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REF: Tools - 111

Cheater Bar, Breaker Bar and General Leverage Assistance

Cheater Bar

Cheater bars are usually used to break free threaded pipe, screws, bolts, and other fasteners too difficult to remove with a ratchet or pipe wrench alone.

They are also commonly used to operate valves.¹⁾

The cheater bar allows higher torque with the same force by: torque = radius \times force

A cheater bar (snipe, a pipe extension or an extension pipe) is slipped over the handle of a wrench to extend the length of the handle.

The extra length adds leverage and allows you to pull with the same force to add extra turning power to the wrench.

A cheater bar is generally not needed while using a torque wrench on a Sportster.

The wrench itself is designed for the intended torque range that it works in.

There is change of torque applied to the wrench if using a cheater bar on it.

You will lose 'feel' when using one. If using it on a clicker wrench, you can easily over-torque before the wrench clicks.

Avoid using a cheater bar on a torque wrench unless it's necessary.

The bar over the end can move the set value on a clicker wrench while you're using it.

Problems with using cheater bars: ²⁾

OSHA, MSHA, CCOHS, EU-OSHA, etc. strictly prohibit or discourage the use of cheater bars due to the extreme risk of injury or death to users and bystanders.

If the component frees suddenly, you can become a projectile propelled into whatever is in the "line-offire".

This could (and has) resulted in falls, impacts, punctures, and other injuries.

The cheater bar itself can become a catapult.

Heat is produced whenever a bolt is tightened or loosened. The faster you turn, the more the heat. A cheater bar can quickly heat (or overheat) a fastener or the opposing threads where the fastener resides. Last update: 2020/05/24 21:26





Breaker Bar (pull handle)

A breaker bar is a lengthy, non-ratcheting tool intended for use with sockets. It works on the same principle of length as a cheater bar.

The primary function of this long tool is to generate more torque than a standard socket wrench when you apply the same amount of force.

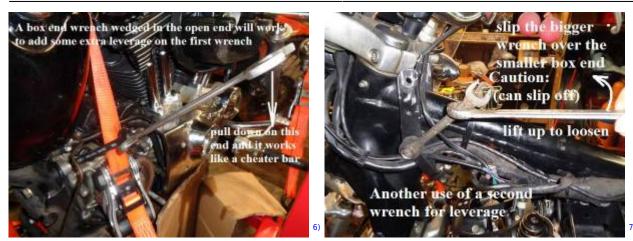
Breaker bars can range from 10"-38.5" in length.

These tools are useful for turning sockets and loosening any nuts and bolts that are tight or have become stuck. They are much more safer than a cheater bar.



Double Wrench Method

You can wedge a bigger open/box end wrench on a smaller one to gain extra leverage. This works on the same principle of extending the pull point for extra length/leverage. Caution: The leverage wrench can slip with busted knuckles or other injury to follow.



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1) , 2) https://en.wikipedia.org/wiki/Cheater_bar 3) , 4) , 5) , 6) , 7) photo by Hippysmack

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