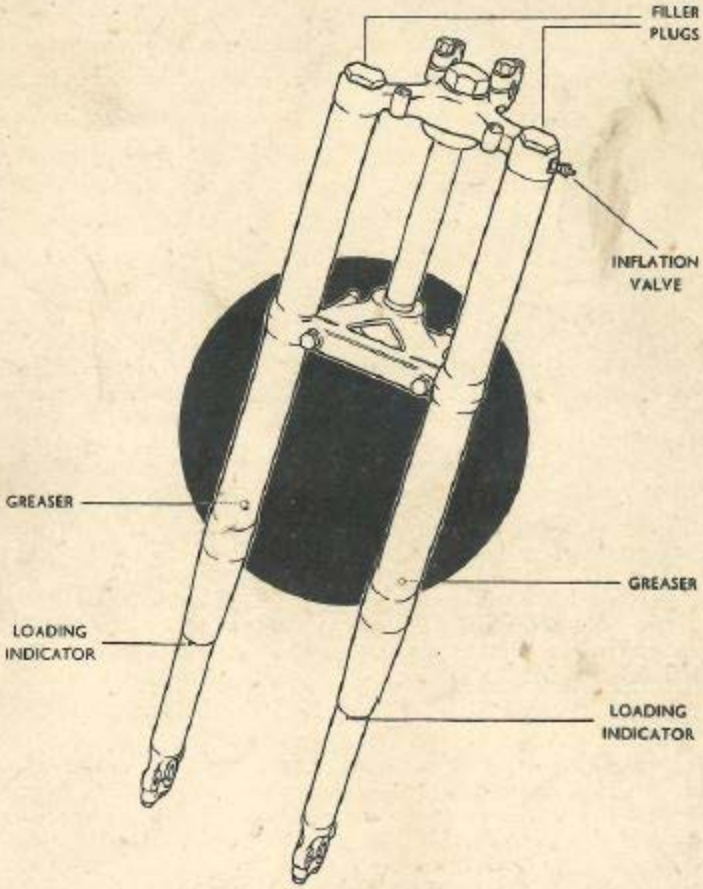
DOWTY 'Oleomatic'
MOTOR CYCLE FORKS



SERVICE NOTES

DOWTY 'OLEOMATIC' MOTOR-CYCLE FORKS

Dowty 'Oleomatic' Forks are air-sprung and oil-damped. Air springing has the advantage of allowing considerable deflection for normal surface irregularities, whilst maintaining the ability to absorb all shocks without excess fork movement. The movement of the synthetic rubber cushions in oil provides approximately equal and constant damping in both directions, without the contact and resultant wear of working parts. These cushions also absorb the shock, should the fork extend fully, whilst the oil cushion between the pistons and internal top fittings prevents too rapid closing on compression.

Inflation Valve

The inflation valve is fitted with a special core designed to open at low pressure and fitted with oil-resisting rubber seatings. *Under no circumstances* should a normal tyre valve insert be used, as the action of the oil would rapidly destroy the natural rubber seatings. Dowty valve cores can be obtained from your dealer or direct from the manufacturers.

Inflation and adjustment to load

A red dot is positioned on the front of each lower sliding tube. When correctly inflated to the load with rider or riders in position, the bottom edges of the shrouds should coincide with the red dots.

To obtain the correct adjustment, slightly over-inflate the fork by removing the inflation valve dust cap and coupling an ordinary tyre pump to the valve. Only a small volume of air is required. The rider should then sit on the machine, keeping his feet on the footrests and maintaining balance from some convenient support. Air should then be released in small quantities, by depressing the stem of the inflation valve, until the bottom of the shrouds line up with the red dots. Replace the dust cap on the inflation valve.

It will be seen from the above that the fork can, without fear of error, be correctly adjusted for solo, sidecar or pillion riding.

Topping up

Topping up becomes necessary only if 'bottoming' occurs in spite of correct inflation. Scrupulous cleanliness is essential. Remove inflation valve dust cap, depress valve stem and allow all air to escape. The fork will close.

Rest the crankcase on a block so that the fork is one inch from the fully closed position. Unscrew the filler plugs and fill each leg with one of the recommended oils (see 'Filling'). Replace and tighten filler plugs.

Remove the block from beneath the crankcase and depress the inflation valve, thus allowing surplus oil to drain off and the fork to close completely.

Carry out air inflation procedure, adjust to the load and replace valve dust cap.

Filling

Forks are supplied correctly filled and inflated. When filling, it is important that the recommended grade of oil be used as its viscosity does not change appreciably over a wide range of temperatures. Consequently there is little or no alteration in its damping characteristics. The recommended oils are:—

Mobiloil Arctic
Castrolite
Single Shell.

The procedure for filling is exactly as described under 'Topping Up', except that more oil will be required.

Unless dirt has been allowed to enter with the oil during filling or topping up, the oil need never be changed during the life of the machine.

Greasing

The bottom bearings in each leg should be greased weekly. Six shots with the grease gun are given to each greaser, situated at the rear of the outer tubes, at the lower bearings. Special attention should be given to this, to ensure a free action, and only clean high-grade grease must be used. Vent holes are provided in the sides of the outer tubes, below the fork crown and these allow surplus grease to escape.

Nuts and screws

Periodically check the tightness of all nuts and screws to ensure completely efficient working. It is particularly important that the steering tube pad bolt is kept really tight, otherwise fork alignment may become incorrect.

Adjusting steering head race

Slacken both the clamp bolts on the fork crown fitting and the pad bolt on the handlebar clip lug. Adjust steering head nut as required. Retighten pad bolt hard and clamp bolts, on completion of adjustment.

Removing front wheel

Place a suitable block under the crankcase so that the fork is fully extended and the wheel is clear of the ground. Disconnect the brake cable at the brake drum. Slacken the nuts locating the axle cap, on the brake drum side. Screw back the axle nut about two complete turns. Remove both axle caps, supporting the wheel with one hand as it comes clear of the fork.

Replacing front wheel

Screw up the nuts locating the axle caps, to finger tightness only. Tighten the axle nut on the brake drum side, so that the wheel is held tightly against the side of the axle fitting. Now tighten axle cap on this side only. Lift the machine off the block and bounce the fork a few times on the ground. Tighten near side axle cap, replace brake cable and adjust.

The object of the procedure explained in the preceding paragraph is to ensure that the lower tubes of the fork slide freely in the outer tubes. It will be noticed that a small clearance for this purpose is allowed between the shoulder on the near side axle ferrule and the axle fitting.

With 'knock-out' spindle wheels, the fork should also be bounced before tightening the axle nut and clamp bolt, to ensure correct alignment.

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