

(2) Extension

Spring tension returns the outer tube to its original position, the return dampened by the flow resistance of the returning oil through the upper side aperture in the inner tube, and out through the bottom opening. The non-return valve is closed during extension and does not allow oil passage. If the fork extends further, the side orifice reaches the metal slide which covers it and stops oil flow. This results in an oil lock, and fork extension ceases.

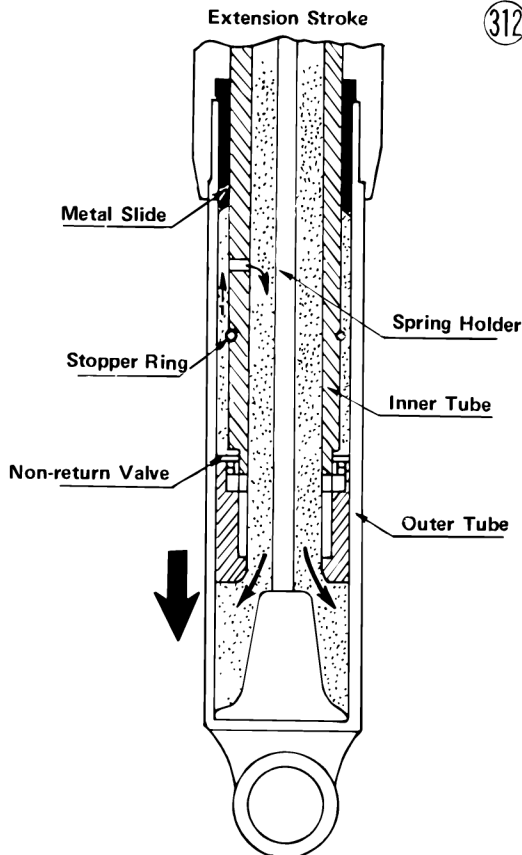
NOTE: In a badly worn or defective fork where the metal slide will not close the upper hole, or where the non-return valve does not close, the oil lock will not occur and a metal-striking-metal sound will be heard as the stopper ring of the inner tube hits the metal slide.

c. Steering Stem

The steering stem supports the front fork, and acts as its pivot. When the handlebars are turned, the stem turns inside the frame head pipe, friction being reduced by the ball bearings at its upper and lower ends.

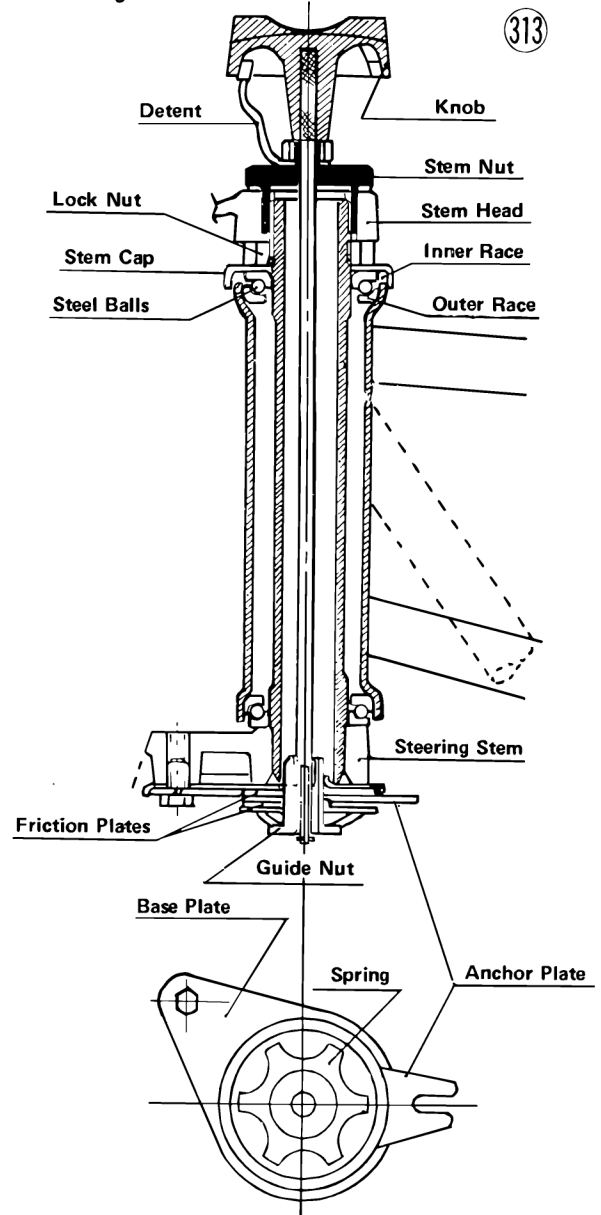
Steering stiffness can be adjusted by turning the damper knob at the top of the steering stem. Stiffness results from friction between the upper and lower steel plates and the anchor plate between them, friction being transmitted indirectly by the friction plates. The anchor plate is held stationary with respect to the frame, by a projection of the frame that fits into the plate notch; the steel plates turn with the handlebars.

Front Shock Absorber



When the knob is turned in, the damper spring is pulled up, increased spring tension forces the steel, friction and anchor plates harder together, and the increased friction stiffens steering.

Steering Stem



H1, H2 Front Spring Force

