

Before refitting the exhaust pipe and silencer, it is opportune to clean these parts internally and externally. Detach the silencer from the exhaust pipe and remove any burnt oil or carbon from the slots in the exhaust pipe, also from the silencer outlet. Refit the exhaust system, the carburettor and throttle control.

TO REFIT THE CYLINDER HEAD. A new cylinder head gasket is preferable. If the original gasket is used, it must be undamaged if a gas tight joint is to be made. Clean the gasket face on the cylinder head and barrel : a little graphite grease on the threads for the cylinder head bolts is beneficial. Locate the gasket on the cylinder, position the cylinder head and fit the four head bolts and washers. These bolts should be tightened diagonally and firmly. See that the sparking plug is in order as described in chapter on ignition and lighting. Apply a little graphite grease on the sparking plug threads, refit the plug and H.T. cable.

PILOT JET AIR SCREW ADJUSTMENT.

1. Set air screw $1\frac{1}{2}$ turns from fully closed position.
2. Run engine until warm.
3. With engine at tick over, adjust air screw until even firing occurs.
4. Finally adjust throttle stop screw until desired idling speed is obtained.

Clutch

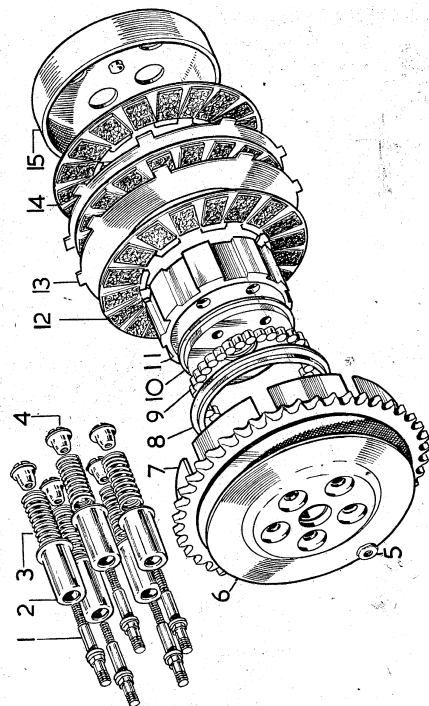
CLUTCH ADJUSTMENT. Attention to the clutch is usually confined to adjustment of the operating mechanism. To avoid clutch slip or clutch drag, the clutch should have $\frac{1}{8}$ of an inch slack between the clutch outer casing and the clutch cable adjuster on the gearbox cover. Without such slack the operating mechanism will be pre-loaded causing wear on the operating parts, also clutch slip. Conversely, excessive slack in the clutch cable will prevent separation of the friction plates and cause the clutch to drag, thus making the gear selection difficult. As the clutch inserts tend to settle down, this has the effect of lengthening the clutch push rod, as the width of the friction inserts is slightly reduced. To deal with clutch drag, or clutch slip, first unscrew the clutch cable adjuster lock nut and run down the adjuster as far as it will go. Unscrew one or two turns the adjuster lock nut (100) shown in illustration of clutch assembly on page 24. With a screwdriver, screw in the adjuster until contact with the push rod can be felt; unscrew the adjuster exactly half a turn and retighten the locknut, taking care the adjuster does not move. Complete the adjustment by unscrewing the clutch cable adjuster until there is $\frac{1}{8}$ " slack between the outer casing and the adjuster, tighten the locknut.

Clutch slip should be dealt with promptly otherwise the friction plates will be damaged and the clutch springs affected by heat. The normal free length of the clutch springs are $1\frac{1}{2}$ ", the clutch pushrod length is $8\frac{3}{4}$ ".

DISMANTLING THE CLUTCH — NOTE : Nuts and screws in the clutch and gearbox assembly have a right hand thread, with the exception of the nut retaining the gearbox rear chain sprocket, which has a left hand thread.

Commence by removing the primary drive cover by undoing centre screw. Unscrew in turn the five clutch spring adjusting screws, take away the clutch spring pressure

CLUTCH ASSEMBLY.



- 1 Clutch spring stud.
- 2 Clutch spring cup.
- 3 Clutch spring.
- 4 Clutch spring adjuster nut.
- 5 Nut.
- 6 Back plate.
- 7 Clutch sprocket.
- 8 Roller cage.
- 9 Roller bearings.
- 10 Race plate.
- 11 Clutch centre.
- 12 Friction plate.
- 13 Plain plate.
- 14 Front friction plate.
- 15 Pressure plate.

plate complete with the spring cups and springs, leaving the steel and friction plates free for removal. The front chain is endless, consequently the clutch and engine sprockets are removed simultaneously. A box key is required to unscrew the nut on the gearbox mainshaft securing the clutch hub and sprocket. The shaft nut is $\frac{1}{16}$ " across flats, the engine sprocket nut is $1\frac{1}{2}$ " across flats.

Engage top gear, using a good fitting spanner on the engine sprocket nut, apply pressure on the rear brake pedal, then hit the end of the spanner with one or two light hammer blows which will loosen the sprocket nut. With a box key use the same method to unscrew the gearbox shaft nut. Both the engine sprocket and clutch hub are on splined shafts, and usually they can be pulled off simultaneously after both nuts have been removed. If difficulty is experienced the careful use of two screwdrivers placed behind the sprockets will have the desired effect. For access to the clutch bearing unscrew the five nuts securing the clutch studs and back plate. The clutch bearing arrangement is shown in the illustration on this page.

TO RE-ASSEMBLE THE CLUTCH. Apply a little anti-centrifuge grease to the cage for the clutch bearing, to retain the 12 rollers, whilst the cage is fitted to the clutch race plate, and assemble parts in the reverse order described for dismantling. The five clutch stud nuts should be peened or centre popped for security.

To correctly position the clutch-spring adjusting nuts (4) adjust each nut until the slot/ end is just flush with the end of the clutch spring stud (1), then unscrew each nut two complete turns. The position of these nuts can be varied slightly to ensure that the pressure plate (15) is withdrawn parallel to steel plate behind it, when the clutch is operated.