

CHAPTER 2. ADJUSTING THE MONOSHOCK

TUNING

A. Adjustments and Effects

1. Damping (orifice) adjustment
 - a. Turning the damping adjuster clockwise: increases the damping; the shock absorber becomes stiffer.
 - b. Turning the damping adjuster counterclockwise: decreases the damping; the shock absorber becomes softer.
2. Gas pressure
 - a. Increasing the gas pressure: achieves the same effect as when the preload is increased; the absorber becomes stiffer and rebounds more quickly.
 - b. Decreasing the gas pressure: achieves the same effect as when the preload is decreased; the absorber becomes softer and rebounds more slowly.

3. Spring set length
 - a. Shortening the set length: increases the preload; the shock becomes stiffer and rebounds more quickly.
 - b. Lengthening the set length: decreases the preload; the shock becomes softer and rebounds more slowly.
4. Spring replacement
 - a. Using the hard type: the spring rate is higher; the spring is stiffer and rebounds more quickly.
 - b. Using the soft type: the spring rate is lower; the spring is softer and rebounds more slowly.

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B. Symptoms and Adjustments

The general procedure for shock adjustment is described below. Each adjustment should be made after you fully understand the effects of that particular adjustment.

SEQUENCE

SYMPTOM	1	2	3	4
Bottoming	Shorten the set length (increase preload)	Increase damping	Increase gas pressure	Replace spring (hard type)
Soft	Increase damping	Shorten set length (Increase preload)	Increase gas pressure	Replace spring (hard type)
Hard	Decrease damping	Extend the set length (Decrease preload)	Decrease gas pressure	Replace spring (soft type)

C. Tuning Notes:

1. It is advisable to use the standard setting. If it does not suit your preference, then make an adjustment according to the table above and the following instructions.
 - a. Set length should be adjusted in 3mm (0.1 in.) increments.
 - b. Damping should be adjusted in increments of 2 clicks.
 - c. Gas pressure should be adjusted within the 13 kg/cm² to 20 kg/cm² (185 to 284 psi) range.
2. Start adjustments using sequence 1. After each test ride, proceed to the next sequence, if necessary.

ADJUSTMENT

A. Checking the Gas Pressure

Always use a check gauge to check the nitrogen pressure in the gas chamber. Remove the panhead screw from the gas filler plug and insert the oiled needle into the rubber valve.

B. Bleeding the Gas

Oil the monoshock needle and carefully insert the needle into the gas filler plug. Slowly push the rod into the cylinder until the rod bottoms.

NOTE: Always replace the safety sheave on the check gauge to protect the needle from damage.

C. Adding Nitrogen Gas

1. Remove the panhead screw from the gas filler plug.
2. Thread the monoshock needle onto the nitrogen pressure hose and lightly oil the needle.
3. Completely close the regulator by turning the knob counterclockwise.
4. Open the nitrogen bottle main valve.
5. Insert the monoshock needle into the gas filler plug.

CAUTION: Support the monoshock needle when you pressurize the system so the needle will not be damaged.

6. Adjust the gas pressure to the desired level. Hold this pressure for one minute. Do not over-charge the gas chamber.

MAXIMUM STATIC PRESSURE
20 kg/cm² (284 psi)

WARNING: Do not charge the system with one large burst of gas. Gradually increase the pressure until the desired pressure is attained.

7. Close the main valve of the nitrogen bottle. Remove the monoshock needle from the gas filler plug. The nitrogen in the hose will flow out. Back off the pressure regulator.
8. Check the pressure with a check gauge.

NOTE: Approximately 5 psi will be lost from the gas chamber when you verify the pressure with a check gauge. ALWAYS verify the pressure with a check gauge. Do not rely on the regulator.

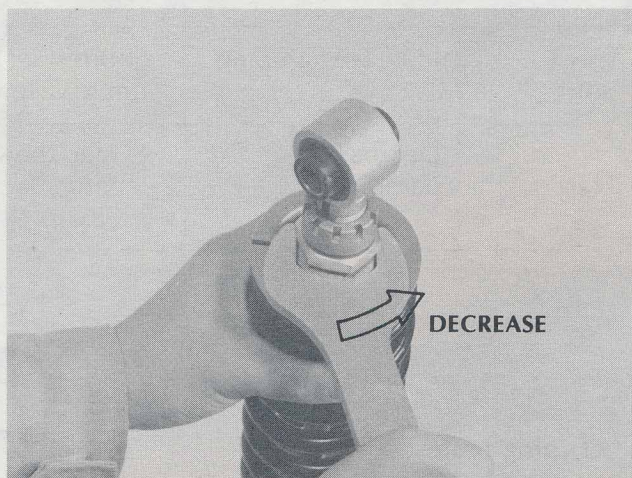
9. Reinstall the panhead screw in the gas filler plug.

10. Replace the safety sheave on the monoshock needle.

D. Adjusting the Preload

The preload is adjusted by changing the set length of the spring: a shorter set length increases the preload, a longer set length decreases the preload.

To adjust the preload, remove the monoshock from the motorcycle and loosen the jam nut. Adjust the spring set length by turning the spring adjuster with the special wrench. To increase the preload, turn the spring adjuster clockwise. To decrease the preload, turn the spring adjuster counterclockwise. Never attempt to turn the adjuster beyond the maximum or minimum setting.



Whenever adjusting the preload, adjust the spring set length in 3mm (0.1 in.) increments. Always tighten the jam nut against the spring adjuster and torque the jam nut to specification.

JAM NUT TORQUE:
6.5 m-k (47 ft.-lbs.)

STANDARD SET LENGTH

MONOSHOCK	MODEL	SET LENGTH
2X3	YZ125F	295mm (11.6 in.)
2X4	YZ250F	308mm (12.1 in.)
	YZ400F	306mm (12.0 in.)
3R3	YZ125G	356mm (14.0 in.)
3R4	YZ250G	356mm (14.0 in.)
	YZ465G	356mm (14.0 in.)
3R6	IT175G	335mm (13.2 in.)

STANDARD DAMPING SETTING

MONOSHOCK	MODEL	SETTING
2X3	YZ125F	14 Clicks Out
2X4	YZ250F	12 Clicks Out
	YZ400F	12 Clicks Out
3R3	YZ125G	9 Clicks Out
3R4	YZ250G	11 Clicks Out
	YZ465G	11 Clicks Out
3R6	IT175G	15 Clicks Out

E. Adjusting the Damping

To set the damping, turn the damping adjuster clockwise until it bottoms; then back it out to the standard setting.

The damping can be increased by turning the damping adjuster clockwise. Turning the damping adjuster counterclockwise will decrease the damping.

Adjust the damping in increments of 2 clicks.

HANDLING NOTES

WARNING: Never subject a monoshock to an open flame or other high heat source. The monoshock contains highly compressed nitrogen gas. High temperatures could cause the unit to explode due to excessive gas pressure.

Gerard Rouquette

DISPOSAL NOTES: The gas pressure must be released before disposal. To do so, bleed the gas from the monoshock. Drill a 2 to 3mm (0.08 to 0.12 in.) hole through the cylinder wall at a point 40mm (1.6 in.) above the bottom of the cylinder, or drill the reservoir at a point 30mm (1.2 in.) above the bottom of the reservoir.

