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How do I know
my gauges are correct?

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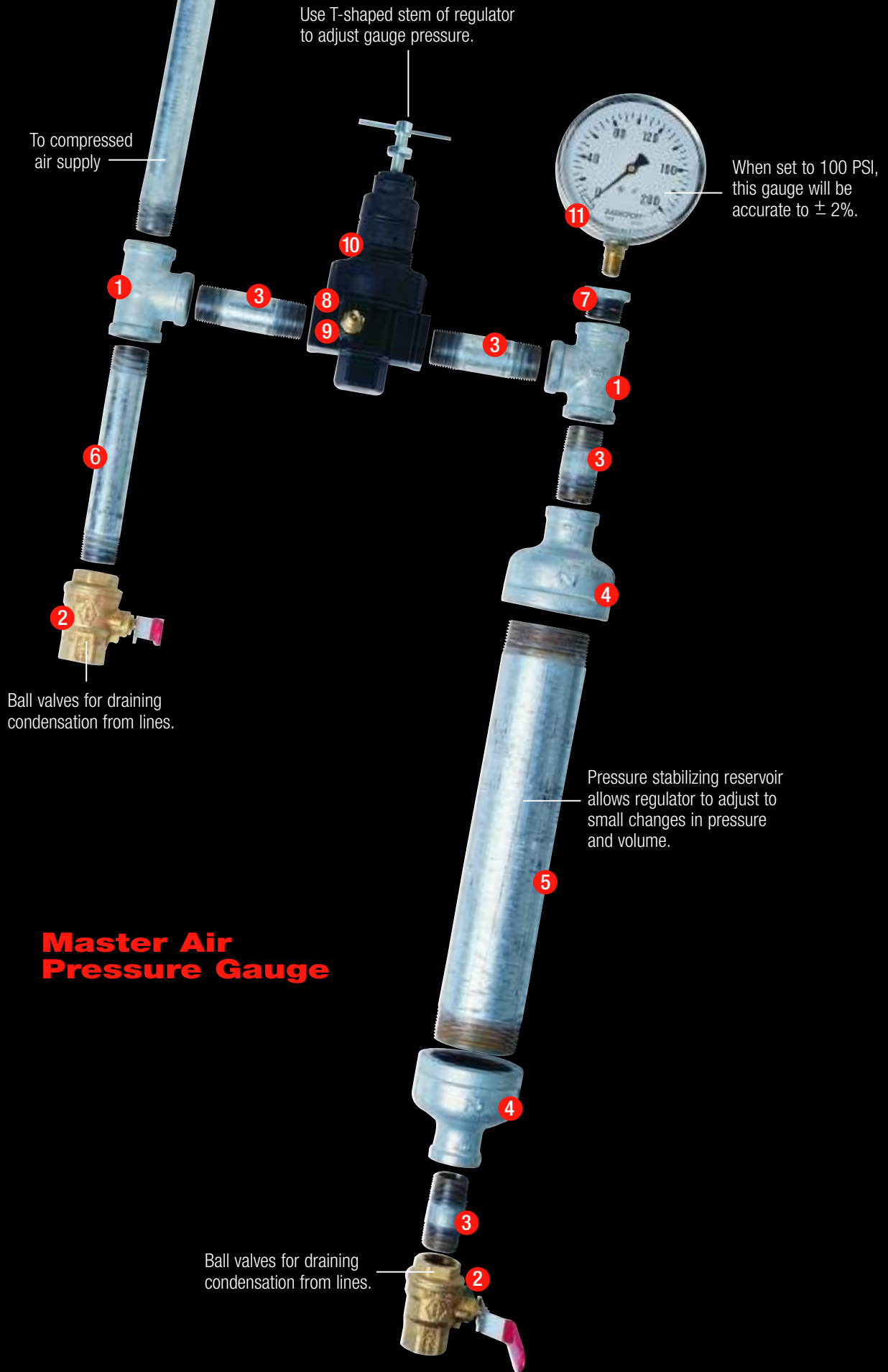


The Tire Doctor Responds:
Use a master air pressure gauge. With one of these in your shop, you can check your stick and dial gauges regularly to make sure you're inflating tires to correct, consistent pressures. We asked our friends at Ryder System, Inc. about their master gauges, and the one we describe was assembled using their instructions.

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What parts will we need?

Assuming you use 3/4-inch galvanized pipe for your compressed air supply, here's a bill of materials:

Quantity	Description	Remarks
1	2	3/4" tees
2	2	3/4" ball valves
3	4	3/4" nipples Length not critical
4	2	3/4" - 2" bell reducers
5	1	2" pipe Length not critical
6	1	3/4" pipe Length not critical
7	1	1/4" - 3/4" reducing bushing
8	1	1/8" - 1/4" reducing bushing
9	1	Schrader-type air tank valve Control Devices, Inc., Grainger No. 1X361 or equivalent
10	1	Regulator 250 PSI max., Grainger No. 4ZM23 or 6B208 or equivalent
11	1	Gauge Ashcroft 1008, 0-200 PSI, liquid-filled, Grainger No. 2C454 or equivalent

Why the two ball valves?

The ball valves are used to drain condensed water from the incoming and pressure-regulated air lines. The additional length of pipe above the valves serves as a reservoir for condensation.

The 2-inch pipe on the right also provides a reservoir to allow the regulator to adjust smoothly to small changes in air pressure and volume.


How do we use the gauge?

Set the regulator to a convenient pressure (probably 100 PSI for most shops). The regulator manufacturer recommends that you always increase pressure from a lower setting to your final setting — for consistent results.

Then, check your portable stick or dial gauge by applying it to the Schrader-type valve. If the two gauges don't match, the portable one is probably defective and should be discarded.

The master gauge shown here has a rated accuracy of ± 2 percent in the middle of its range. That is, if it reads 100 PSI, the actual pressure will be between 98 and 102 PSI.

How often should we check gauges?

Some shops check theirs once a week, but the most important thing is to do it on a regular schedule. And, to replace defective gauges immediately. 

Editor's Note: Our thanks to Ryder System, Inc. for sharing their master gauge design and specifications with us.