

Typical set-up for checking WHEEL runout

FIGURE 2

Over 300 Precision Measuring & Specialty Tools from

- Micrometers
 - Rod & Tubular Types
 - Inside
 - Outside
 - Depth
 - Sets
- Dial Indicators & Test Sets
- Magnetic Bases
- Machinists Tools
- Dial Calipers
- Electronic Digital Calipers
- Torque Wrenches
- Cylinder Bore Gages

Write for Catalog

Central Tools, Inc.

**456 Wellington Avenue
Cranston, Rhode Island 02910**

1-800-866-5287

Central Tools, Inc.
Your Automotive Measuring People

ROTOR RUNOUT and BALL JOINT GAGE

No. 6450 English 0-1"

No. 6451 Metric 0-30mm

No. 6634 High Precision 0-1"

No. 6624 Ultra Precision 0-.1"

No. 6629 Ultra Precision 0-2mm

No. 6627 English w/Roller Contact

No. 6644 High Precision w/Roller Contact

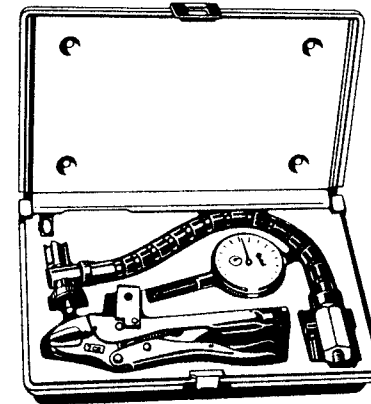
TIRE & WHEEL RUNOUT GAGE

(Also checks Rotor Runout and Ball Joints)

No. 6454 English 0-1"

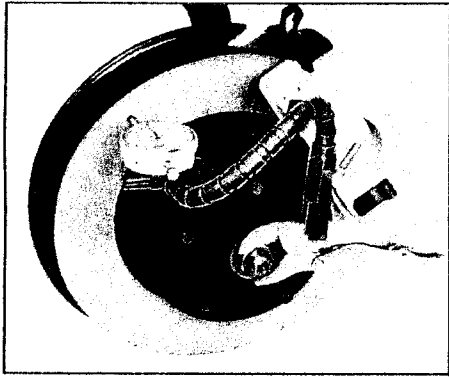
No. 6455 Metric 0-30mm

No. 6643 High Precision 0-1"



CENTRAL TOOLS, INC.

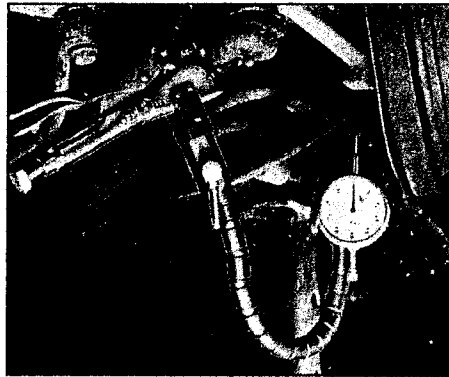
Cranston, Rhode Island 02910



TO MEASURE ROTOR RUNOUT

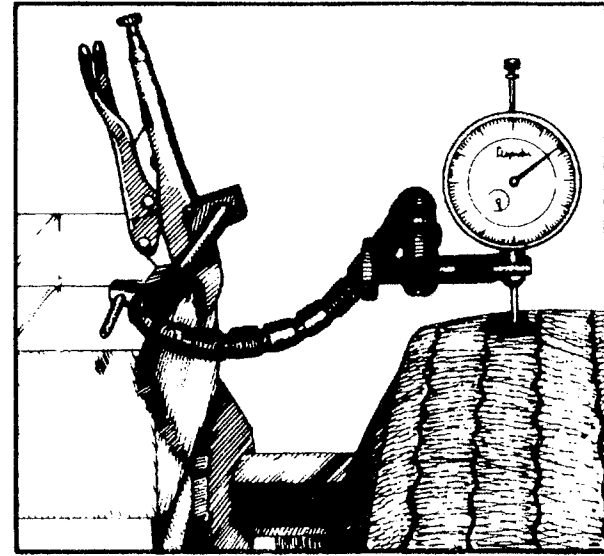
Remove the wheel and inner hub cap. Tighten the wheel bearing spindle nut carefully to remove wheel bearing play. Set up gage as indicated above and set indicator to zero.

It may be helpful to place a chalk mark on the outer edge of the rotor. Turn the rotor one full turn and note the maximum runout variation. For your specific make and model, consult manufacturer's specifications for maximum allowable runout.



TO MEASURE BALL JOINT WEAR

Refer to specification in manual. Set up the gage so that actual ball joint play is measured, as it exists between the spindle and the lower suspension arm. Illustration shows the holding pliers secured to the tie rod which will move up and down with the wheel. The indicator contact is positioned against the ball joint housing. This will give the movement between the spindle and lower arm, or actual amount of ball joint play. Before making a reading, the gage should be set to zero by rotating the bezel. Be certain that the vehicle is supported properly and only move the wheel enough to take up the ball joint play.



Typical set-up for checking TIRE runout **FIGURE 1**

SETTING UP

The flex-arm can be locked in any position by turning the lever at the base. This rotates a cam which puts tension on a cable that passes through the center of each joint.

If the arm will not lock in position, adjust cable length by turning the knurled nut located under the crosshead at the outer end of the arm. Do not over tighten the lever. This will weaken and eventually break the cable. A cable kit (4337) and replacement instructions are available.

To secure the indicator to the flex-arm, use the cross head screw, passing it through the lugged indicator back; or place the indicator stem bushing in the round end of the crosshead screw. The snap ring (4338) will prevent the indicator from falling out.

CHECKING TIRE & WHEEL RUNOUT

The tire & wheel runout gages are equipped with all components necessary for checking tire and wheel runout on any off-car dynamic balancing equipment. For checking radial runout, use the large diameter contact (4340), Figure 1. Roller contact (4213) is helpful for checking sidewalls and wheels (Figure 2).

For allowable radial and sidewall runout, check tire manufacturers specifications. If radial or sidewall runout is beyond specifications, it is recommended that the wheel be checked for excessive runout, as this can adversely affect the tire.

To set up the gage on your balancing equipment, secure the pliers to any convenient flange. Use of the 6" extension is often necessary. Before making the test, check all connections to be sure they are tight and rigid. Place chalk mark at starting point of tire and turn tire slowly one revolution while watching indicator for maximum runout. Indicator bezel should be rotated to set zero before turning the tire.

KIT	DIAL INDICATOR	RANGE	FLEX-ARM	LOCKING PLIER	SNAP RING	ROLLER CONTACT	1" DIA CONTACT	6" EXTENSION
6450	4344	0-1" (.001)	4333	4334	4338	-N/A-	-N/A-	-N/A-
6451	4392	0-30mm (.02)	4333	4334	4338	-N/A-	-N/A-	-N/A-
6634	4589	0-1" (.0005)	4333	4334	4338	-N/A-	-N/A-	-N/A-
6624	4582	0-.1" (.0001)	4333	4334	4338	-N/A-	-N/A-	-N/A-
6629	4583	0-2mm (.002)	4333	4334	4338	-N/A-	-N/A-	-N/A-
6627	4344	0-1" (.001)	4333	4334	4338	4213	-N/A-	-N/A-
6644	4589	0-1" (.0005)	4333	4334	4338	4213	-N/A-	-N/A-
6454	4344	0-1" (.001)	4333	4334	4338	4213	4340	4369
6455	4392	0-30mm (.02)	4333	4334	4338	4213	4340	4369
6643	4589	0-1" (.0005)	4333	4334	4338	4213	4340	4369