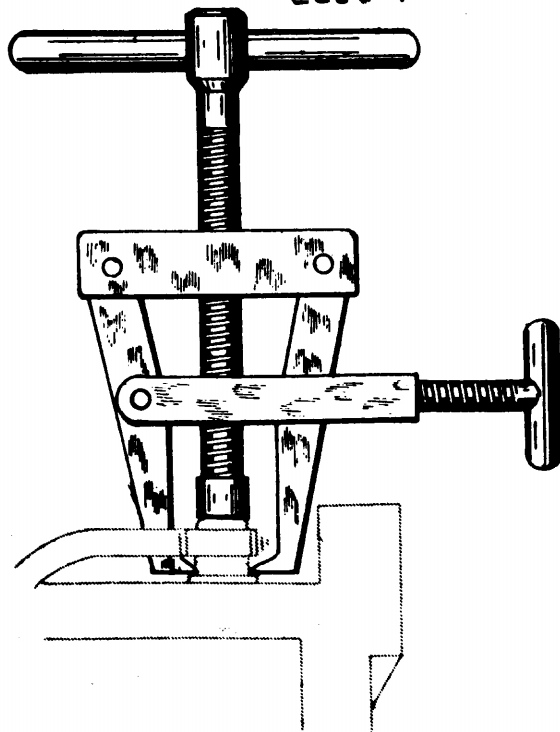


Fig.4. - APPLICATION OF COMPRESSOR

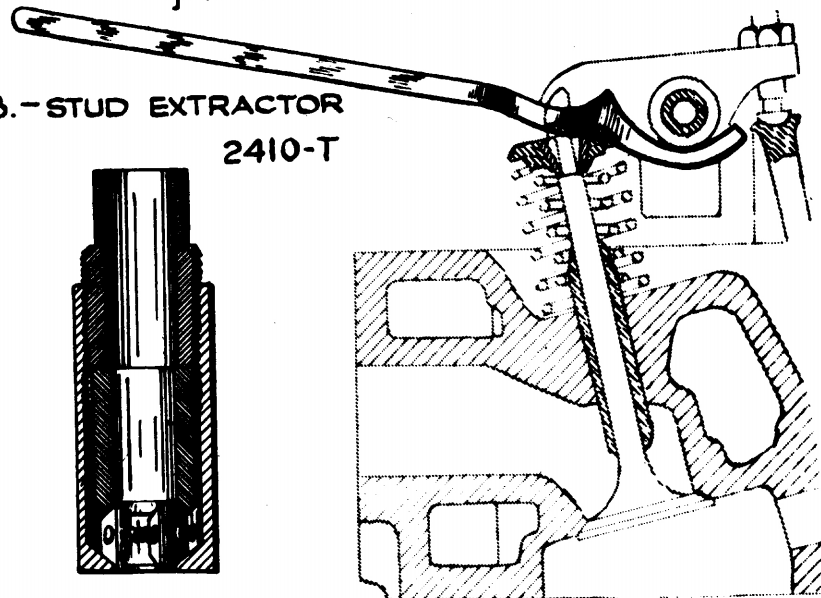
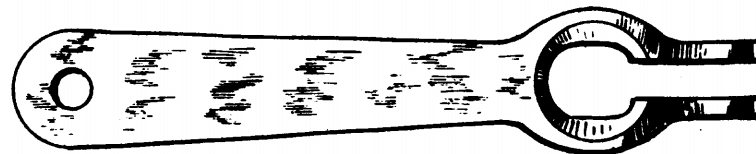


Fig.3. - STUD EXTRACTOR  
2410-T

Fig.5. - VALVE SPRING COMPRESSOR



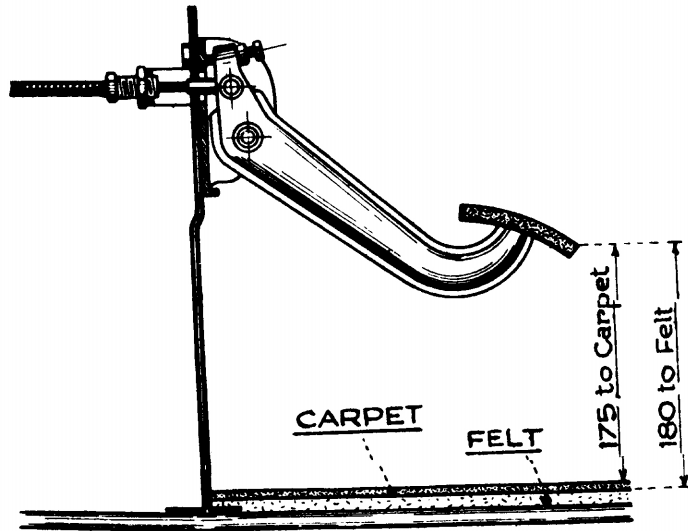
1511-T

— ENGINE —

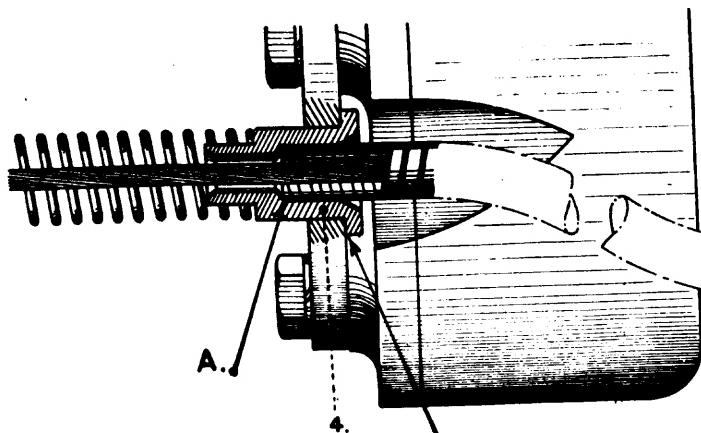
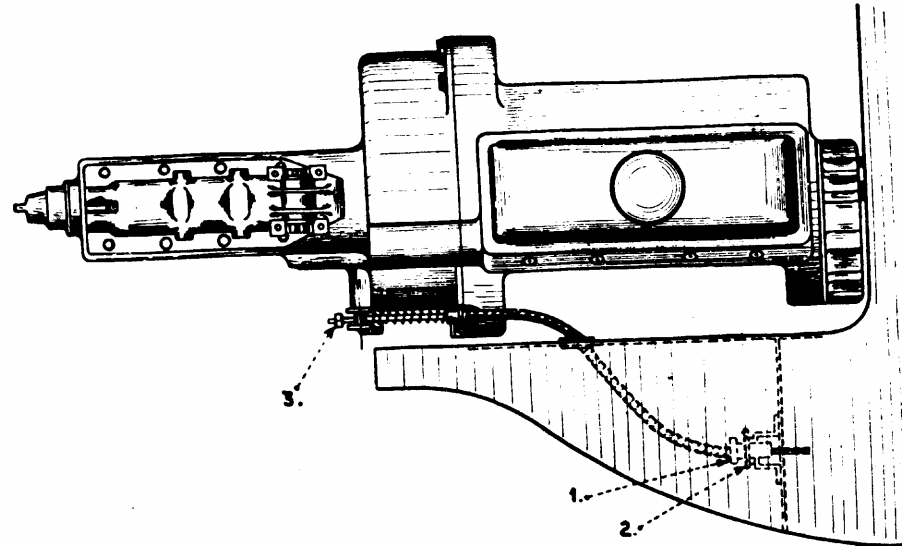
— CLUTCH CONTROL —

SETTING AND ADJUSTING INNER AND OUTER CLUTCH CABLES.

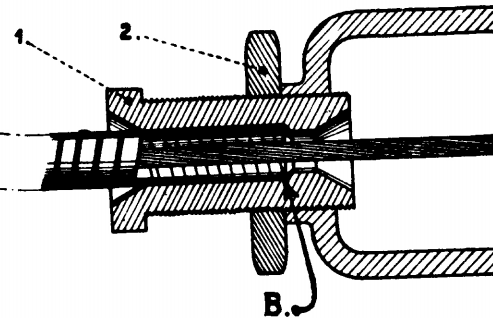
ADJUSTMENT OF CLUTCH PEDAL HEIGHT.



VIEW SHOWING CLUTCH CABLE IN POSITION.



ADJUSTMENT OF OUTER CABLE

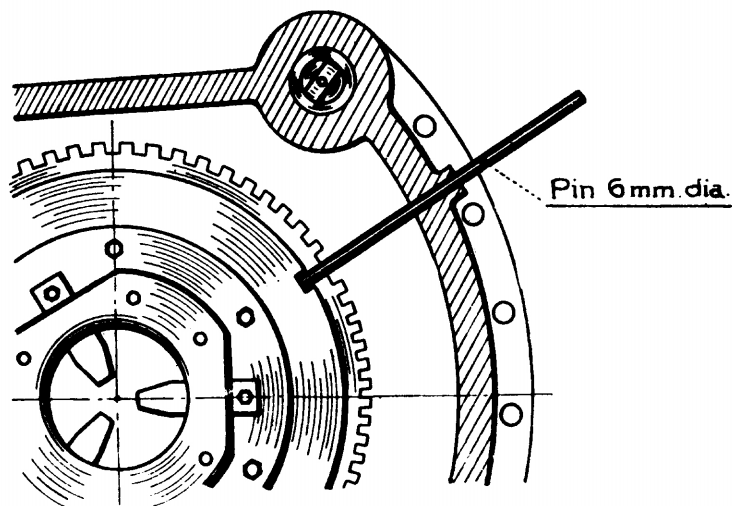


When declutching, outer cable must remain seated on cable guide 4.

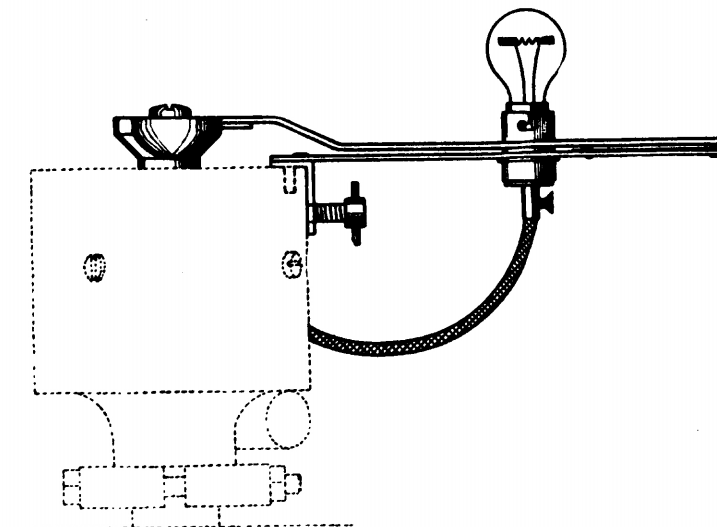


— TIMING DISTRIBUTOR —

HOW TO USE LOCATING PIN.

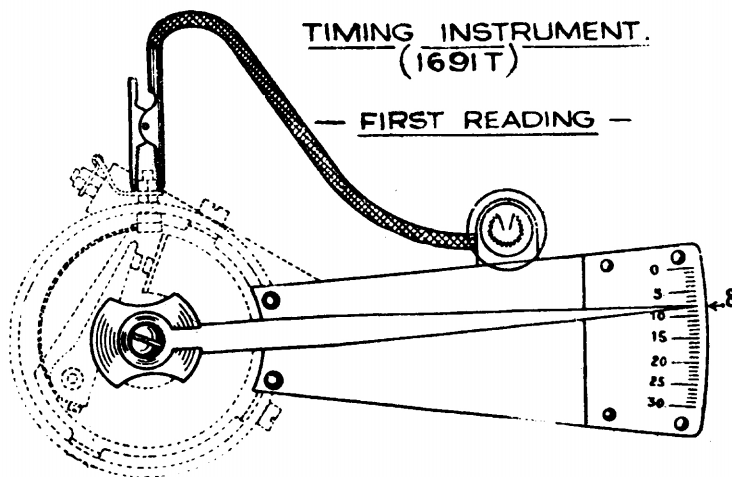


TIMING INSTRUMENT IN POSITION.



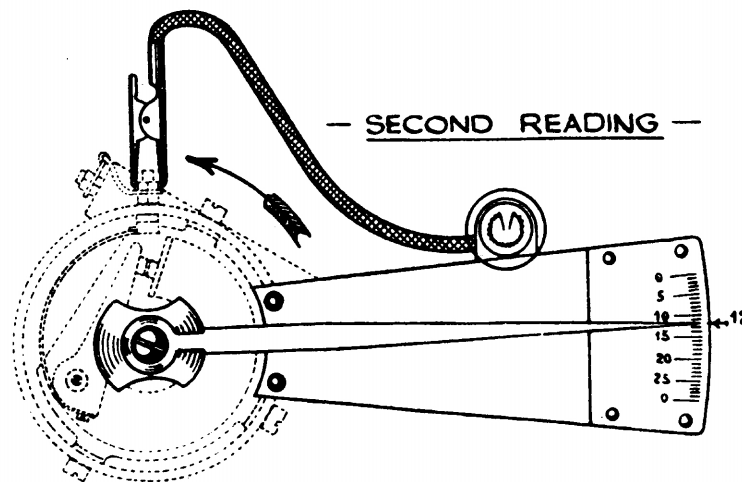
TIMING INSTRUMENT.  
(169IT)

— FIRST READING —



FIRST ADJUSTMENT : ENGINE IS SET AT 8° ON FLYWHEEL. 6mm. PIN IS ENGAGED IN FLYWHEEL SLOT AND LAMP IS ALIGHT. CHECK NEEDLE POSITION.

— SECOND READING —

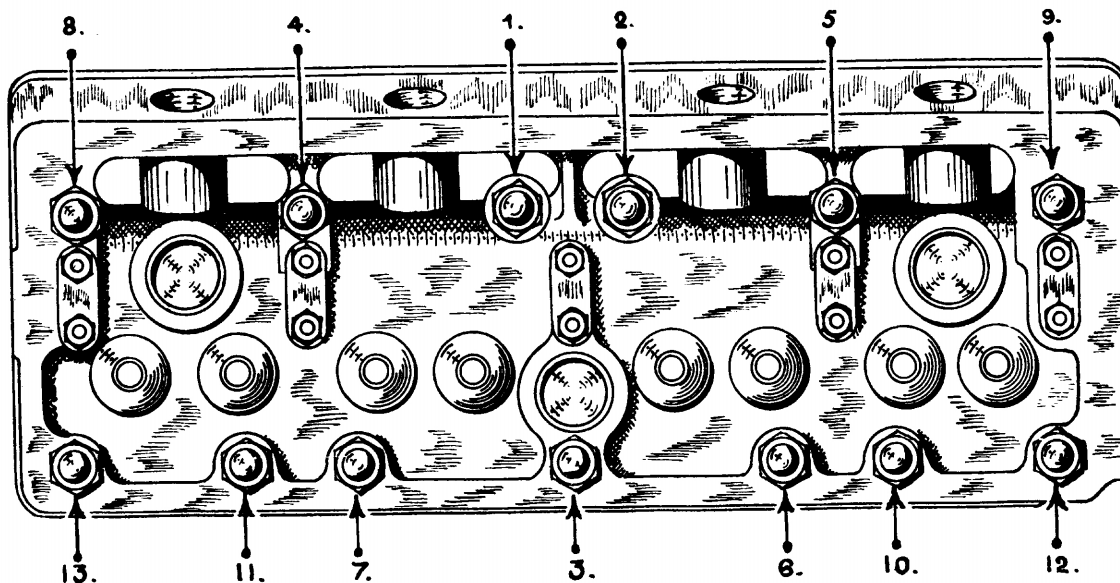


SECOND ADJUSTMENT : TURN DISTRIBUTOR BODY ANTI-CLOCKWISE TO INCREASE ADVANCE BY 4°. NEEDLE SHOWS 4° MORE THAN PREVIOUS READING.

ENGINE

— CYLINDER HEAD —

Fig.1.- SEQUENCE FOR TIGHTENING CYLINDER HEAD NUTS.



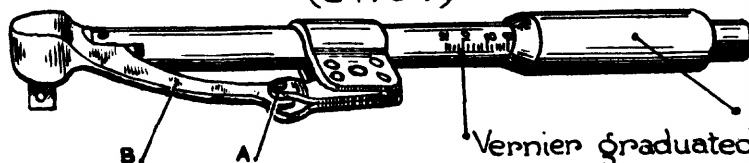
TIGHTNESS OF CYLINDER HEAD NUTS	}	1ST. TIGHTENING	3	21.7
		2ND. TIGHTENING	5	36.17
		TIGHTENING WHEN HOT	5	36.17

IN METER - KILOS

IN FOOT - POUNDS

IT IS RECOMMENDED TO TIGHTEN CYLINDER HEAD NUTS IN THE ORDER STATED : THE DEGREE OF TIGHTNESS INDICATED MUST BE STRICTLY ADHERED TO AND OBTAINED BY USING TORSION SPANNER. THIS SPANNER IS GRADUATED IN METER-KILOS AND USED WITH 12.7mm. SOCKET (2465T) WHEN EFFORT HAS REACHED CORRECT POINT ON GRADUATION AND ARTICULATION "A" FOLDS, STOP TIGHTENING. ARTICULATION "A" MUST NEVER CONTACT BODY OF SPANNER IN "B".

Fig.2. - TORSION SPANNER. (2470T)



Handle for setting and pulling.  
Vernier graduated in meter - kilos.