

Thread Gage Maintenance, Use, and Storage

Carrying out proper maintenance, use, and storage procedures will ensure longer life for thread gauges.

Part dimensions to be gaged should be cleaned and burr free to prevent gaging interference. Grit and part chips which become lodged in thread gages will create scratches and wear on the flanks of threads. Various materials such as aluminum and castings are abrasive and will tend to wear out gages more quickly than other types of materials. Finer pitch and smaller diameter thread gages tend to wear quicker than larger and coarser pitch gages and have less gage tolerance as well. For thread gages, it only takes a small amount of wear to have a significant effect on the pitch diameter. The wear on each flank angle is multiplied by almost 4 times to determine the total impact of wear on the pitch diameter. 50 microinches or 1 micron of wear per thread flank will impact the measured size by .0002" which can be the total tolerance of many thread gages.

Thread gages should be turned slowly and gently into or onto the threaded part being checked. Forcing gages will result in faulty gaging and the possibility of damaging both the part and gage. Spinning thread ring gages or thread plug gages onto or into parts will create greater friction and increased wear thus reducing the life of the gage.

Using hard chrome plated thread gages can extend the wear life by more than 100% over standard tool steel gages which can provide dramatic savings on replacement costs. Thread Check supplies all standard size thread plug gages in inches and metric up to 1 ½ or 39mm in diameter in hard chrome at no additional cost. Other options for coatings and alternate material for thread

gages include tin coat, carbide, alternate steels and even ceramic. There are pros and cons to utilizing various coatings and materials in gage applications which should be discussed with your gage maker. For example, gages made of carbide and ceramic are extremely durable and have excellent wear properties but can be extremely brittle and break and chip if not handled carefully. These gages are typically priced many times over the cost of standard tool steel material.

A thin coating of gage lubricant will help reduce friction from gage to part.

Proper training of personnel involved in the use of gages will pay dividends on ensuring the gages are treated with care and last longer. Review the current inventory of gages and look for visual signs of nicks, dents and scratches on gage members and handles. Evidence of this may suggest the gages are not being handled properly.

Protecting gages from excessive heat, humidity, moisture and corrosive chemicals will extend the life of your gages. After use, gages should be cleaned and recoated with a thin-film rust preventative or dipped in an easy to peel oil-based waxed coating and stored properly.

Gages should be periodically inspected and calibrated to assure accuracy. Go member gages tend to wear quicker with normal use. NOGO gages will wear on the ends that receive the greatest usage. Frequency of inspection and calibration should be dependent on such factors as the amount of usage, part and gage material, tolerance, and quality procedures.

Feel free to contact us by phone or email if you have any questions or requirements regarding this topic.

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