CDX Using a feeler gauge

Objective:

Show the correct choice and use of feeler gauge sets.

This activity sheet contains:

- Step-by-step instructions for completing the workshop procedure.

Personal safety:

Whenever you perform a task in the workshop you must use personal protective clothing and equipment that is appropriate for the task and which conforms to your local safety regulations and policies. Among other items, this may include:

- Work clothing - such as coveralls and steel-capped footwear.
- Eye protection - such as safety glasses and face masks.
- Ear protection - such as earmuffs and earplugs.
- Hand protection – such as rubber gloves and barrier cream.
- Respiratory equipment – such as face masks and valved respirators.

If you are not certain what is appropriate or required, ask your supervisor.

Safety check:

- Never use feeler gauges on operating machinery.
- Feeler gauges are strips of hardened metal that have been ground or rolled to a precise thickness. They can be very thin and will cut through skin if not handled correctly.
- Make sure that you understand and observe all legislative and personal safety procedures when carrying out the following tasks. If you are unsure of what these are, ask your supervisor.

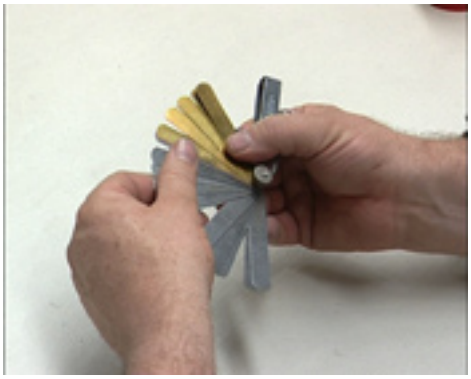
Points to note:

- There are many types of feeler gauges, each with a specific application.
- Feeler gauges usually come in sets with a number of blades. The thickness of each blade is marked in thousandths of an inch and hundredths of a millimeter. A marking of 0.040 indicates the feeler is 40 thousandths of an inch thick. It may also indicate a measurement of 1.02 millimeters. A feeler marked 0.005 indicates the thickness is 5 thousandths of an inch. It may also indicate 0.12 millimeters.
- Some sets contain feelers made of brass. These are to take measurements between magnetic components.
- When measuring a spark plug gap, it is preferable to use wire feeler gauges. These feelers use accurately machined pieces of wire instead of metal strips.
- If the feeler gauge feels too loose when measuring a gap, select the next size larger and measure the gap again. Repeat this procedure until the feeler gauge fits snugly in the gap. If the feeler gauge is too tight, select a smaller size until the feeler gauge fits snugly in the gap.

1. Select correct type of gauge set

Select the appropriate type and size of feeler gauge set for the job you're working on.

2. Examine the wires or blades



Spread out the wires or blades and examine the markings on them.

They indicate the size of the feeler. The measurements may be in inch or metric sizes – or both. They should also be clean, rust-free and undamaged, but slightly oiled for ease of movement.

3. Measure gap

Select the part you wish to check, and make sure it's clean.

Choose one of the smaller wires or blades, and try to insert it in the gap on the part.

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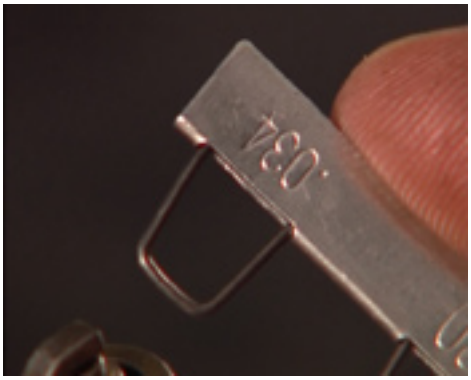
3. Measure gap (continued)

If it slips in and out easily, choose the next size up.

When you find one that touches both sides of the gap, and slides with only gentle pressure,



then you've found the exact width of that gap.

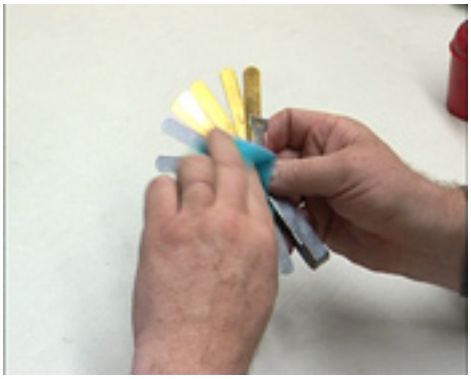
4. Keep gauges oiled

The oily film on the blade helps to minimize friction. So if you move the gauge and it feels tight, then you've got the wrong measurement.

5. Check the specifications

Read the markings on the wire or blade, and check these against the manufacturer's specifications for this component. If gap width is outside the tolerances specified, refer to your supervisor.

6. Clean and store



Finish the job by cleaning the feeler gauge set with an oily cloth to prevent rust when you put the set away.