



CUSTOM SIZING AN AMERICAN V-TWIN THROTTLE CABLE

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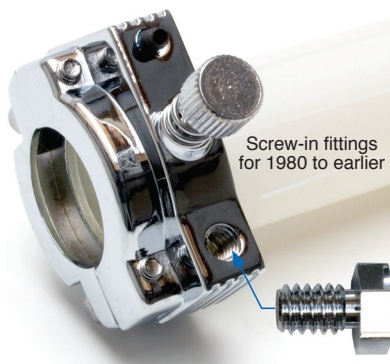
Motion Pro stocks a huge number of American V-Twin cables and often times we have the right cable for the customer in stock and ready to ship. If we do not stock the correct cable, our custom cable shop can make just about any cable configuration that a customer might need. There are many different variations in cables and getting the correct cable for the customer is our top priority.

Identifying the correct specifications for an American V-Twin throttle cable can be bit of a detective game if the customer does not know exactly what they need. In order to determine the right specifications for a throttle cable we need to know what type of throttle and carburetor is being used, how long the cable needs to be and what type of elbow is needed so it can be routed properly.

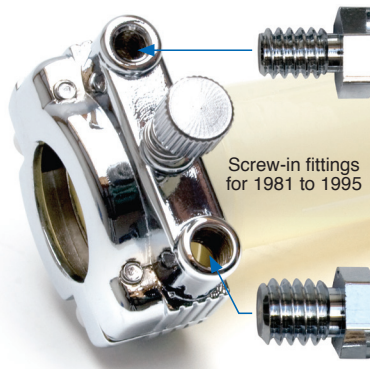
The first thing we need to determine is what type of throttle assembly is being used. Is it a single-cable pull only twist throttle or a push-pull using two cables? If it is a single cable pull only throttle, what is the thread pitch of the fitting that goes into the pull throttle assembly? Is it 1/4-20 or 5/16-18? Early model OE style pull-only throttles had a 1/4-20 thread pitch. This design was stock on 1980 and earlier H-D® models. However, many aftermarket pull only throttle assemblies have a 5/16-18 thread pitch. This was done to allow the use of OEM replacement pull cables designed to fit 1981-1995 H-D® models.

If it's a dual cable push-pull throttle – does the throttle have a screw in fitting or the snap in style? Push-pull screw in throttle assemblies were used on H-D® models from 1981-1995 and have a 1/4-20 thread pitch on the idle cable and 5/16-18 thread pitch on the pull cable. Push-pull snap in throttle assemblies are used on H-D® models from 1996 to present.

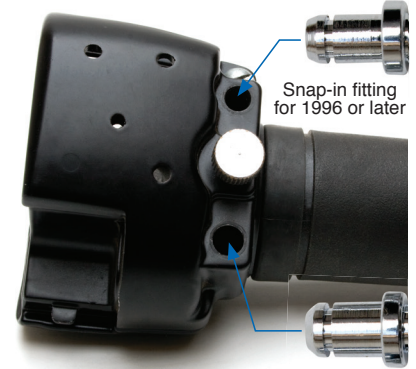
1980 to earlier Pull Only Type-Throttle



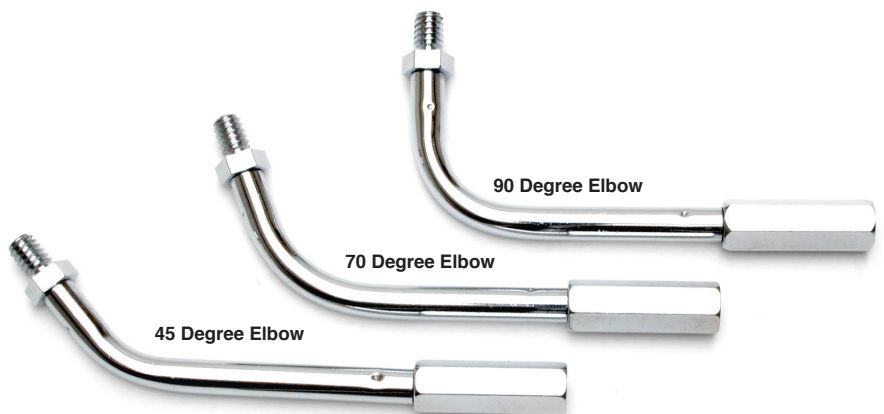
1981 to 1995 Push/Pull Screw-in Type-Throttle



1996 to Later Snap-In Push/Pull Type-Throttle



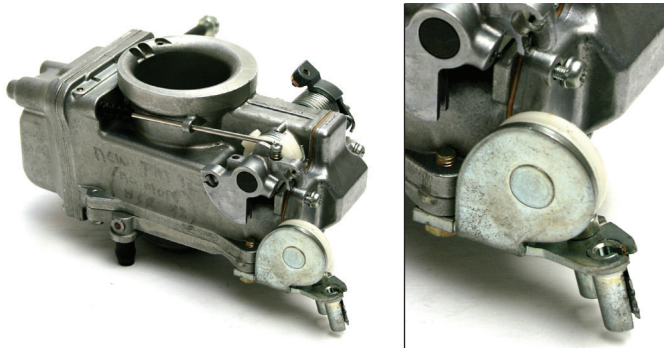
With the throttle identified the next item to identify is what bend is needed for the throttle elbow. Motion Pro stocks American V-Twin throttle cables elbows in 90, 70, and 45 degree bends. 90 degree elbows are used mostly on Dyna® and Softail® models, 70 degree elbows are used on bagger models, and 45 degree elbows are used mostly on Sportster® models. Any of these bends can be used on any of the throttle reference in paragraph 3, this part comes down to what the best fit for the bike is.



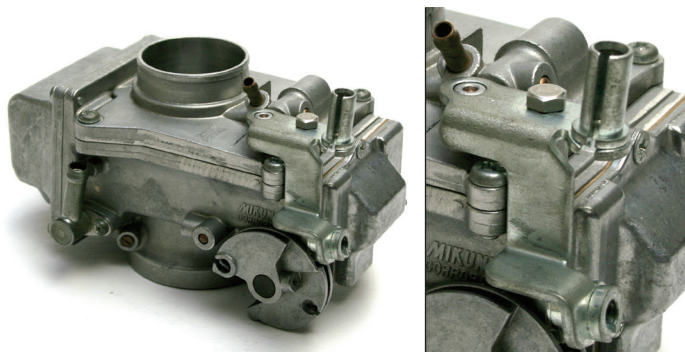
Once the throttle and elbows have been identified the next thing to confirm is what specific carburetor is on the machine. While most of the carbs used share the same cable components, identifying the correct carburetor is critical for identifying the proper cable.

If it's a Mikuni carb, it needs to be confirmed which Mikuni carb is being used. While the Mikuni HSR carb is the most common, there are two different designs of this carburetor. Is it an old or new style Mikuni HSR carb? Mikuni introduced the new style HSR carb about 12 years ago and designed it to be used with the stock throttle cable found on 1992 and later big twin CV carburetors. The new style Mikuni HSR carbs will have a white plastic wheel that the throttle cable inner wire wraps around and is located on the right side of the carburetor. The old style Mikuni HSR does not have the white plastic wheel, and the throttle cable bracket is located on the left side of the carburetor. There are other Mikuni carbs that are used on American V-Twin applications, they're usage has slowed considerably, like the Mikuni HS40 (TM40-6) and Mikuni VM round slide carbs.

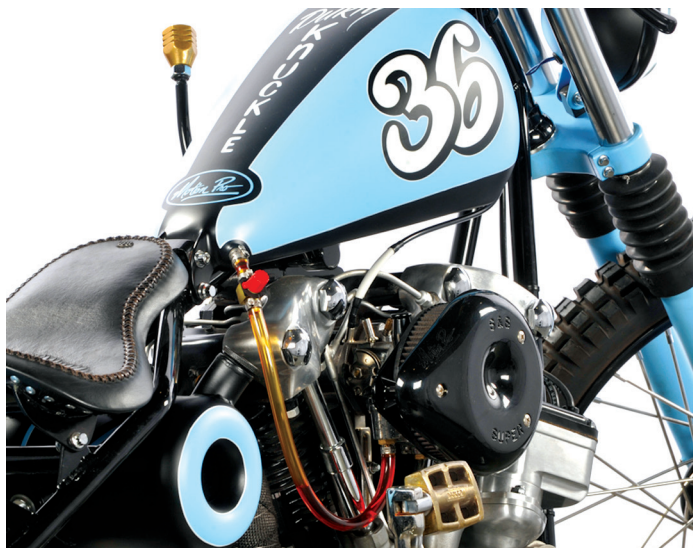
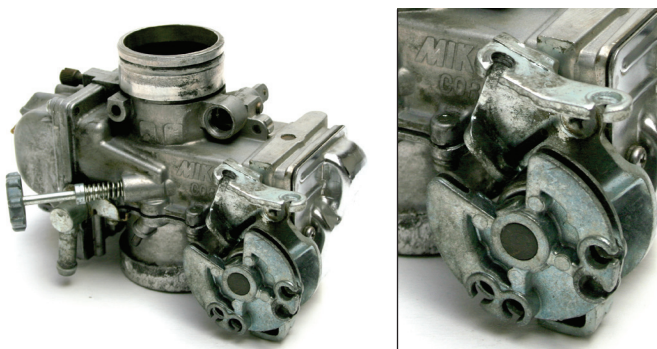
New Mikuni HSR-42
1992 & Later Big Twin CV Free Lengths



Old Mikuni HSR-42/45

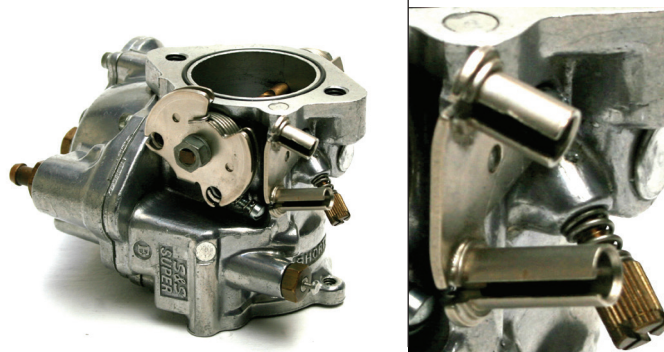


Mikuni HS-40
Many Metric and V-Twin Applications

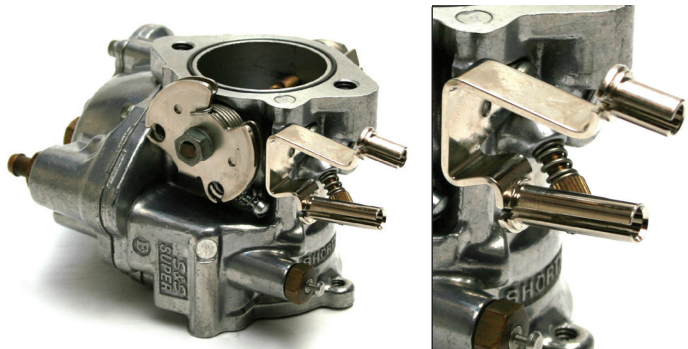


If it's an S&S carb, it's generally going to be a Super E or G model and we just need to verify if the carb has the tall or short bracket. In 2000, S&S started providing their carbs with two cable brackets. The shorter bracket was designed for 1981-1989 big twin model applications carbs and will generally work with stock cables for these machines. The tall bracket was designed to be used with the stock cables found on 1990 and later big twins with a CV carburetor. S&S offers other carbs like the Super B and Super D. The Super B carb uses a set screw to hold the cable inner wire and does not require a cable with a defined free length. Motion Pro rarely gets requests on machines using Super B carbs because a replacement cable for these carbs can easily be made by finding a cable with the correct throttle elbow fittings and the correct housing length and then cutting the wire fitting off the carb side of the inner wire.

S&S Super E with Short Bracket
Many V-Twin Applications

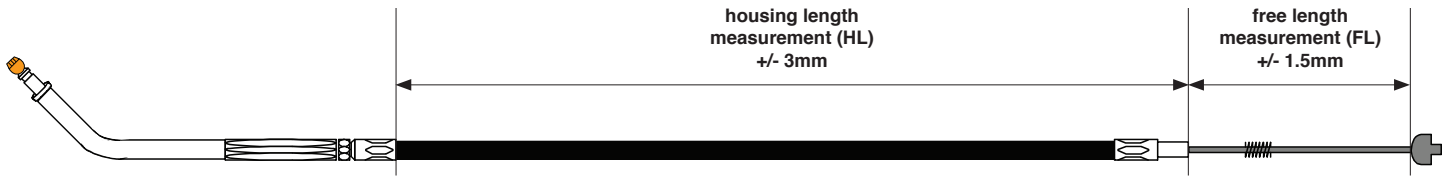


S&S Super E with Tall Bracket
Many V-Twin Applications



With the carburetor, throttle and elbows identified the only thing left is to confirm the housing length. This needs to be determined by the individual working on the bike. This can't be determined with any confidence by supplying handlebar and riser information; there are just too many variables. The cable needs to be long enough to allow for proper routing and allows the handlebars to be turned lock to lock without tensioning the cable. Also, the customer will not want the cable to be too long as such that it interferes with the operation of the bike and or other cables and wiring.

Our convention for measuring V-Twin throttle cables is to measure the housing length, including the housing end fittings that are straight with no bends, excluding the elbow fitting that goes into the throttle. The cable housing is the exterior vinyl portion of the cable. Motion Pro throttle elbows are 4 inches long, but not all manufacturers elbows are the same length. The illustration below shows the way we measure housing length.



The easiest way to determine the correct cable length is to determine the length of the existing cable. If the customer needs a longer than stock cable the best way to determine the additional length needed is to leave the existing stock cable installed into the carburetor and routed properly and then measure the additional length needed to reach the throttle and allow for proper movement of the handlebars.

With all the above information the next step is to see if we have an off the shelf cable that meets all the necessary criteria. An off the shelf cable will cost less than a custom made cable and can be shipped right away. If all the information is confirmed and it's determined no cable is available off the shelf we can always custom make it. Custom cable builds generally take at least a week or more to complete.

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