



**ATG9755—5-in-1 Gauge**



# 5-in-1 Gauge

for inspecting wheel end components

This gauge is designed to inspect hub-pilot wheel systems to include: M22 x 1.5 wheel studs, wheel nuts, and disc wheel bolt holes. Precision machined, coated to prevent rust and is not affected by the day-to-day work environment. In the hands of a trained technician, the 5-IN-1 gauge is designed to enhance current industry inspection methods and best practices.



**WARNING**

**WARNING:** The use of heat on any wheel end component may cause property damage, injury or death. Immediately replace any component that was heated in an attempt to separate the components. Follow all industry recommended practices and safety procedures.



**WARNING**

**WARNING:** Federal OSHA Regulations require all employers to make sure their employees who service rims/wheels and wheel ends understand the safety information and procedures required. Do not let your employee's service rims/wheels and wheel ends unless they are thoroughly trained and completely understand all safety information and procedures.



**WARNING**

If you are a service technician do not service rims/wheels and wheel ends unless you are thoroughly trained and completely understand all safety information and procedures.

**WARNING:** Do Not attach this tool to your ignition key ring, the weight may cause damage.



Figure 1

### 1. Inspecting studs for Under Diameter

Using the 5-in-1 gauge inspect the stud for under diameter by inserting the gauge over the threaded end of the stud. If the stud enters the gauge more than the first 4-5 threads, replace it and contact the stud manufacturer for dimensional specifications.

### Inspecting hub-pilot wheel nuts

#### 2. Inspecting for bell mouting



Figure 2

With the key chain already removed, begin by turning the gauge upside down inserting it into the top of the nut at the threads, the scribe line on the outside of the gauge should not enter the threaded area of the nut. Remove any nut from service where the gauge enters past the scribe line and contact the nut manufacturer for dimensional specifications.

#### 3. Inspecting for over diameter



Figure 3

With the key chain still removed, insert the gauge into the bottom of the nut. Again, the scribe line should not enter the threaded area of the nut. Remove any nut from service where the scribe line enters past the threads (not flange washer) and contact the manufacturer for dimensional specifications.



Figure 4

### 4. Inspecting disc wheel bolt holes for elongation or foreign material

Insert the 5-in-1 gauge into the bolt hole inspecting for elongation and foreign material. If elongation or distortion is found, replace the wheel. If foreign material is found, clean the bolt holes.

### 5. Inspecting disc wheel bolt holes for diameter



Figure 5

Place the large end of the gauge on each bolt hole. It will not pass through if it meets SAE J694/ISO4107 sizing. It is possible to have a larger bolt hole, if there is no elongation or distortion, contact the manufacturer for specifications before returning the wheel to service.

