DUNKLEY

Scooter

MODEL S65

Operation & Maintenance





Scooter MODEL S65

Operation & Maintenance

INTRODUCTION

Your Scooter, fitted with a Dunkley Motor OHV 4 Stroke Engine incorporating 2 speed gearbox, has been designed to give you many miles of trouble free riding with the minimum amount of attention. It is economical to run, simple to maintain in service. Every Scooter has been fully tested before leaving the Factory - it should, therefore, not be necessary to make any further adjustments. To obtain the best results the engine should be carefully run in for the first 500 miles. Speeds should not exceed:-

First Gear 17 Miles per hour Top Gear 28 Miles per hour

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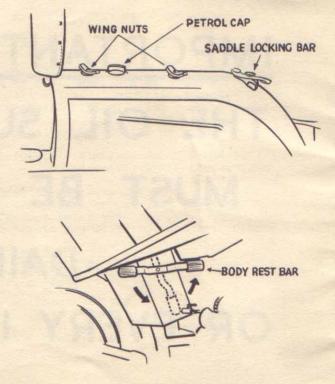
DATA

ENGINE	Four Stroke OHV. Bore 44 m/m. Stroke 42 m/m.
	Capacity 65 c.c. BHP. 2.6 at 5,200 R.P.M.
PISTON	Heplex split skirt, 1 compression ring,
	1 step compression ring, 1 oil control ring.
RING GAP	.004010".
BEARINGS	Heavy duty ballrace. Roller big end.
LUBRICATION	Wet sump.
OIL	Recommended Oil:- Winter: SHELL X100-30.
	Summer: SHELL X100-40.
OIL CAPACITY	5/8 Pint.
TRANSMISSION	1/2" x 3/16" Heavy Duty Chain.
IGNITION	Flywheel magneto, incorporating lighting
101/11/101/	coil. Contact point gap .015".
CRADE DING	
SPARK PLUG	KLG F. 50 Points Gap .022".
CARBURETTOR	Amal.
	Jet size 35.
	Throttle slide No. 2.
	Jet Needle Clip No. 2 position.
TYRES	Dunlop 2.50" x 15"
	Pressure: - Front: 22 lbs.
	/
DESCRIPTION OF THE PROPERTY OF	Passenger).
PETROL TANK	Capacity 8 Pints.

IMPORTANT WARNING THE OIL SUMP LEVEL MUST BE CHECKED DAILY. OR EVERY 100 MILES.

The body hinges up for maintenance of the engine and chassis and is lifted as follows:-

Move the locking bar at the rear of the saddle from left to right and hinge the saddle upwards, remove the two wing nuts securing the body and relock the saddle, now lift the body upwards from the rear end. Mounted on the front of the petrol tank is the body rest bar; turn this bar to a horizontal position and lower the body onto it. When lowering the body back into position always check that the footbrake pedal has entered the socket on the brake arm. See Page 14



ON THE ROAD

PETROL

Use ONLY premium grade petrol. Do NOT fill the tank with a petrol/Oil mixture. Your Scooter is fitted with a four stroke engine which runs on Pure Petrol and which has a separate oil sump.

CONTROLS

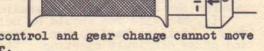
THROTTLE: Sitting on the saddle, on the right side of the handlebar is your throttle twist grip control. The lever attached to the twist grip operates the front brake.

CLUTCH & GEAR: On the left side of the handlebar is the twist grip gear control which is marked 1, zero and 2.

Position 1 - Bottom gear.

" Zero - Neutral.

" 2 - Top Gear.



The clutch lever is attached to this control and gear change cannot move without first lifting the clutch lever.

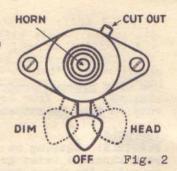
LIGHTS, HORN AND IGNITION CUT OUT.

These are controlled from a switch mounted on the right side of the handle bar and operated as follows:-

LIGHTS: Lever in centre of switch. Fig. 2.

Lever Position: Centre - off Left - dim

Right - head



HORN: By button in centre of switch. Fig. 2.

CUT OUT: By button in right side of switch. Fig. 2.

TO START ENGINE: Turn on petrol, the petrol tap is in the ON position with the lever pointing in the direction of the petrol flow.

Your Dunkley Scooter is fitted with an Amal carburettor which has an auxiliary starting chamber for use when the engine is cold. This is brought into use by lifting the engine inspection door and pulling upwards the flexible rod protruding from the carburettor top.

Fig. 4. This rod should be held up for a maximum of two seconds only. If it is held up for a long period over richness will occur and cause difficult starting. It will not be necessary to use the

starting chamber during the summer weather.

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Lever Position: Centre - off

Left - dim Right - head DIM CUT OUT

HEAD

OFF Fig. 2

HORN: By button in centre of switch. Fig. 2.

CUT OUT: By button in right side of switch. Fig. 2.

TO START ENGINE: Turn on netrol, the netrol ten is in the ON needtion

Check that the gear change control is in the neutral position, then sharply depress the kickstart lever with the foot. When kicking the engine over the throttle should only be opened very slightly, if the throttle is fully open, the engine may be difficult to start.

starting chamber during the summer weather.

TO DRIVE AWAY:

Sit on the saddle with the engine running, pull up the clutch lever and turn the control to position marked "1", now start to open the throttle and at the same time gently release the clutch lever; your Scooter will then move forward. After reaching a speed of 17 M.P.H. approx. change up to top gear No. 2 position.

TO SLOW DOWN OR STOP:

When you wish to travel at a low speed DO NOT try and do so by keeping the machine in top gear and slipping the clutch (this will cause undue strain and wear) always change to bottom gear for slow speed riding; when riding in traffic; up a steep hill etc. If you want to stop as at traffic controls etc., always pull up your clutch lever and turn the control to the neutral position and release the clutch lever. Then reengage bottom gear when you are ready to move off. DO NOT wait with the clutch disengaged and the engine in gear as this causes undue wear to the clutch mechanism.

TO STOP THE ENGINE:

With the gear change control in the neutral position press the cutout button in right side of switch case, see Fig. 2, turn off the petrol.

RUNNING IN:

Your Scooter will require running in for the first 500 miles, this means that whilst the engine is new it requires care in use. You should not travel longer than necessary in bottom gear as this causes over

heating. Always avoid over-running, but do not travel too slowly in top gear, always change down to low gear. For the first 500 miles the recommended speeds are 17 M.P.H. in low gear and 30 M.P.H. in top gear.

ADJUSTMENTS

GEAR CHANGE:

The adjuster for this is screwed into the gear change lever and is adjusted as follows:- Place the gear change control in the NEUTRAL position, the adjuster is then screwed in or out until the rear wheel spins perfectly free. If while travelling in bottom gear, the gear tends to disengage, this indicates that the cable adjuster should be gradually screwed out until bottom gear is positively engaged. If top gear disengages while riding, this indicates that the cable adjuster should be screwed in, also check that the inner wire of the cable is perfectly free and does not require oiling. After making any adjustment always ensure that the engine and rear wheel are perfectly free in the neutral position.

CLUTCH LEVER:

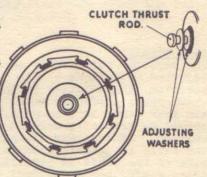
The movement of the clutch lever should be adjusted by means of the adjuster in the clutch cable so that there is 1/8" free play at the end of the lever.

CLUTCH:

There should always be a minimum of 1/8" free movement on the clutch lever attached to the spindle in the clutch housing, adjustment to this

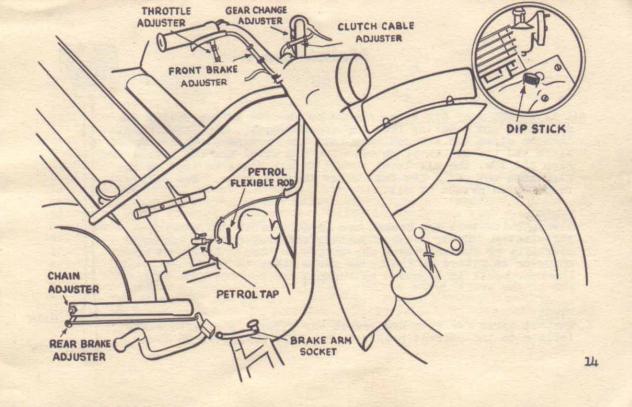
carried out as follows :-

Remove the three screws securing the Clutch Housing and lift off; the clutch is now visible. In the centre of the clutch is the thrust rod, behind the head of this rod are one or two thin washers, if the movement on the end of the lever is too great, additional washers should be fitted (Part No:223) and a washer removed if there is insufficient movement. Always ensure that there is at least 1/8" movement at the end of the lever otherwise clutch slip will be experienced.



SLOW RUNNING:

This adjustment is carried out with the adjuster provided in the throttle control. The amount of petrol used by the engine can be varied by adjusting the height of the jet needle. This is carried out as follows:- Unscrew the mixing chamber top of the carburettor and withdraw the throttle valve assembly, then pull up the throttle valve spring and fully compress; the jet needle can be withdrawn from the throttle valve, the clip on the jet needle should be carefully removed and refitted to a higher groove to weaken the petrol mixture and a lower groove to richen. The normal position is the 2nd groove from the top.



Maintenance

DAILY



OIL LEVEL: The sump oil level should be checked by unscrewing the dip stick and removing from the crankcase, the dip stick should then be wiped and screwed back into the crankcase, then removed again and the oil level noted. The dip stick has two levels i.e. high and low, the oil level should at all times be kept at the high mark and never let fall below the LOW level. Use only recommended grades of oil.

BRAKES:

Always check that the brakes are in good order and working efficiently. Never leave adjusting the brakes until tomorrow - your life or someone elses may depend on them. The front brake adjuster is fitted in the brake cable close to the brake lever. The rear brake is adjusted by turning the knurled knob at the end of the brake rod.

TYRES:

Inspect tyres for cuts and remove any flints, etc. afterwards inflate to the correct pressure, front 22 lbs., rear 26 lbs.

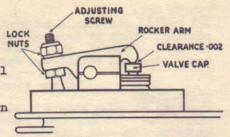
-HIGH

_Low

FIRST 250 MILES

TAPPET ADJUSTMENT:

This should be carried out only when the engine is cold. Remove spark plug, flywheel cover and rocker box cover and check the cylinder head nuts for tightness, then proceed to adjust the tappets as follows:- Turn the magneto flywheel in an anti-clockwise direction until the inlet valve opens and



closes again, continue turning until the piston is at top dead centre (that is until the piston is at the top of its stroke close to the cylinder head). In this position you can adjust both tappets. Slacken off the top adjusting screw locknut and then the bottom locknut, now with a screwdriver turn the adjusting screw until a .002" feeler will just slide between the valve cap and the rocker face. When the correct adjustment has been obtained the adjusting screw should be held in position with the screwdriver and the top locknut tightened first and then the bottom nut. (Remember always when retightening the tappet locknuts that the top nut must be tightened first). After tightening the locknuts recheck the clegrance between the valve cap and rocker. Refit the rocker box cover making certain that the gasket is in position. It is safest to stick the gasket in position with grease or a little joining compound.

ENGINE OIL:

The engine oil should be drained whilst the engine is still warm after running. This is carried out by removing the drain plug at the bottom of the crankcase. After all the oil has been drained out replace the drain plug and refill the engine with ½ pint of a recommended grade of oil.

SHELL X100-30 Winter
SHELL X100-40 Summer

SPARK PLUG:

Check spark plug points gap and reset to .022" to .025".

MAGNETO:

The magneto contact breaker points should be checked and if necessary reset. This adjustment is carried out as follows:— Turn the magneto flywheel in an anti-clockwise direction until the contact breaker points are visible through the inspection slot and are fully open adjacent to the word Bletchley. Slacken off the large locking screw immediately above the contact breaker points now turn the small adjusting screw in a clockwise direction to increase the points gap and anti-clockwise to reduce. The correct gap is .015" this should be checked with a feeler gauge. When the setting has been obtained retighten the locking screw and re-check the points gap. NOTE: Always make certain that the feeler gauge is perfectly clean before inserting between the contact breaker points. A dirty feeler gauge can cause burnt contact points, poor starting and erratic running.

CHAIN ADJUSTMENT:

Adjust rear chain by loosening wheel nuts and pulling wheel back 17 with adjuster provided. Ensure wheel is in correct alignment and retighten wheel nuts.

EVERY 1,000 MILES

Drain engine oil as instructions for first 250 miles.

EVERY 3,000 MILES

DECARBONIZE:

Unscrew the nuts securing the valve rocker box and lift off the cover. Next remove the four nuts securing the cylinder head and carefully slide the cylinder head off the engine studs. (When lifting the cylinder head ensure that the push rods remain in position and do not lift with the cylinder head otherwise they may drop into the engine sump). Remove the cylinder head gasket; next with a screwdriver or similar instrument carefully scrape the carbon from the top of the piston. The carbon should then be scraped from the compression chamber of the cylinder head and the valves removed:- A convenient way to remove the valves is as follows:-Place a small block in the compression chamber of the cylinder head and put the cylinder head on the bench with the compression chambers downwards, then with a suitable tool, such as an open ended spanner, push downwards on the valve cotter plate, this will compress the valve spring and will allow the split cotters to be removed. Carefully release the tension on the valve spring and remove the valve spring and valve. Carefully keep the valves, springs, cotter plate and split cotters in sets and note whether they are from inlet or exhaust so that they can be fitted back in their correct ports in the cylinder head. The carbon should then

be scraped from the valve and valve ports and the surfaces polished with fine emery paper. Care should be taken when cleaning these parts that the valve seat faces are not scratched, otherwise it will take a considerable time to "lap in" the valve faces again.

To "lap in" the valves you require some coarse and fine Carborundum paste. First smear a small amount of coarse paste on the face of the valve, then insert the valve in its correct guide and with a screwdriver rotate the valve backwards and forwards; remove the valve and examine the seatings, these should be "matt grey" and free from all blemishes. When you are satisfied with the valve seatings, a small amount of fine paste should then be smeared on the valve seatings and the valve again "lapped in" until the seatings have a fine smooth matt finish. The valve and valve seating should then be washed in paraffin or petrol, the valves replaced in their correct guide, and the valves, spring, etc., refitted. Replace the cylinder head gasket and rerit the cylinder head taking care to ensure that push rods enter the tappet adjusting screws. (It will be found that by pushing down on the rocker adjusting screws so that the rocker is at 45° to the cylinder head, the push rods will then readily enter the adjusting screws). Fully tighten the cylinder head nuts and adjust the tappet clearance as instructions for first 250 miles. Check magneto contact breaker points as instructions for first 250 miles.

If new piston rings are fitted the top ring should be replaced with the side of the ring marked TOP.nearest the crown of the piston. The stepped compression should be fitted with the cutaway section nearest the gudgeon pin.

FAULT FINDING

IF ENGINE WILL NOT START:

Check that petrol tap is in ON Position. Check that the ignition is switched ON.

Remove the spark plug and examine: if the plug is dry it indicates that there is something wrong with the petrol system. If the plug is wet with petrol it is an indication that the carburettor is flooding or that there is not a sufficiently strong spark at the plug to ignite the petrol.

CHECK PETROL SYSTEM

- (1) AIR VENT HOLE: Examine the air vent hole in the petrol filler cap.
- (2) CARBURETTOR: With the petrol tap off remove the nut from the base of the carburettor mixing chamber and allow the petrol to drain off, next turn on the petrol, the petrol should now flow through the carburettor and out past the jet if the petrol drips very slowly or does not flow at all, this

indicates that the feed hole in the float chamber cover is choked. Remove the float chamber cover and clean the feed hole - when refitting making certain that the float needle enters its seating, and also that gasket is in position.

(3) CLEAN JET: Remove the carburettor jet and examine - the hole in the jet is so small that it is not always possible to see an obstruction with the naked eye. It is, therefore, recommended that the jet is cleaned by passing a piece of soft copper wire, such as a fuse wire, through it; refit the jet and nut to the base of the carburettor.

CHECK IGNITION SYSTEM

- (1) PLUG: Remove spark plug from the engine, clean and adjust. Correct gap at points .022" to .025". Try new plug
- (2) MAGNETO CONTACT BREAKER POINTS: Check contact breaker points as for 250 miles.
- (3) SPARK: Remove the terminal from the end of the H.T. lead and the plug from the engine. Hold the end of the H.T.lead 3/16" to 1/4" away from the cylinder head, then rotate the engine with the pedals or kick start the spark should then jump the gap of 3/16"; if it does not it indicates that the magneto is possibly faulty and should be examined

by a specialist. (Do not connect the H.T. to the plug and try the spark via the plugs. The gap on the plug is too small to give a true indication of the strength of the spark from the magneto).

(4) H.T. LEAD: Examine the H.T. Lead for any cracks, etc., that will allow the spark to earth in damp or wet conditions. Do not join a new length on to your H.T. Lead, always fit a new one.

ENGINE DIFFICULT TO START

- (1) Check contact breaker points and plug gap as per maintenance instructions.
- (2) Check compression as instructions for "If engine lacks power" (1).
- (3) Check petrol system as per instructions "If engine will not start" (2) and (3).
- (4) Check inlet manifold screws for tightness; if necessary fit a new gasket.

IF ENGINE LACKS POWER

(1) CHECK COMPRESSION: By rotating the flywheel in an anti-

clockwise direction. If compression is poor or non-existant examine tappet adjustment as per instructions for 250 miles. If tappet adjustment is correct the cylinder head should be removed and valves lapped in as instructions for decarbonizing at 3000 miles.

- (2) CARBURETTOR: Remove the carburettor from the inlet manifold and whilst looking through the rear aperture of the carburettor, open the throttle by rotating the twist grip and ascertain that the throttle valve is opening fully (i.e.leaving the hole in the carburettor completely unobstructed). If the throttle valve is not fully opening this should be adjusted by the cable adjuster fitted in the mixing chamber top.
- (3) Check petrol system as per instructions "If engine will not start" (2) and (3).

IF ENGINE IS ERRATIC

- (1) Check plug and contact breaker points as in maintenance instructions for first 250 miles.
- (2) Check for air leak in manifold or in "If engine difficult to start" (4).
- (3) Check spark as in "If engine will not start". Ignition system (3).

ALWAYS QUOTE ENGINE NO. AND FRAME NO. IN ALL CORRESPONDENCE.

MAINTENANCE NOTES

DATA	MILEAGE	DATA	MILEAGE
	TOTAL TH	415343	
	THE	STA ONA	
	1.14	141	
	man	Barria A	
	- I MARILLA		

REPLACEMENT PARTS LIST

PART NO.	DESCRIPTION OF PARTS	PART NO.	DESCRIPTION OF PARTS.
\$65 - 124 \$65 - 125 \$65 - 126 \$65 - 125 \$65 - 125 \$65 - 127 \$65 - 128 \$65 - 129 \$65 - 131 \$65 - 131 \$65 - 271 \$65 - 272 \$65 - 125 \$65 - 125 \$65 - 127	Rocker Spacing Washer. Tappet Adjusting Screw. Locknut for 130. Locknut Nyloc for 130. Cylinder Head Casting. Cylinder Head Gasket. Cylinder Head Securing Nut. Cylinder Head Securing Nut N Washer for 125.	865 - 147 865 - 148 865 - 149 865 - 150 865 - 274 865 - 152 865 - 275	Valve Guide. Spark Plug. Spark Plug Gasket. Spark Plug Cover. Inlet Manifold. Inlet & Exhaust Manifold Gasket. Inlet Manifold Securing Washer for 149. (Screw. Cylinder Barrel. Cylinder Barrel Gasket. Piston only. Piston Gudgeon Pin. Piston Gudgeon Pin Circlip. Piston Compression Ring. Stepped Compression Ring. Oil Control Ring. Engine Stud Long.

PART NO.	DESCRIPTION OF PARTS.	PART NO.	DESCRIPTION OF PARTS.
\$65 - 282 \$65 - 161 \$65 - 162 \$65 - 163 \$65 - 164 \$65 - 166 \$65 - 166 \$65 - 167 \$65 - 168 \$65 - 169 \$65 - 170 \$65 - 171	Push Rod. Cam Follower. Inlet. Cam Follower Exhaust. Cam Follower Spindle. Cam Follower Spacing Washer. Camshaft. Camshaft Bushes. Camshaft Spindle. Camshaft Spindle Circlip. Camshaft Spindle D Washer. Camshaft Spindle D Washer. Camshaft Spindle D Washer. Camshaft Spindle Securing Nut. Washer for 170. Crankshaft Gear. Crankshaft Gear Woodruff Key. Duplex Gear. Bush for 174. First Gear. Secondary Shaft. Secondary Shaft Circlip. Sliding Gear Selector. Gear Selector Fork. Gear Selector Fork Spring. Thrust Washer for 182.	\$65 - 185 \$65 - 186 \$65 - 187 \$65 - 188 \$65 - 189 \$65 - 190 \$65 - 191 \$65 - 192 \$65 - 193 \$65 - 195 \$65 - 284 \$65 - 199 \$65 - 200	"E" Clip for 184. Securing Nut for 184. Washer for 186. Gear Selector Cam & Spindle. "O" Sealing Ring for 188. Nut for 188. Washer for 190. Gear Change Lever. Crankshaft Assembly. Connecting Rod Small End Bush. Crankcase (sets only). Crankcase dowl pin. Crankcase Gasket. Crankcase Securing Screw Long. Crankcase Drain Plug. Crankcase Drain Plug Washer. Main Bearing (Magneto Side). Mein Bearing (Clutch Side). Bearing Secondary Shaft Thrust. Bearing Secondary Shaft. Oil Seal Main Bearing. Oil Seal Secondary Shaft.

PART NO.	DESCRIPTION OF PARTS.	PART NO.	DESCRIPTION OF PARTS.
\$65 - 212 \$65 - 213 \$65 - 216 \$65 - 217 \$65 - 218 \$65 - 219 \$65 - 220 \$65 - 221 \$65 - 222 \$65 - 222 \$65 - 223 \$65 - 225 \$65 - 226 \$65 - 227 \$65 - 228 \$65 - 229 \$65 - 230 \$65 - 231 \$65 - 231 \$65 - 231 \$65 - 233	Clutch Retainer/Chain Sprocket. Chain Sprocket Bush. Clutch Pressure Plate. Clutch Centre Plate. Clutch Drive Plate. Clutch Spring Main. Clutch Spring Internal. Clutch Spring Retaining Plate. Locking Clip for 220. Clutch Thrust Rod. Adjusting Washer for 222. Clutch Thrust Rod Carrier Plate. Clutch Thrust Lever. Clutch Thrust Lever. Clutch Thrust Lever Ball. Leaf Spring for 225. Screw for 227. Washer for 228.	\$65 - 236 \$65 - 240 \$65 - 241 \$65 - 241 \$65 - 245 \$65 - 245 \$65 - 288 \$65 - 291 \$65 - 292 \$65 - 292 \$65 - 294 \$65 - 294 \$65 - 295 \$65 - 296 \$65 - 298 \$65 - 300 \$65 - 300	Clutch Cover Oiler. Clutch Cover Securing Screw. Magneto Stator Plate Securing Washer for 240. (Screw Magneto Rotor Securing Nut. Washer for 245. Kickstart Folding Arm. Kickstart Crank. Bolt for 288. Spring for 289. Ball for 289. Securing Bolt for 289. Nut for 293. Washer for 294. Kickstart Return Spring. Pawl Carrier Shaft. Pawl Plunger.
305 - 255	Clutch Cover.	00) 00)	

PART NO. DESCRIPTION OF PARTS.

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S65 - 306 Bush/Kickstart Distance Shaft. S65 - 316 Crankcase Breather Banjo.
$65 - 307 Kickstart Stop Plate. $65 - 317 Bolt for 315. $65 - 308 Screw for 307. $65 - 318 Washers for 316.
865 - 308 Screw for 307.
865 - 309 Washer for 308.
                                                      865 - 319 PVC. Tube for 315.
S65 - 251 Rear Engine Mounting Stud.
S65 - 310 Rear Engine Mounting Rubber.
S65 - 254 Rear Engine Mounting Rubber Spacer.
S65 - 315 Engine Mounting Back Plate.
865 - 125 Nut for 251.
S65 - 126 Washer for 125.
865 - 256 Top Engine Mounting Clip.
S65 - 257 Top Engine Mounting Rubber.
S65 - 258 Top Engine Mounting Bolt.
865 - 311 Nut for 258.
865 - 312 Washer for 311.
965 - 313 Name Plate.
S65 - 314 Name Plate rivet.
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USE ONLY GENUINE DUNKLEY SPARES FOR RELIABLE SERVICE Always quote Engine No. and Frame No. in all correspondence.





IceniCAM Information Service



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