

Brake Rotor Specifications

I've pulled this data mainly from the Raybestos and Wagner catalogs. It covers both 84-87 and 88 setups. I also included the Grand Am rotor specifications for people with that upgrade.

Using This Workbook

Do not cut rotors below the "machine to" specification. Discard rotors that can't be turned clean without failing that limit.

Any rotor at or below "Discard At" thickness should be immediately scrapped!

This workbook is intended as a guide only. Recheck all numbers before cutting rotors.

You will need a dial gauge with mounting set and a micrometer to use these measurements.

The reason "Machine To" is greater than "Discard At" is to allow the rotor to have a useable life after cutting.

Excess Lateral Runout will accelerate wear of the caliper and hardware. It can cause noise but often will not feed back thru the pedal.

Excess Variance From Parallelism will usually feed back thru the pedal. It may or may not cause noise.

When checking lateral runout, make sure there's no junk between the hub and rotor. Rotors should be held on the hub with at least 2, preferably 3, lug nuts. It's a very good idea to double-check this on a brake lathe before actually cutting the rotor.

Brake/Wheel Service, 84-87 Fiero, All		Notes
Rotors	Inch	
Minimum Thickness; Machine To; Front	0.386	Yes, the rear rotor really is thicker than the front!
Minimum Thickness; Machine To; Rear	0.440	
Minimum Thickness; Discard At; Front	0.374	
Minimum Thickness; Discard At; Rear	0.430	
Lateral Runout T.I.R. (Total Indicator Reading-1 Revolution); Front	0.004	
Lateral Runout T.I.R. (Total Indicator Reading-1 Revolution); Rear	0.004	
Max. Variance From Parallellism; Front	0.0005	
Max. Variance From Parallellism; Rear	0.0005	
Pads	Inch	
Minimum Lining Thickness Above Rivets or Plate; Front	0.062	
Minimum Lining Thickness Above Rivets or Plate; Rear	0.062	
Caliper Bolts	Ft-Lbs	
Mounting Bolt Torque (Ft-Lbs); Front	21-35	
Mounting Bolt Torque (Ft-Lbs); Rear	21-35	
Wheel Lugs or Nuts Torque (Ft-Lbs); Front & Rear	Ft-Lbs	
Exc w/Aluminum Wheels	80	
w/Aluminum Wheels	105	
Source: Raybestos		
Groove Depth, Max, (Inch)	0.006	
Source: http://www.motorage.com/edindex/089730.HTM		

Brake/Wheel Service, 88 Fiero, All

Rotors	Inch
Minimum Thickness; Machine To; Front	0.702
Minimum Thickness; Machine To; Rear	0.702
Minimum Thickness; Discard At; Front	0.681
Minimum Thickness; Discard At; Rear	0.681
Lateral Runout T.I.R. (Total Indicator Reading-1 Revolution); Front	0.003
Lateral Runout T.I.R. (Total Indicator Reading-1 Revolution); Rear	0.003
Max. Variance From Parallellism; Front	0.0005
Max. Variance From Parallellism; Rear	0.0005
Pads	Inch
Minimum Lining Thickness Above Rivets or Plate; Front	0.030
Minimum Lining Thickness Above Rivets or Plate; Rear	0.030
Caliper Bolts	Ft-Lbs
Mounting Bolt Torque (Ft-Lbs); Front	74
Mounting Bolt Torque (Ft-Lbs); Rear	74
Bridge or Guide Bolt; Pin or Key Screw Torque (Ft-Lbs); Front	74
Bridge or Guide Bolt; Pin or Key Screw Torque (Ft-Lbs); Rear	74
Wheel Lugs or Nuts Torque (Ft-Lbs); Front & Rear, all	100

Source: Raybestos

Groove Depth, Max, (Inch)	0.006
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Source: <http://www.motorage.com/edindex/089730.HTM>

Brake/Wheel Service, 88 Grand Am, All

Rotors	Inch
Minimum Thickness; Machine To; Front	0.830
Minimum Thickness; Discard At; Front	0.815
Lateral Runout T.I.R. (Total Indicator Reading-1 Revolution); Front	0.004
Max. Variance From Parallellism; Front	0.0005
Pads	Inch
Minimum Lining Thickness Above Rivets or Plate; Front	0.030
Caliper Bolts	Ft-Lbs
Mounting Bolt Torque (Ft-Lbs); Front	38
Wheel Lugs or Nuts Torque (Ft-Lbs); Front & Rear	Ft-Lbs
All	100

Source: Raybestos

Groove Depth, Max, (Inch)	0.006
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Source: <http://www.motorage.com/edindex/089730.HTM>

84-87 Fiero Front Wheel Bearing

Warning: Tapered roller bearings are used on all series vehicles and they have a slightly loose feel when properly adjusted. A design feature of front wheel tapered roller bearings is that they must never be preloaded. **Damage can result from preloading.**

Source: 87 Service Manual, Section 3C, Front Suspension (GM said Notice. Ogre made it a Warning.)

To Install/Adjust

Use Wheel Bearing Grease rated as Disk Brake is ok. Many types of grease, included some wheel bearing grease, won't take heat that disk brakes can generate.

There are two holes in the spindle for the cotter pin. Back-off the nut to first hole that the nut uncovers.

Step	Do
1	Tighten Spindle Nut to 12 Ft-Lbs
2	Back-Off & Retorque to Hand Tight
3	Lock or Back-Off & Lock; 1/2 Flat of nut at maximum

Source: Wagner (Ogre made it for easy reading.)

See also Service manual, section 3C, Front Suspension.

Dust Cap

Install the Dust Caps without wrecking the cap; use a piece of 1.5 inch Schedule 40 PCV pipe and bump the pipe with side of hammer.

Last Revised

7/20/2011 Add Dust Cap Note