| 78810 Torque Levels With Your Impact | |
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| **Explanation** | The 78810 Torque Limiting Extension set is calibrated from the factory and therefore it is static. Because the torque level is determined when machined it cannot change. Therefore the user must calibrate how they use and what they use with the extensions as below to obtain the desired torque level. |
| 1. Torque | Use a torque wrench to torque a lug nut to the level you wish to limit torque to with the adapter. Mark with chalk or a paint pen on the lug nut and the face of the hub or wheel at the same location. Remove the lug nut with a breaker bar. Select the 78810 extension whose rating matches closest to the level you torqued the lug nut to. Install your impact socket and attach to your impact gun. |
| 2. Test | Set your impact to the middle power level and impact the lug nut on with the torque limiting extension until it appears to stop rotating (usually 1-2 seconds). Visually check if the marks on the lug nut and hub or wheel face align. If the mark is not rotated far enough, remove the lug nut, increase the power level and perform the test again until the power level of your impact reliability hits the mark you made. If the mark rotates too far do the opposite. Once determined, always use this air pressure and power setting. |
| 3. Adjust | If in the less common instance that your impact gun at its lowest power setting is too high or at the highest power setting too low and you are still unable to align your test marks closely enough and adjusting air pressure supply is not an option consider these solutions.<br>A) Modify the mass of your extension. This can be done by choosing a different impact socket. For instance deep vs shallow. More mass will increase the calibration torque level of the whole tool.<br>B) Use a different impact gun if available. Power level has some effect, but IPM (impact per minute) is the primary determinant of how close the extension will perform to its stated value from the factory. An impact gun with a higher IPM will not allow a torque limiting extension to rotate back and fight against the impact gun as successfully.<br>C) Ensure you are not over impacting the extension (i.e longer than around 2 seconds) |
| 4. Select | Depending on the impact gun and/or socket you need to use to get the job done on a daily basis, if the torque range you wish to hit is still not obtainable you may need to use a different torque extension from the set. For instance if through testing you determine your 100ft/lb stick is always 10ft/lbs low with your set-up it would not be uncommon to need to use the 110ft/lb extension from then on as long as the results are consistent. Consistent repeatable results are the intention of the product in order to ensure it does not go over a certain value, not specific torque levels (which should be set with a torque wrench). |
| 5. Always Finish W/ A Torque Wrench | As mentioned above, this set is designed solely to **LIMIT** torque. It is not designed to hit a specific torque range of your choosing, this task should always be done with a torque wrench. For example, if you're wishing to torque a vehicle's lug nuts to 100ft/lbs, the 80 or 90ft/lbs extension might be a good choice to quickly install the wheels on the car and ensure in doing so you will not exceed the recommended torque level. Then once the car is on the ground, torque the lug nuts to the final 100ft/lbs with a calibrated torque wrench.<br>Using this tool as the only method to fasten bolts and nuts with a required torque value is not recommended and the user does so at their own risk. |