Forge Motorsport Type RS Valve Adjustment

Adjustment of the Forge Motorsport Type RS valve is done by turning the adjustment knob located on the top of the valve. Turning the knob clockwise in the direction of the "+" sign will stiffen the spring for higher levels of boost, while turning the knob counter-clockwise in the direction of the "- " sign will loosen the spring for lower levels of boost.

The adjustment knob is ratcheted and there are 4 "clicks" per 1 full revolution of the knob (360 degrees). There are also roughly 13 full revolutions meaning about 52 "clicks" to provide a wide range of adjustment.

The spring used in the Type RS valve is designed to hold about 7 PSI with no pre-load added to the spring (adjustment knob backed all the way out) and about 34 PSI with the maximum amount of pre-load (adjustment knob tightened all the way). These values, however, are based on spring pressure alone and do not consider the addition of a manifold vacuum/pressure reference to the valve when installed on a car that will alter the above mentioned figures.

The relationship between the clicks of the knob and the spring pressure is not completely linear, however, and each click of the adjustment knob is NOT necessarily good for 0.519 PSI as predicated by the above numbers (roughly 2 clicks per 1 PSI). Each car will vary in it's required level of adjustment and each spring will vary slightly in it's rating, varying the amount of clicks or turns of the knob required for the desired level of valve adjustment to each application.

Each user will need to adjust their valve so that it will hold boost all the way to the specified redline of their application under wide open throttle without experiencing any valve fluttering at full-boost throttle lift.

If valve fluttering is felt at full-boost throttle lift, this is typically an indication that the valve is adjusted too stiffly.

If the valve is leaking under wide open throttle before the specified redline of the application is reached, this is typically an indication that the valve is adjusted too softly.

Please note that valve flutter under partial throttle conditions or partial boost throttle lift is a normal occurrence as IS NOT an indication of compressor surging. Partial throttle or partial boost valve flutter is solely an indication that the valve is responding to an inconsistent pressure differential on either side of the throttle body as it is being modulated. Compressor surging would only be experienced if full-boost throttle lift valve flutter is experienced and is not corrected immediately.