

**Subject:** Brake Pads Without Asbestos

**Part Identifier**  
4636/4638

**Number**  
8810

All Porsche cars from model year 1989 on up are equipped with asbestos-free brake pads. Asbestos-free brake pads are also available for cars prior to 1989 model year.

This Technical Bulletin contains information on:

- Identification of asbestos-free brake pads
- Asbestos-free brake pad replacement instructions
- Hand brake adjustment with asbestos-free brake shoes
- Asbestos-free brake pad application charts

#### 4 Cylinder Cars (water cooled)

Color coding and semicircular cutouts (Fig. 1) in the area of the retaining pin holes identify asbestos-free brake pads.

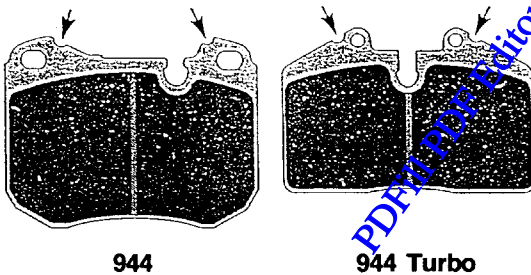


Figure 1

Arrows show location of semicircular cutouts.

#### WARNING:

**Mixed installation of brake pads (with and without asbestos) on a vehicle is not permissible.** When installing asbestos-free brake pads on cars prior to the 1989 model year, both front and rear pads must be replaced.

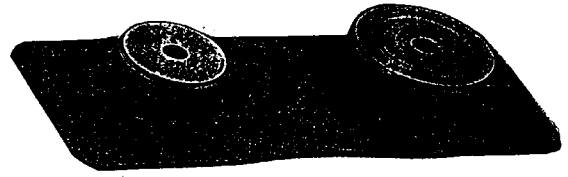


Figure 2

#### 944 Turbo and Turbo S

944 Turbo S model year 1988 and 944 Turbo model year 1989 have vibration dampers installed on the front calipers between the pistons and the brake pads. Brake pad thickness is reduced to 17.5mm (was 18.2mm). When replacing brake pads, the vibration dampers must also be replaced.

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## NOTE:

Early 1988 Turbo S vehicles have asbestos-free brake pads with sintered metal plugs (Part Number 928 351 939 03) installed on the front axle up to VIN 95JN151487 (Fig. 3). Existing stock of pads may be used up. **Vibration dampers cannot be installed with these pads.** Pads with and without plugs must not be mixed on a vehicle.

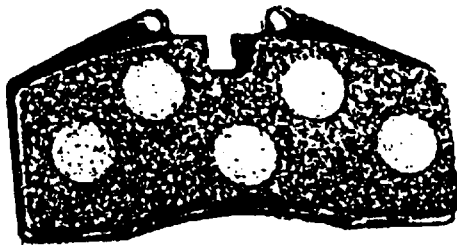


Figure 3

## Very Important

Clean seating and guide surface of brake caliper with mineral spirits before installing vibration dampers and pads. Lubricants or grease must not be used in conjunction with vibration dampers. A light coat of sliding lubricant (Optimoly HT Part Number 000 043 004 00) may be applied on the guide surface of the pad carrier plate (Fig. 4).

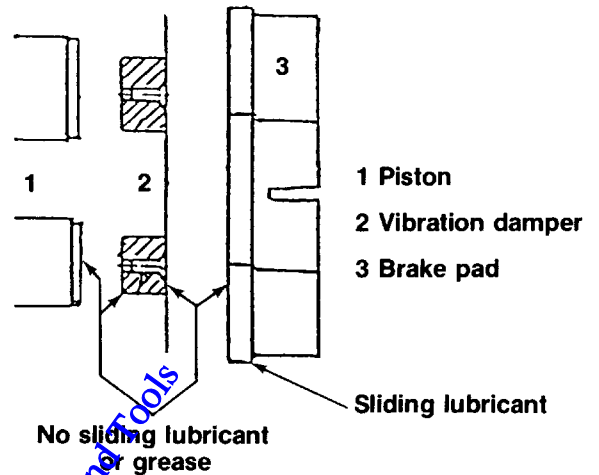


Figure 4

## Adjusting Parking Brake with Asbestos-Free Brake Linings

(standard equipment from model year 1987)

Make sure asbestos-free brake linings do not contact the brake disc when turning the wheel since these brake linings expand more with heat than brake linings with asbestos. Refer to Workshop Manual 944, Volume III, page 46-6 for hand brake adjustment and update step 4 as follows:

Insert screwdriver through hole in brake disc and adjust star nut until it is no longer possible to turn the wheel. Then turn star nut in the other direction until the wheel can be turned freely. **Turn star nut an additional two notches.**



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### 4 CYLINDER WATER COOLED MODELS - BRAKE PAD, HARDWARE AND VIBRATION DAMPER APPLICATION CHART

Vehicle Type Model Year	Caliper Type Piston Dia. in mm	Asbestos-Free Brake Pads Material and Markings	Asbestos-Free Brake Pads Part Number	Hardware Set	Vibration Dampers
924 76-82	Front Floating dia. 48	Textar T 400 yellow-white-green-yellow with cutouts	928 352 951 02	477 698 163	No
	Rear: Drums	Pink - no cutouts	477 609 537D 477 698 076A oversize	No	No
924 Turbo 80-82 924S 87-88 944 From 82 944S	Front Floating dia. 54	Textar T 400 yellow-white-green-yellow with cutouts	944 351 951 02	944 351 952 01	No
	Rear: Floating dia. 36	Textar T 400 white-green-yellow-yellow with cutouts	944 352 951 02	944 352 952 00	No
944 Turbo 85-88	4 pistons frt. dia. with scrape 36/40 rings 36/38 rear dia. 28/30	Textar T 400 white-white with cutouts	951 351 939 04	No set available	No
		Textar T 400 white-white with cutouts	951 351 939 04	No set available	No
944 Turbo S 88	4 pistons frt. dia. with scrape 36/44 rings	Textar T 400 white-white with cutouts	928 351 939 04	No set available	951 351 089 00 (2)
		white-white-blue no cutouts	928 351 939 03	No set available	No/sinter plugs
	rear dia. 28/30	Textar T 400 white-white with cutouts	951 351 939 04 (951 351 939 02)	No set available	No
944 Turbo 89 (1)	4 pistons frt. dia. with 36/44 dust caps rear dia. 28/30	Textar T 400 white-white with cutouts	928 351 939 04	No set available	951 351 089 01 (3)
		Textar T 400 white-white with cutouts	951 351 939 04	No set available	No
944 S2 89	4 pistons frt. dia. with 36/40 dust caps rear dia. 28/30	Textar T 400 white-white with cutouts	951 351 939 04	No set available	No
		Textar T 400 white-white with cutouts	951 351 939 04	No set available	No

1) Early production 944 Turbo has 4 piston calipers with scraper rings.

Application of vibration dampers can also be determined by measuring the piston inside diameter.

- 2) Pistons with scraper ring inside dia.: 26mm and 34mm  
Vibration damper guide dia.: 25.1mm and 33.7mm
- 3) Pistons with dust cap inside dia.: 20.5mm and 27.5mm  
Vibration damper guide dia.: 19.6mm and 27.2mm



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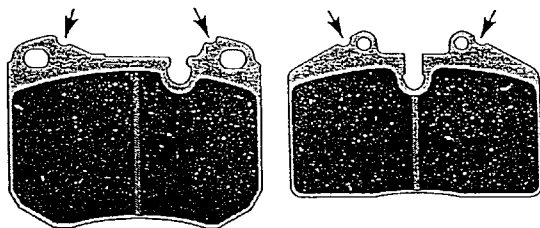
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## Air Cooled Cars (911, 911 Turbo, 912 and 914)

Color coding and semicircular cutouts (Fig. 1) in the area of the retaining pin holes identify asbestos-free brake pads.

## Important:

Free turning of the wheel must also be checked when making fine adjustment after basic adjustment.



911 Carrera

911 Turbo

Figure 1

Note: Asbestos-free rear axle brake pads up to and including 1983 model year do not have semicircular cutouts. Refer to color markings for identification.

**Mixed installation of brake pads (with and without asbestos) on a vehicle is not permissible.** When installing asbestos-free brake pads on cars before 1989 model year, both front and rear pads must be replaced.

## Adjusting Parking Brake With Asbestos-Free Brake Linings

(standard equipment from model year 1987)

Make sure asbestos-free linings do not contact the brake disc when turning the wheel since these linings expand more with heat than brake linings with asbestos.

Refer to Carrera Workshop Manual, Volume III, pages 46-6 and 46-7 for adjustment procedure and update step 5. Check whether both wheels can be turned **freely** after releasing parking brake.

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**6 CYLINDER AND 4 CYLINDER AIR COOLED MODEL BRAKE PAD AND HARDWARE APPLICATION CHART**

Vehicle Axle	Model Year	Caliper Type Piston dia. in mm	Asbestos-Free Brake Pad Material and Markings	Asbestos-Free Brake Pad Part Numbers	Hardware Set
<b>FRONT AXLE</b>					
911 all types 911 T and E 911 and 911S 912	64-68 69-73 74 66-69	M-Caliper dia. 48	Energit 586 white-red-blue with cutouts	911 352 950 02	911 351 951 02
911 T/E/S 911S 911 Carrera 2.7	69-73 74 73-74	S-Caliper (alum) dia. 48	Energit 586 white-red-blue with cutouts	911 351 950 03	911 351 951 03
911, 911S Carrera 912E 911SC 911 Carrera 911 Turbo	75-77 76 78-83 from 84 76-77	A-Caliper (cast iron) dia. 48	Energit 586 white-red-blue with cutouts	911 351 950 02	911 351 951 01 Carrera from 84
911 Turbo	from 78	4 piston calipers dia. 38/38	Textar T 400 white-white w/cutouts	951 351 939 04	No set available
<b>REAR AXLE</b>					
911 all types 912	64-68 66-68	2-Caliper dia. 35	Energit 582 red-blue-white-blue no cutouts	911 352 939 00	No set available
911 all types 912 911 Turbo 912E	69-83 69 76-77 76	M-Caliper dia. 38	Energit 586 red-blue-white-blue no cutouts	911 352 950 03	911 352 951 00
911 Carrera	from 84	M-Caliper dia. 42	Energit 586 white-red-blue with cutouts	911 352 950 02	911 352 951 01
911 Turbo	from 78	4 piston caliper dia. 30/30	Textar T 400 white-white with cutouts	951 351 939 04	No set available

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## 914 BRAKE PAD APPLICATION CHART

Vehicle Type	Model Year	Calliper Piston Dia. In mm	Asbestos-Free Brake Pads Material and Markings	Asbestos-Free Brake Pads Part Numbers
914/4	70-72	Front diameter 42	Energit 586 white-red-blue with cutouts	911 352 950 02
		Rear dia. 33	Textar T 426 white-green-yellow- yellow /no cutouts	914 352 923 01
914/4 - 1.7 914/4 - 1.8 914/4 - 2.0	72-73 73-75 72-75	Front dia. 42	Energit 586 white-red-blue with cutouts	914 352 905 01
		Rear dia. 33	Textar T 426 white-green-yellow- yellow /no cutouts	914 352 923 01
914/6	70-72	Front dia. 48	Energit 586 white-red-blue with cutouts	911 352 950 02
		Rear dia. 38	Textar T 426 white-green-yellow- yellow /no cutouts	914 352 903 01

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## 8 Cylinder Cars

Color coding and semicircular cutouts, (Fig. 1) in the area of the retaining pin holes identify asbestos-free brake pads.

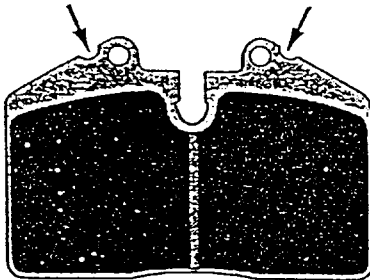


Figure 1

Note: Asbestos-free pads for fist-calipers installed on the front axle model year 1980 from VIN 92A080750 through model year 1985 do not have semicircular cutouts. Refer to color marking for identification.

Mixed installation of brake pads (with and without asbestos) on a vehicle is not permissible. When installing asbestos-free brake pads on cars before 1989 model year both front and rear pads must be replaced.

Vibration dampers (Fig. 2), must be installed on cars from model year 1986 (four piston calipers) on the front calipers between the pistons and the brake pads. Brake pad thickness has been reduced from 18.2 to 17.5mm. When replacing brake pads, the vibration dampers must be replaced also.



Figure 2

Note: Some early 1989 production cars received one-piece vibration dampers. In case of noisy brakes, two-piece vibration dampers should be installed.

## Very Important

Clean seating and guide surface of brake caliper with mineral spirits before installing vibration dampers and pads. Lubricants or grease must not be used in conjunction with vibration dampers. A light coat of sliding lubricant (Daimler HT Part Number 000 043 004 00) may be applied on the guide surface of the pad carrier plate (Fig. 3).

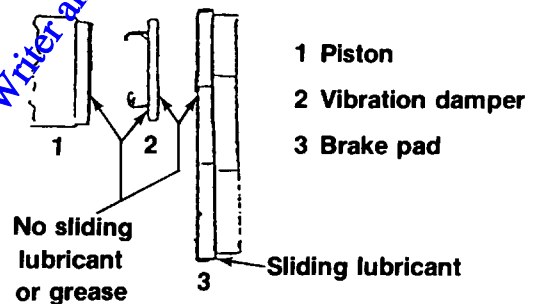


Figure 3

## Adjusting Parking Brake with Asbestos-Free Brake Linings.

(standard equipment from model year 1987)

Make sure asbestos-free brake linings do not contact the brake disc when turning the wheel since asbestos-free brake linings expand more with heat than brake linings with asbestos. Refer to Workshop Manual, Volume IV, page 46-21 for hand brake adjustment and update step 4 as follows:

Insert screwdriver through hole in brake disc and adjust star nut until it is no longer possible to turn the wheel. Then turn star nut in other direction until the wheel can be turned easily.

Turn star nut an additional two notches.



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ADDITIONAL INFORMATION

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## 8 CYLINDER MODELS - BRAKE PAD, HARDWARE AND VIBRATION DAMPER APPLICATION CHART

Vehicle Type Model Year	Caliper Type Piston dia. in mm	Asbestos-Free Brake Pads Material and Markings	Asbestos-Free Brake Pads Part Numbers	Hardware Set	Vibration Dampers
928 78-80	front: Floating dia. 54 up to 92A0800749	Textar T 400 yellow-white-green-yellow with cutouts	944 351 951 02	928 351 958 00	No
	rear floating dia. 36	Textar T 400 yellow-white-green-yellow with cutouts	928 352 951 02	928 352 953 00	No
928S 80-85	front fist dia. 54 from 92A0800750	Textar T 400 yellow-white-green-yellow no cutouts	928 351 931 01	No set available	No
	rear floating dia. 36	Textar T 400 yellow-white-green-yellow with cutouts	928 352 951 02	928 352 953 00	No
928S 86	4-pistons front dia. with 36/42	Textar T 400 white-white with cutouts	928 351 939 04	No set available	928 351 096 14 (19) 928 351 096 13 (18)
	scraper rear dia. rings 28/30	Textar T 400 white-white with cutouts	951 351 939 04	No set available	No
928 S4 87-88 89 up to VIN 92 KS860282	4-pistons front dia. with 36/44	Textar T 400 white-white with cutouts	928 351 939 04	No set available	928 351 096 14 (19) 928 351 096 12 (17)
	scraper rear dia. rings 28/30	Textar T 400 white-white with cutouts	951 351 939 04	No set available	No
928 S4 89 from VIN 92 KS860282	4-pistons front dia. with 36/44	Textar T 400 white-white with cutouts	928 351 939 04	No set available	928 351 096 11 (16) 928 351 096 10 (15)
	dustcaps rear dia. 28/30	Textar T 400 white-white with cutouts	951 351 939 04	No set available	No

NOTE: Application of vibration damper can also be determined by measuring the piston inside diameter. Refer to chart below.  
Vibration dampers with adhesive surface will be made available soon. (Part Number in parenthesis).

### VIBRATION DAMPER APPLICATION CHART

Piston diameter Outside — Inside mm		Vibration damper spring approx. dia. mm	Part Number
36	26	26.5	928 351 096 14 (19)
42	32	32.5	928 351 096 13 (18)
36	26	26.5	928 351 096 14 (19)
44	34	34.5	928 351 096 12 (17)
36	20.5	21.0	928 351 096 11 (16)
44	27.5	28.0	928 351 096 10 (15)

#### Important Notice

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