

CAM GAUGE PINS- 0.105” & 0.108”



INSTRUCTION SHEET

Purpose of this tool is to make sure you're cam gear and pinion gear are the correct sizes for each other. It's important to choose the correct pinion gear to match with cam gear. If these gears aren't properly matched, problems can arise.



- If they are too loose, then there will be too much gear lash is present and you will hear a clicking noise (can sound a lot like bad lifters) from “slapping” contact between the 2 gears. This is an annoyance and should be avoided, but it doesn't generally cause a problem other than the noise.
- If the gears are too tight however, you will generally have a fairly loud “whining” noise and you risk irregular wear to components like the gears, cam bearing, and the bushings in the cam cover. eliminate the clicking, and have a slight whine, do the following:
- When the correct cam and pinion gears are used, there will be a slight whine and you'll get a long service life out of the components.
- Pinion gears are color coded with a paint dot to indicate their size, although these gauge pins will allow you to verify their size (especially important on older/worn components or if the paint dot is no longer visible)

How to use this tool:

1. With cam or pinion gear clean, hold gauge pins in place with a rubber band. Put each pin in opposite sides of the gear.
2. Using a quality micrometer, measure the distance across the pins.
3. Match your micrometer reading with the chart shown below. Use the correct cam gauge pins and the correct chart for your bike's year.

Example:

- You have a 1976 shovel- so make sure to use the 0.105” gauge pins and look at the correct chart on the back of this sheet for your bike.
- The cam gear you are checking measures between 2.7675 - 2.768
- The ideal pinion gear you should choose would have a red paint dot on it.



Tips:

- Rubber bands can help hold the pins in place while you take the measurement
- Gently clamping your micrometer in a vise can make it easier to hold everything



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1954-1977 big twin models (measure with 0.105" pins)

<u>Pinion Gear Size</u>	<u>Cam Gear Size</u>	<u>Color Code</u>
1.4490-1.4485	2.7665-2.7670	Orange
1.4480-1.4475	2.7675-2.7680	Red
1.4475-1.4470	2.7680-2.7685	Blue
1.4470-1.4465	2.7685-2.7690	Green
1.4465-1.4460	2.7690-2.7695	White
1.4460-1.4455	2.7695-2.7700	Brown
1.4455-1.4450	2.7700-2.7705	Yellow

Note: 1954-1977 cams have no groove on gear face

1978-1989 models (measure with 0.105" pins)

<u>Pinion Gear Size</u>	<u>Cam Gear Size</u>	<u>Color Code</u>
1.4751-1.4756	2.7324-2.7334	Orange
1.4745-1.4751	2.7334-2.7344	White
1.4737-1.4745	2.7344-2.7354	Yellow
1.4729-1.4737	2.7354-2.7364	Red
1.4721-1.4729	2.7364-2.7374	Blue
1.4715-1.4721	2.7374-2.7384	Green
1.4710-1.4715	2.7384-2.7394	Black

Note: 1978-1989 cam gears have one groove on gear face

1990-1999 models (measure with 0.108" pins)

<u>Pinion Gear Size</u>	<u>Cam Gear Size</u>	<u>Color Code</u>
1.4853-1.4850	2.7472-2.7476	Orange
1.4849-1.4846	2.7477-2.7481	White
1.4845-1.4842	2.7482-2.7486	Yellow
1.4841-1.4838	2.7487-2.7491	Red
1.4837-1.4834	2.7492-2.7496	Blue
1.4833-1.4830	2.7497-2.7501	Green
1.4829-1.4826	2.7502-2.7506	Black

Note: 1990-1999 cam gears have 2 grooves on gear face