

V-Twin Mfg.
FORK SPRINGS 41MM
Fits WG,FL,FX,1949-UP FLT
VT No. 24-0165

This is a custom application and rider safety depends on proper installation. This product should only be installed by a knowledgeable and trained motorcycle technician. V-Twin Mfg. accepts no responsibility for improper installation.

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|-------------------------------------|---------------------|
| 48-77 Early FLH (See Vent Cap Note) | 3.5" Spacer length |
| L77-91 FLH/S, FLT/C FLHT/C | 1.25" Spacer length |
| 80-86 FXWG | 4.25" Spacer length |
| 84-91 FXST/C | 4.25" Spacer length |
| 84-91 FLST/C/F | 2.5" Spacer length |

VENT CAP NOTE:

Some 48 to early 77 Wide Glide forks have a spring loaded vent protruding below the fork cap. This vent will not fit inside our PVC spacer. The vent system can be unscrewed out of the fork cap so that our PVC spacer can be used. Be sure to plug the hole if you unscrew the vent system. If you wish to retain the vent system in your fork cap, you will have to fabricate a spacer with the required length but with an inside diameter large enough for the vent system to fit inside.

STREET FORK SPRING INSTALLATION INSTRUCTIONS

Removing and replacing fork springs should be performed by a qualified mechanic or according to steps outlined in the service manual for your particular model.

WARNING

Never attempt to remove the fork cap nut without first placing a quality jack or sufficient blocks under the motorcycle to securely lift the front ~heel off the ground. **FAILURE TO DO SO COULD RESULT IN SERIOUS INJURY!**

Instructions:

1. Remove fork springs according to instructions listed in the service manual. For maximum performance we highly recommend that the forks be thoroughly cleaned, inspected and new fork oil installed.

Note: If your motorcycle comes equipped with two fork springs in each leg (long & short), remove and discard both springs and the flatwasher between the springs. If a stock spacer exists, remove it. If there is a short spring on the damper rod, **DO NOT REMOVE IT!**

2. In most cases, we recommend 10 weight fork oil as a "ballpark" starting point. For fine tuning see Step 7. Fork oil level should be checked by measurement, not volume. Measure fork oil level with springs out and forks completely compressed. Measure with a ruler or use a fork oil adjustment tool from the top of the fork tube to the oil level. Make sure the levels in both legs are equal. **CAUTION!** Under no circumstances should the oil level be **LESS** than 5.5" (130mm).
3. Install your new fork springs with the close wound coils facing up. Check the spacer length requirement for your motorcycle in the enclosed supplement. If not listed, you must calculate preload. What is preload? Preload is the distance the spring compresses when the fork cap is installed. You may or may not utilize a spacer to achieve proper preload. The spacer in itself is not Preload. It just helps to achieve it. Why preload important? It determines the proper ride height which in turn affects how the bike handles.

CALCULATING PRELOAD

If your motorcycle is not listed on the enclosed chart, you will need to calculate preload to determine if you need a spacer and the length it must be. Most motorcycles need between $\frac{3}{4}$ " to 1" of preload. As a rough rule of thumb, the fork spring (Fig 1) or fork spring and spacer combination (Fig 2) should be at least flush (or above) the top of the fork tube with the forks **FULLY EXTENDED**. This is true for most motorcycles because their fork caps are between $\frac{3}{4}$ " to 1" long meaning that they will screw into the fork tube the same distance.

For fork caps longer than 1", you must calculate the preload length so the fork spring or fork spring/spacer combination will be below the edge of the fork tube. If your fork caps have adjustable preload settings or are recessed below the edge of the fork tube (circlip type), then they are usually much longer than the $\frac{3}{4}$ " to 1" caps and must be measured accordingly. Check the fork notes on the application chart, the stock spacer in some cases can be modified to fit. If making a spacer we recommend PVC pipe that is the approximately diameter of the fork springs but will still fit inside the fork tubes. **WARNING! IF INSTALLING A SPACER, A FLAT WASHER MUST BE INSTALLED BETWEEN THE SPACER AND THE SPRING!**

4. After installing the fork cap, we recommend no air pressure for a starting point. See Note 7 (Fine Tuning).

5. Fork Braces: We have found numerous cases of binding forks due to improperly mounted fork braces. Our experience has led us to conclude that even the slightest misalignment installing the fork brace will cause the forks to bind. If, after installing the springs, a harshness exists (especially on small bumps and freeway expansion joints), remove the fork brace and ride the bike again over the same route. If harshness has disappeared, refer to the fork brace installation instructions for proper and concise installation to eliminate the mis-alignment. If harshness still exists, your front end (wheel/forks) may be misaligned. Consult your service manual for proper wheel and fork alignment instructions.
6. Fork damper adjustments: Our testing has shown that bikes equipped with fork damping adjusters should be set at the minimum setting for freeway and surface street riding for maximum comfort. On motorcycles equipped with anti-dive or adjustable preload, we recommend starting at the minimum settings for each.
7. Fine Tuning:
 1. Preload: Spacer length can be decreased to lower the ride height and soften the ride or increased to raise the ride height and stiffen the ride. Adjust in 1/4" increments.
 2. Fork Oil: Viscosity can be increased to compensate for wear on high mileage vehicles or to increase damping. Increase in 5 weight increments (i.e. 'from 10 weight to 15 weight). Heavier fork oil will have more effect on rebound damping than compression damping.
 3. Air pressure: Add air only if excess bottoming occurs or to suit your' particular riding requirements. Remember though that air pressure can cause for "sticktion" which tends to contribute to a harsh ride on small bumps and freeway expansion joints.

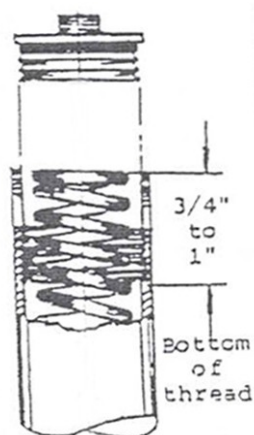


Fig 1

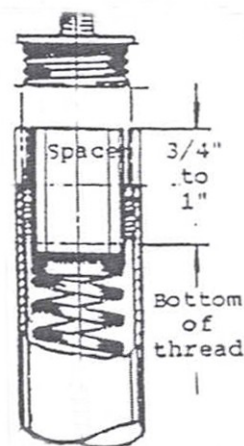


Fig 2