

STUART

MARINE ENGINES

TYPES P5ME, P55ME
with Vertical Reverse Gear Lever
and Separate Dynamo and Starter

SPARE PARTS

When ordering spares **ALWAYS** quote the full Engine Number as well as the Spares Part Number and description.



Part No.	Description	Part No.
1824*	Cylinder	P55
5164 set	Cylinder Studs (4 long, 2 short)	P55
1821*	Cylinder	P55
4959 set	Cylinder Studs Short (4)	P55
4960 set	Cylinder Studs Long (4)	
1827	Cylinder Head	
1454	Cylinder Head	
3513 each	Cylinder Head Nuts (6)	
4343*	Cylinder Head Pipe Union Body	
03616 set	Cylinder Head Studs (5)	P55
3513 each	Cylinder Head Nuts (13)	P55
4316	Cylinder Head Water Outlet Union	P55
5422	Cylinder Head Water Elbow	
4934	Cylinder Drain Plug	
6775	Water Jacket Cover	
6776	Water Jacket Fixing Dog and Screws	
250	Expansion Chamber Cover	
4189 each	Expansion Chamber Cover Nuts (4)	P55
10457	Expansion Chamber Cover	P55
4189 each	Expansion Chamber Cover Nuts (8)	P55
00363 each	Expansion Chamber Studs	
00364 each	Expansion Chamber Studs	
2988	Expansion Chamber Drain Plug	P55
1825	Exhaust Outlet	
6035	Exhaust Outlet	
1826	Exhaust Outlet Cover (with water inlet nipple)	P55
5165	Exhaust Outlet Cover	
8853 set	Exhaust Outlet Studs (3)	P55
4189 each	Exhaust Outlet Nuts (3)	

IGNITION

Wipac Magneto Spares

- 00156 Coil H.T.
- 00174 Contact Set
- 00162 Condenser
- 00190 Cover - Distributor
- 00191 Cover - Distributor
- 00189 Cover - Coil
- 00376 Terminal Screw Cap
- 00378 Terminal H.T. Lead

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P55

Exchange Wipac Magnetos

- 00264 Exchange Magneto
- 00265 Exchange Magneto

P5
P55

Lucas SR Magneto Spares

- 00169 Contact Set
- 00161 Condenser
- 00187 Cover - Distributor
- 00188 Cover - Distributor

P5
P55

Wipac Coil Ignition Spares (early type)
3" Dia. C.B. Plate (with internal condenser)

- 00163 Condenser
- 00175 Contact Set
- 14503 Cam 5/8" Dia.
- 373004 Fixing Screws - Baseplate
- 21423 Ignition Coil

Lucas Coil Ignition Spares (early type)
2 11/16" Dia. C.B. Plate (with internal Condenser)

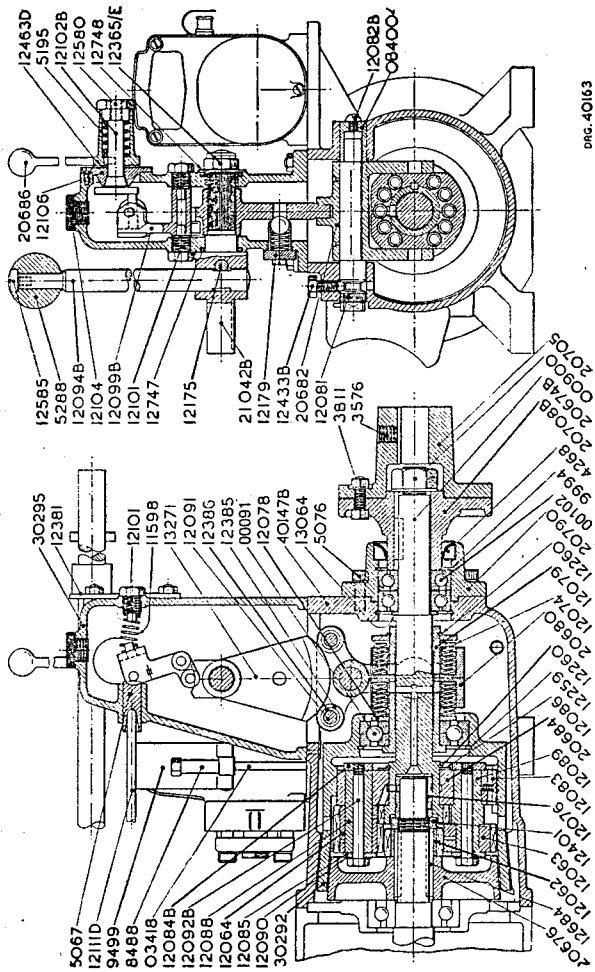
- 00159 Condenser
- 00172 Contact Set
- 14052 Cam

Lucas Coil Ignition Spares (late type)
2 11/16" Dia. C.B. Plate (with external Condenser pack)

- 00165 C/B Assy. Complete
- 00166 C/B Assy. Complete
- 00171 Contact Set
- 00159 Condenser
- 00160 Condenser Pack
- 21735 Coil
- 14052 Cam 3/4" Dia.
- 373004 Fixing Screws - Baseplate

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- 12387 Magneto Chain
- 12267B Magneto Drive Shaft
- 6842 Magneto Drive Cover
- 12265 Magneto Drive Sprocket
- 00093 Circlip
- each Ball Bearing (1 1/2" x 1 1/4" x 1/2") (2)
- 12266 Ball Bearing Housing
- 12270 Ball Bearing Circlip
- 4241 Oil Seal



ENG. 40163

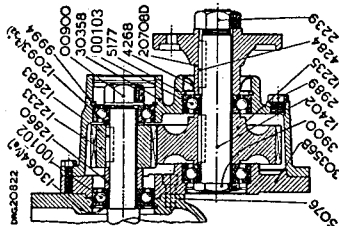
REVERSE GEAR BOX

Part No.	Description
40147B	Gear Box Case
03505 each	Gear Box Case Studs and Nuts (6)
21089B	Dipstick
2988	Drain Plug and Washer
20676	Forward Cone
12684	Forward Cone Key
12062	Sun Wheel, Driving
12401	Nut Crankshaft
12076	Floating Bush
20674B	Shaft and Sun wheel (Secondary)
20684	Pinion Housing with 6 Pinion Shafts
12085	Pinion Housing Forward End Plate
12084B	Pinion Housing Rear End Plate
12092B each	Pinion Housing Bolts (6)
12090 each	Locking Plate (3)
12083 each	Pinion Housing Screws (3)
06300 each	Pinion Housing Washer
12086	Pinion Housing Circlip
12260	Pinion Shaft, Long (3)
12088 each	Pinion Shaft, Short (3)
12089 each	Planet Pinion, Long (3)
12064 each	Planet Pinion, Short (3)
12063 each	Clutch Body
30292	Ball Bearing (split inner race) (1 1/2" x 3" x 1/2")
00091	Ball Bearing Circlip
12259	Ball Bearing Washer
13064	Ball Bearing (2) (1 1/2" x 2" x 1/2")
00102	Ball Bearing Circlip (2)
9994 each	Ball Bearing Housing
20790	Ball Bearing Housing Screws (6)
5076 each	Oil Seal
4268	Coupling on Engine
20708B	Coupling Key
12683	Coupling Nut and Washer
00900	

Not in engines with reduction gear

REVERSE AND THROTTLE CONTROL

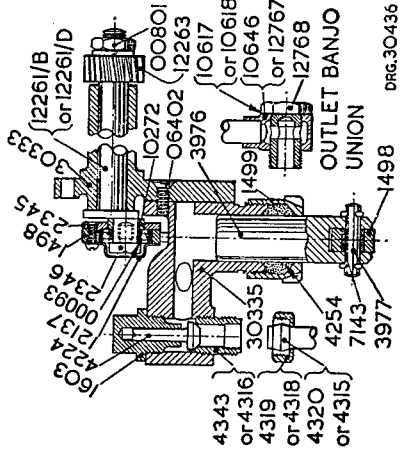
Part No.	Operating Sleeve on Crankshaft
20680	Operating Sleeve Key
12684	Operating Inner Sleeve
12079	Operating Inner Sleeve Washer (2)
12078 each	Operating Inner Sleeve Circlin
12260	Operating Springs (20)
12074 set	Eccentric Shaft
12081	Eccentric Shaft Locking Screw
12433B	Eccentric Shaft End Cap
12082B	Eccentric Shaft End Cap Screw
084004	Operating Fork
20682	Operating Fork Roller (2)
13950 each	Operating Fork Pin and Split Pin (2)
12091 each	Control Housing
30295	Control Housing Studs and Nuts (4)
03403 each	Oil Filler Plug with Feit Breather
12104	Reverse Cross Shaft
21042E	Reverse Cross Shaft Cam
13271	Reverse Cross Shaft Collar
13517	Reverse Cross Shaft O Rings (2)
12747 each	Reverse Cross Shaft Washer
12748	Reverse Cross Shaft Nut (Self-locking)
12365E	Locking Ball Assembly
12179	Reverse Lever
12094B	Reverse Lever Cotter and Nut
12175	Reverse Lever Ball
5288	Reverse Lever Ball Screw
12585	Throttle Lever
20686	Throttle Lever Spindle
(no longer available)	Throttle Lever Spring
12102B	Throttle Lever Nut
5195	Friction Disc
12580	Interlock Lever
(no longer available)	{ Pivot Interlock Lever (2)
12463D	{ Cap Interlock Spring
12099B	Interlock Lever Spring
(no longer available)	Tappet
12101	Tappet Rod
11598	Knuckle Joint and Pin
5067	
12111D	
3520	



REDUCTION GEAR BOX

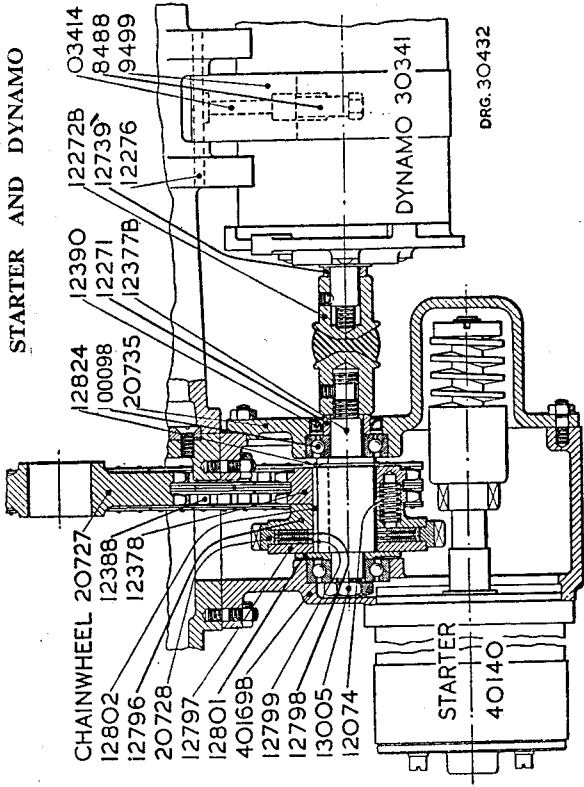
30356B	Backplate
11728 each	Backplate Dowel (2)
5076 each	Backplate Screws (6)
30358	Reduction Gear Case
02402 each	Reduction Fixing Screws and Washers (7)
2989	Reduction Drain Plug and Washer
00102 each	Ball Bearing (2) ($\frac{7}{8} \times 2 \frac{1}{2} \times \frac{3}{8}$)
13064	Ball Bearing Washer Forward ($\frac{3}{8}$ " thick)
12093	Ball Bearing Washer Aft ($\frac{3}{8}$ " thick)
9994 each	Ball Bearing Circlip (2)
12860	Ball Bearing Distance Sleeve ($\frac{1}{8}$ " long)
12233	Gear Wheel (driving)
7522	Gear Wheel Key
00900	Gear Wheel Nut and $\frac{3}{8}$ " Washer
12402	Shaft, Driven with Locknut
12235	Gear Wheel (driven)
9624	Gear Wheel Shim (to prevent end-float)
4284	Gear Wheel Key
00103 each	Ball Bearing (2) ($1 \frac{1}{2} \times 2 \frac{1}{2} \times \frac{3}{8}$)
5177	Ball Bearing Circlip

CIRCULATING PUMP



Part No.	Oil Seal
4268	Coupling on Engine
20708D	Coupling Key
4284	Coupling Nut
2239	Pump Shaft Bearing
30333	Pump Shaft Bearing Screws (3)
06402 each	Gear Wheel
12263	Gear Wheel Nut and Washer
00801	Shaft Wheel
12261B	Shaft Wheel Bush
12261D	Banjo Link with Bush
1498	Banjo Link Ball Bearing ($\frac{3}{4} \times 1 \frac{1}{2} \times \frac{1}{4}$)
7143	Ball Bearing Collar
00093	Ball Bearing Inner Washer
12072	Ball Bearing Fixing Screw
2346	Ball Bearing Grease Cap
12137	Ball Bearing Grease Cap Screws (3)
37301 each	Pump Body
30335	Pump Plunger
3976	Pump Plunger Pin with Split Pins
3977	Pump Gland
1499	Pump Gland Packing
4254/28	Valve (2)
4224 each	Valve Cap (2)
1603 each	Union Body $\frac{3}{8}$ " pipe
4343	Union Nut $\frac{3}{8}$ " pipe
4316	Union Nut
4319	Union Olive
4318	Union Olive
4320	Union Olive
4315	Outlet Banjo $\frac{3}{8}$ " pipe
10646	Outlet Banjo $\frac{3}{8}$ " pipe
12767	Outlet Banjo Bolt
12768	Outlet Banjo Bolt Washer (2)
10617 each	Outlet Banjo Bolt Washer (2)
10618 each	Outlet Banjo Bolt Washer (2)
	PETROL PUMP
12268	Push Rod
12298	Push Rod Guide
21107	Pipe, with banjo union pump to carburettor
30513	Pipe, with banjo union pump to carburettor
	STARTING GEAR
12334	Shaft
12567	Shaft
12381	Bracket with Bush on Gearbox

STARTER AND DYNAMO



- (no longer avail)*
- | | |
|----------|-----------------------|
| Part No. | Duplex Chain |
| 12388 | Case |
| 40169B | Case Cover |
| 20735 | Spindle, Starter Gear |
| 12377B | |

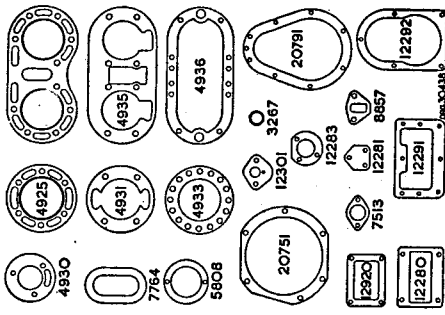
- | | |
|------------|----------------------------------|
| 00098 each | Ball Bearing (2) |
| 13005 | Ball Bearing Locknut |
| 12801 | Ball Bearing Spacing Disc |
| 12797 | Clutch Side Plate |
| 12798 each | Clutch Plates (2) steel |
| 12799 each | Clutch Plates (3) bronze |
| 12796 | Clutch Closing Plate |
| 12074 set | Clutch Closing Plate Springs (8) |
| 12528 | Clutch Inspection Cover |
| 40140 | Starter |
| 00136 set | Starter Brushes (4) |

- | | |
|------------|---------------------------------|
| 20728 | Starter Gear |
| 12378 | Duplex Chain Sprocket |
| 12802 | Duplex Chain Sprocket Key |
| 12824 | Duplex Chain Sprocket Circlip |
| 12390 | Oil Seal |
| 12271 | Oil Seal Sleeve |
| 30341 | Dynamo |
| 00136 pair | Dynamo Brushes (2) |
| 14630A | Dynamo Coupling |
| 9762 each | Dynamo Coupling Grub Screws (2) |
| 54030 | Dynamo Coupling Key |
| 12739 | Dynamo Coupling Collar |
| 13972 pair | Dynamo Strap and Pin (2 pairs) |
| 8488 each | Dynamo Strap Nut (2) |
| 20872 | Current Regulator |
| 4901 | Ammeter |
| 4171 | Stop Button |
| 12734 | Start Button |
| 14960 | Starting Contactor |

For details of other parts see Instruction Book 31 and/or separate leaflet on engines with type suffix "A"

JOINTS

- | | | |
|-----------|-----------------------------|-----|
| Part No. | Complete Set | P5 |
| 13676 | Complete Set | P55 |
| 13677 | Cylinder Head | P5 |
| 4925 | Cylinder Head | P55 |
| 21623 | Cylinder Base | P5 |
| 4931 | Cylinder Base | P55 |
| 4935 | Water Jacket Cover (2) | P5 |
| 7764 each | Water Jacket Cover (1) | P55 |
| 7764 | Exhaust Outlet (2) | |
| 4930 each | Expansion Chamber | P5 |
| 4933 | Expansion Chamber | P55 |
| 4936 | Carburettor Mounting Flange | P55 |
| 7513 | Reverse Gear Case | |
| 20751 | Magneto Drive Cover | |
| 5808 | Circulating Pump Gear Cover | |
| 12283 | Circulating Pump Body | |
| 12281 | Control Box | |
| 12280 | Float Chamber Plug | P5 |
| 3267 | Chaincase Cover | |
| 12292 | Chaincase to Crankcase | |
| 12291 | Clutch Inspection Cover | |
| 12920 | Reduction Gear Case | |
| 20791 | Petrol Pump | |
| 8857 | Petrol Pump Push Rod Guide | |
| 12301 | Thermostat Housing | P5 |
| 9590 | Thermostat Cover (Wax Type) | P5 |
| 13867 | Thermostat Cover (Wax Type) | P55 |
| 13866 | | |
- (no longer available)*



Special Instructions for

P5ME & P55ME with vertical reverse gear lever

53 The gearbox differs from that on the hand started engine. Lucas starter and dynamo are used. The dynamo is driven by a chain from the crankshaft and the driving pinion of the starter engages with the starter wheel on the dynamo drive shaft. A Lucas regulator controls the current.

The Stuart switchboard has two push buttons. The one on the right operates the starter contactor, the other stops the engine by earthing the magneto.

The gear lever moves in a fore and aft direction. It may be fitted in either of two positions, whichever is more convenient, by taking out the cotter pin and turning the lever round. The nut 12365 should not be tighter than is necessary to prevent end movement of the shaft. The gear lever and throttle have the well-known STUART interlock; it is impossible to race the engine when the gear is in neutral.

54 "Lubrication." The filler 12104 for gearbox and chaincase is on top of the control housing. Use the same oil as in the engine, contents about 1 pint (1½ pints on the reduction gear model). The dipstick is on the port side.

A magnetic drain plug attracts any iron particles which enter the lubricating system; it is on the starboard side of the chaincase, below the circulating pump. On the early model P55ME the dipstick is on the top of the chaincase; the early model single cylinder engine has not a dipstick, but there is an oil level plug above the magnetic drain plug. Take it out and fill until oil overflows.

Reverse gearbox:—Dismantling. Don't do it unless necessary for repairs. Put the lever in gear, unscrew the nut 00900 at the after end. Draw off coupling and remove the key. Put lever into neutral. In a reduction gear engine remove the coupling as before, draw off reduction gearbox casing, unscrew nut 00900, removing ball race and pinion wheel. Remove the control housing with the gear lever and throttle mechanism. Take out the eccentric shaft screw 12433B and withdraw the shaft 12081, at the other end of which is a plug 12082. Take out the screw 12082B, then with a rod, drive the shaft out ¼ in. to clear the serrations. Lift out the operation fork 20682.

The gearbox is attached to the crankcase by six studs. The secondary shaft 20674B carrying the remaining moving parts of the gearbox is removed by driving it forward—take care not to damage the end of the shaft. The shaft with the planet train slips forward out of the clutch body 30292 which slides upon it on three keys.

The part of the gearbox most subject to wear is the floating bush 12076. The outside diameter is 0.999 to 0.998 in. If it has worn to 0.996 in., renew. The bore is 0.75075 to 0.750 in. Replace when it exceeds 0.753 in.

Do not disturb the planet train unless it is absolutely necessary. The planet pinions (short, 12063 and 12064, long), are retained by an end plate 12085 secured by six set bolts 12092B; mark the planet pinions so that they go back the same as before. The pinion housing 20684 rotates on shaft 20674B and is secured by a circlip 12260.

To dismantle the clutch body and operating assembly, remove the large internal circlip 12259 securing the double thrust race DLJT1¼ in. in the body and tap the operating sleeve assembly forward and out of it.

To dismantle the sleeve, place two clamps over the thrust race and the rear pressure plate 12078 to compress the springs 12074 sufficiently for the circlip 12260 at the after end of the inner sleeve to be removed.

Re-assembling. Ball thrust races must be the right way round. In the direct drive engine there is a pair of races PLJT7/8 at the after end of the gearbox; they must be assembled with the thicker edges of the outer race marked "thrust" facing inwards. In the reduction gear engines these races are on each side of the pinion 12233 and LJT1¼ in. bearings on both sides of the gearwheel 12235, in this case they must be assembled thrust side outwards.

Chaincase. For access to the chain drive take off starter 40140, dynamo 30341, and gearbox. Remove the sun wheel 12062, forward cone, thrust race MJT1¼ in. and housing 20739B. Loosen the grub screw in the dynamo coupling 12272B and unscrew it. Take off the inspection cover and chaincase cover 20735. Remove the split link from the chain to detach it. The spindle may now be withdrawn.

The starter gear incorporates a slipping clutch to absorb shock. Dismantle by removing the nut 13005 on the end of the shaft and drawing off the ballrace LJT1¼ in. The clutch consists of two steel and three phosphor bronze discs 12798 and 12799 interleaved. There are eight springs 12074 in holes in the chainwheel.

The magneto chain 12387 drive is at the forward end of the chaincase, to get at it remove the large chainwheel 20727 on the crankshaft.

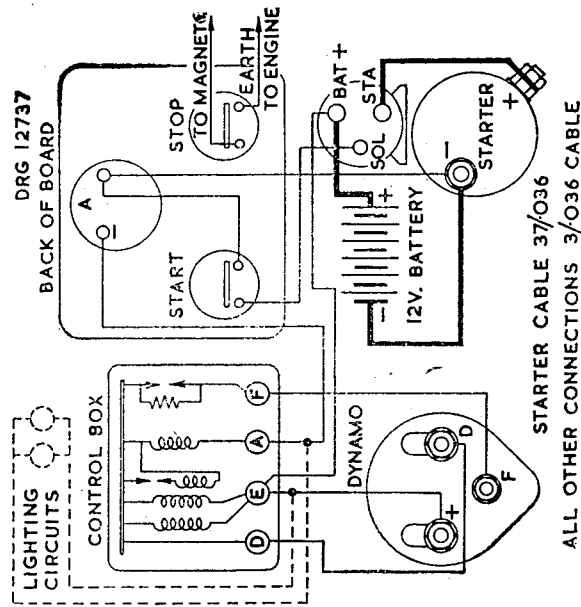
Adjusting the gear control. Equal force is needed to engage ahead and astern gear. To adjust:—Turn the shaft 12081 to a position where the force is balanced. Drive it out to clear the serrations, then turn one serration at a time (see para. 3). Trial and error will find the correct adjustment. Finally retighten the eccentric shaft screw.

ELECTRICAL EQUIPMENT 12 Volt (Lucas)

Dynamo. Speed 2715 r.p.m. with engine at 1500 r.p.m. Cutting-in speed 1050/1200 r.p.m. with engine at 530/665 r.p.m. Maximum output 9 amps.

Every 400 hours remove rubber plug in the end of the dynamo bearing housing, and inject a few drops of engine oil. No lubrication is necessary at the driving end. At the same time remove the through bolts retaining the non-driving end cover, and withdraw the cover to inspect the brush gear and commutator.

See that the brushes move freely in their holders by holding back the springs and pulling gently on the flexible connectors. If a brush is inclined to stick remove it from its holder and clean its sides with a petrol-moistened cloth. Be careful to replace brushes in their original positions in order to retain the bedding. Brushes which have worn so that they will not bed properly on the commutator must be renewed. The commutator should be clean, free from oil and dirt and should have a polished appearance. If dirty, clean by pressing a fine dry cloth against it while the engine is slowly turned over by hand. If this is not effective, moisten the cloth with petrol.



The Starter should be examined in the same way. It needs no lubrication.

The Current Regulator requires no maintenance or adjustment. If the battery is over- or under-charged, adjustment should be made by a Lucas Service Depot.

For starters without + terminal connect STA of solenoid to starter fixing bolt.

See separate wiring diagram for engines with coil ignition.

SUNDRIES

Stuart Green Enamel (Approx. 125 ml.)
Petrol Funnel with waterproof gauze filter
Oil Measure
Corks — Petrol Tap

00285
20758
7409
00179