

New Brake Pad Program
New Brake Shoe Program
Illustrated Product Guide
Includes Fitment Instructions



Brake Pads and Shoes

2010 | 2011



BOSCH

Invented for Life



From the very beginning, Bosch's history has been characterised by a drive for innovation and social commitment. Environmental and social responsibilities are core values at Bosch. Our slogan "Invented for life" conveys the ambitious standards we have set ourselves and the values that we have long stood for. "Invented for life" stands for reliable technology designed and built to last. At the same time it embodies innovations and technology that contribute to the conservation of resources, sustainable development, and helping people improve their quality of life.

The Robert Bosch Stiftung (Robert Bosch Foundation) was established in 1964 to keep alive the philanthropic and social endeavours of its founder Robert Bosch. Through its programs and institutes, the foundation has since issued 840 million euros in project funds. In 2007, it made available 58.9 million euros for non-profit projects. Education, international understanding, and public welfare are the top priorities stated in Robert Bosch's will and are the pillars of our work today.

Responsibility for the environment is a core value at Bosch and is firmly anchored in our principles for safety and environmental

protection. Our environmental focuses are on renewable energies, energy efficiency, and emissions reduction. At Bosch we believe we have an obligation to develop innovative and beneficial technology and in order to meet such demands, considerable amounts of money are spent each year on research and development. We employ more than 25,000 research and development associates worldwide, all working towards the creation of technology that is innovative, beneficial and environmentally friendly.

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Brake Pads and Shoes

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The Bosch Automotive Story



The Bosch Group is a leading global supplier of technology and services, with more than 300 subsidiaries and regional companies in over 50 countries.

The beginnings were humble. In 1898 Robert Bosch developed a magneto ignition device and adapted it to suit a vehicle engine. In doing this he developed the first reliable ignition system, solving one of the greatest technical problems faced by the automotive industry at that time. This key innovation was the first chapter in the success story of Bosch as an automotive supplier.

From 1902 Bosch developed a high voltage magneto ignition system incorporating spark plugs. While the magneto ignition has long since been replaced by battery ignition systems, Bosch today manufactures more than 300 million spark plugs per year, using the very latest precious metal technology.

As cars became a product for the masses, Bosch recognised the prospects for developing motor vehicle lighting. Research in this area resulted in the launch of the Bosch automotive lighting system, comprising of headlights, a generator, a regulator and a battery. This was a significant milestone for both Bosch and the industry, being the first all-in-one system available to consumers, and also the basis for components such as starters, horns, windshield wipers, indicators and car heating systems to be developed and added to the business.

From about 1920, the growth of diesel engines in trucks was a concern at Bosch, because diesel engines did not need an ignition system, the company's main sales driver. To capitalise on this technological advance, Bosch began developing diesel injection pumps and in 1936 launched the first diesel injection pump for passenger cars. Today, Bosch is the global leader in diesel technology, whether it be for passenger cars, trucks or injection systems for ships.

In the years that followed, Bosch made numerous developments with other automotive products. Gasoline injection systems were developed from

1935 and by 1967 had all but displaced the carburettor. Braking systems have also been part of the Bosch offering since 1927. The introduction of the Bosch ABS antilock braking system in 1978 was a significant development in vehicle safety, laying a foundation for the development of further systems, such as Traction Control and the Electronic Stability Program (ESP®).

In today's market, vehicle manufacturers and service organisations face the worldwide challenge of efficient service for highly evolved vehicle systems. This includes not only mastering the electronic systems in today's automobiles, but also utilising the latest state-of-the-art diagnostics technologies to improve servicing efficiencies. The growing range of Bosch diagnostic and service equipment delivers a sophisticated solution for today's workshops to meet these challenges.

Bosch spends billions of dollars annually in research and development to preserve its position as a technological leader. The company's technological competence is evident in the fact that Bosch is world leader in the number of automotive technology patent applications it submits each year. Every hour Bosch research teams create new patents to make Bosch products safer, more efficient and more environmentally friendly.

As one of the world's largest independent manufacturers of automotive parts and systems, Bosch products and technology, supplied through a global network of factories, can be found on virtually every make of car currently produced throughout the world. This strong link to original equipment development and innovation means Bosch is able to deliver a superior aftermarket offering to its customers.

With most vehicles on the road incorporating many Bosch manufactured components, it made sense for Bosch to support these products with local service centres. The Bosch Service Network is a group of over 14,000 independent workshops worldwide, offering the latest technical expertise, tools and equipment to motorists.



In just over a hundred years, Bosch successfully transformed from a small automotive supplier into a modern, multinational group, which today has a workforce of more than 270,000 people worldwide.

Bosch employs over 2,300 associates in Australia and New Zealand with activities spanning three business sectors: Automotive Technology, Consumer Goods and Building Materials, and Industrial Technology.

During the past five decades Bosch has grown into a major force in the Australian automotive industry. Today, Robert Bosch Australia is no longer a local company manufacturing automotive components only for Australian customers. It is truly an integrated member of the Bosch global network supplying overseas customers in Europe, Asia and America.

In the automotive industry the name Bosch is now synonymous with leading technology, sophisticated service solutions and high quality replacement parts.



Brake Pad and Shoe Development



Bosch makes a substantial investment each year in the research and development of brake products.

The Bosch friction program is well researched and supported by product testing and manufacturing processes which ensure that all Bosch brake pads and shoes deliver constant, reliable brake performance.

Bosch friction products are engineered to be workshop friendly, containing non-asbestos organic material and utilising the latest ceramic technology where appropriate.

Testing capability

Bosch ensures the performance and reliability of their friction materials by conducting product testing on the following criteria:

Safety

- ▶ Stability of frictional coefficient
- ▶ Shear strength
- ▶ Compressibility
- ▶ Dimensional stability

Comfort

- ▶ Noise suppression damping
- ▶ Vibration absorption

Durability

- ▶ Wear characteristics

All Bosch friction products are tested rigorously. With safety, comfort and durability as the key customer requirements, vehicle tests are also conducted on the formula, composition and structure of our friction products.

Manufacturing quality

Bosch friction products are manufactured to QS9000 and ISO14001 (Standard for environmental management systems), guaranteeing quality and environmentally sound products for the braking repair industry.

Brake Pad Program



The Bosch brake pad program includes the expected and assured quality, extensive coverage, reliable supply and manufacturer support.

Aftermarket application coverage is at it's highest, with applications that suit the makes and models of local, Asian and European vehicles.

Designed to complement all types of driver braking styles by way of applying the correct composition of friction material to each pad type depending on driving and braking style, the Bosch Brake pad range falls into three categories:

- ▶ Bosch Ultra
- ▶ Bosch Qikstop
- ▶ Bosch Eco

There is no composition of friction material to suit all styles of braking. Regardless of the vehicle driven, driver braking styles can vary considerably.

Rather than focusing on vehicle application, Bosch has matched their brake pads to suit driver braking styles and budgets. Throughout the Bosch pad range a significant number of applications are available across two or even three categories offering you greater choice. Refer to page A10 for part number distribution.

Brake Pad Program



Selecting the Right Brake Pad

Bosch brake pads have been specifically formulated to match driver braking styles to ensure that regardless of the vehicle, braking performance can be optimised.

For most braking styles there is also a choice of product depending on the driver's preference for product life and cost.

For example, driving identical vehicles, one driver may be a heavy braker (one who likes to accelerate and brake hard closer to the stopping point, or one that regularly tows heavy loads), the other a light braker. The heavy braker could only be matched to a Bosch Ultra brake pad as the friction material in this pad is designed for heavy duty braking. For a light braker, either Bosch Eco or Bosch Qikstop will do the job.

For the full range of product options available refer to page A10.

Selecting the right Bosch brake pad			
	Ultra	Qikstop	Eco
Light braker	✓	✓	✓
Normal braker	✓	✓	✓
Heavy braker	✓		
Warranty	3 years*	2 years*	1 year*

*Conditions apply, refer to page A24 for further details.

Ultra Brake Pads



Ultra

Bosch Ultra brake pads use the latest technology in heavy duty ceramic friction material compounds, and are ideal for demanding driving and use in all European vehicles. Using specially coated, noise damped shim technology, these brake pads give optimum friction performance for the harshest of drivers, guaranteeing product life to the fullest.

Bosch Ultra brake pads offer:

- ▶ Long braking life
- ▶ Extremely quiet
- ▶ Powerful stopping ability
- ▶ 3 year / 30,000km warranty

The premium solution for normal or heavy brakera and for European vehicles.

QikStop Brake Pads



QikStop

Bosch QikStop brake pads are recommended for everyday driving. Specially formulated using non-asbestos organic friction material, they contain lower levels of abrasive metal, compared to metallic or semi metallic alternatives. This lower metal content will result in reduced levels of wear to the vehicle's brake discs.

Bosch Tip:

If your customer drives a European vehicle and/or would like to take advantage of a longer warranty period, suggest Bosch's premium brand – Ultra.

Bosch QikStop brake pads offer:

- ▶ Low noise
- ▶ Low dust
- ▶ Solid all round braking performance
- ▶ 2 year / 20,000km warranty

The perfect solution for light and normal brakers, looking for longer braking life.

Eco Brake Pads



Eco

Bosch Eco brake pads are a good quality, economical option for popular vehicle applications. They consist of the latest technology ceramic friction material compound, assuring no compromise on safety.

Bosch Tip:

If your customer would like to take advantage of a longer warranty period, suggest QikStop at 2 years* or Ultra at 3 years*.

*Conditions apply, refer to page A24 for further details.

Bosch Eco brake pads offer:

- ▶ Good pedal feel
- ▶ Great value for money
- ▶ 1 year / 10,000 km warranty

A good solution for light and normal brakers.

Part Numbers for Ultra, QikStop and Eco



Part Number	Ultra	QikStop	Eco	Part Number	Ultra	QikStop	Eco
BP008	✓			BP273	✓		
BP010	✓			BP274	✓		
BP015	✓			BP275	✓		
BP022	✓			BP276	✓		
BP037	✓			BP278	✓		
BP041	✓			BP283	✓		
BP072	✓			BP286	✓		
BP083	✓			BP289	✓		
BP084	✓			BP293	✓		
BP085	✓			BP296	✓		
BP086	✓			BP297	✓		
BP094	✓			BP298	✓		
BP102	✓			BP302	✓		
BP103	✓			BP311	✓		
BP105	✓			BP312	✓		
BP106	✓			BP313	✓		
BP120	✓			BP314	✓		
BP137	✓			BP315	✓		
BP138	✓			BP318	✓		
BP166	✓			BP323	✓		
BP172	✓			BP325	✓		
BP176	✓			BP326	✓		
BP191	✓			BP327	✓		
BP195	✓			BP328	✓		
BP196	✓			BP336	✓		
BP197	✓			BP337	✓		
BP198	✓			BP338	✓		
BP200	✓			BP339	✓		
BP204	✓			BP343	✓		
BP209	✓			BP345	✓		
BP218	✓			BP346	✓		
BP221	✓			BP347	✓		
BP222	✓			BP348	✓		
BP232	✓			BP353	✓		
BP238	✓			BP354	✓		
BP239	✓			BP355	✓		
BP240	✓			BP364	✓		
BP242	✓			BP367	✓		
BP245	✓			BP368	✓		
BP249	✓			BP369	✓		
BP255	✓			BP374	✓		
BP262	✓			BP375	✓		
BP265	✓			BP376	✓		
BP266	✓			BP378	✓		
BP269	✓			BP380	✓		



Part Number	Ultra	QikStop	Eco	Part Number	Ultra	QikStop	Eco
BP383	✓			BP536	✓		
BP388	✓			BP542	✓		
BP389	✓			BP552	✓		
BP390	✓			BP556	✓		
BP391	✓			BP567	✓		
BP393	✓			BP568	✓		
BP395	✓			BP581	✓		
BP396	✓			BP586	✓		
BP397	✓			BP597	✓		
BP398	✓			BP598	✓		
BP399	✓			BP600	✓		
BP401	✓			BP601	✓		
BP412	✓			BP613	✓		
BP415	✓			BP617	✓		
BP416	✓			BP618	✓		
BP417	✓			BP619	✓		
BP418	✓			BP623	✓		
BP419	✓			BP626	✓		
BP421	✓			BP628	✓		
BP432	✓			BP632	✓		
BP434	✓			BP636	✓		
BP447	✓			BP644	✓		
BP448	✓			BP650	✓		
BP449	✓			BP667	✓		
BP450	✓			BP668	✓		
BP452	✓			BP669	✓		
BP457	✓			BP670	✓		
BP460	✓			BP673	✓		
BP462	✓			BP679	✓		
BP463	✓			BP686	✓		
BP465	✓			BP690	✓		
BP472	✓			BP713	✓		
BP473	✓			BP714	✓		
BP475	✓			BP721	✓		
BP479	✓			BP738	✓		
BP480	✓			BP744	✓		
BP489	✓			BP745	✓		
BP493	✓			BP750	✓		
BP500	✓			BP771	✓		
BP512	✓			BP773	✓		
BP520	✓			BP774	✓		
BP522	✓			BP775	✓		
BP525	✓			BP777	✓		
BP526	✓			BP781	✓		
BP527	✓			BP783	✓		



Part Number	Ultra	QikStop	Eco	Part Number	Ultra	QikStop	Eco
BP920	✓			BP1026	✓		
BP924	✓			BP1027	✓		
BP926	✓			BP1029	✓		
BP928	✓			BP1030	✓		
BP935	✓			BP1031	✓		
BP936	✓			BP1032	✓		
BP937	✓			BP1033	✓		
BP938	✓			BP1037	✓		
BP942	✓			BP1042	✓		
BP944	✓			BP1052	✓		
BP945	✓			BP1058	✓		
BP951	✓			BP1059	✓		
BP957	✓			BP1069	✓		
BP958	✓			BP1070	✓		
BP960	✓			BP1072	✓		
BP962	✓			BP1073	✓		
BP963	✓			BP1074	✓		
BP965	✓			BP1075	✓		
BP967	✓			CVP002	✓		
BP968	✓			DB2	✓	✓	✓
BP971	✓			DB6	✓	✓	
BP973	✓			DB11	✓		
BP977	✓			DB14		✓	
BP981	✓			DB29	✓	✓	
BP987	✓			DB36	✓		
BP991	✓			DB39		✓	
BP992	✓			DB40		✓	
BP995	✓			DB84	✓		
BP997	✓			DB85		✓	
BP1005	✓			DB86		✓	
BP1006	✓			DB87		✓	
BP1007	✓			DB122		✓	
BP1008	✓			DB126	✓		
BP1009	✓			DB128	✓		
BP1012	✓			DB138		✓	
BP1013	✓			DB143	✓		
BP1014	✓			DB153		✓	
BP1015	✓			DB161	✓		
BP1017	✓			DB162	✓		
BP1018	✓			DB164	✓		
BP1020	✓			DB165	✓		
BP1021	✓			DB166	✓		
BP1023	✓			DB170	✓	✓	
BP1024	✓			DB179	✓		
BP1025	✓			DB191		✓	



Part Number	  			Part Number	  		
	Ultra	QikStop	Eco		Ultra	QikStop	Eco
DB192	✓			DB415	✓		
DB195	✓			DB418		✓	
DB208		✓		DB422		✓	✓
DB211	✓			DB425	✓	✓	
DB224	✓			DB426		✓	
DB225		✓		DB427		✓	
DB239	✓			DB429		✓	
DB241		✓	✓	DB430	✓	✓	
DB243	✓	✓		DB433	✓		
DB256	✓			DB437		✓	
DB279		✓		DB438	✓	✓	
DB288	✓	✓		DB439	✓		
DB292	✓	✓		DB440	✓		
DB293		✓		DB441		✓	
DB296	✓	✓		DB442		✓	✓
DB296U	✓	✓		DB521		✓	
DB297	✓	✓		DB525		✓	
DB300		✓		DB538	✓	✓	
DB304		✓		DB549		✓	
DB306	✓	✓		DB585	✓	✓	
DB308	✓	✓	✓	DB595	✓		
DB317	✓			DB625	✓	✓	
DB318	✓	✓		DB815	✓		
DB319		✓	✓	DB843	✓	✓	
DB321	✓	✓		DB869	✓		
DB325		✓	✓	DB879	✓		
DB326		✓		DB1004		✓	
DB328	✓			DB1023	✓	✓	✓
DB340	✓	✓		DB1024		✓	
DB370	✓			DB1025		✓	
DB388	✓	✓		DB1026		✓	
DB390		✓	✓	DB1028		✓	
DB399	✓			DB1029		✓	✓
DB400	✓			DB1032		✓	
DB400P	✓			DB1045	✓	✓	✓
DB402		✓		DB1046		✓	
DB403		✓		DB1075	✓	✓	✓
DB406	✓	✓	✓	DB1076		✓	
DB407		✓		DB1078		✓	✓
DB408		✓		DB1085	✓	✓	✓
DB409	✓	✓		DB1086	✓	✓	✓
DB410		✓		DB1088		✓	
DB411	✓			DB1091		✓	
DB413		✓		DB1094		✓	
DB414		✓		DB1095		✓	



Part Number	Ultra	QikStop	Eco	Part Number	Ultra	QikStop	Eco
DB1103	✓	✓	✓	DB1172		✓	
DB1104		✓	✓	DB1175	✓	✓	
DB1105		✓	✓	DB1176		✓	
DB1106		✓	✓	DB1176W	✓		
DB1108	✓	✓	✓	DB1177	✓	✓	✓
DB1109	✓	✓	✓	DB1180		✓	✓
DB1110	✓	✓	✓	DB1182	✓		
DB1111		✓		DB1183	✓		
DB1112		✓		DB1185	✓	✓	✓
DB1113	✓	✓		DB1186		✓	✓
DB1114		✓	✓	DB1187		✓	
DB1115		✓	✓	DB1189			
DB1116	✓	✓		DB1189W	✓		
DB1117	✓	✓	✓	DB1191		✓	✓
DB1118		✓	✓	DB1192	✓	✓	✓
DB1124		✓		DB1198	✓	✓	
DB1125		✓	✓	DB1199	✓	✓	
DB1127	✓			DB1200	✓	✓	
DB1129		✓		DB1203	✓	✓	✓
DB1130	✓	✓		DB1204	✓	✓	✓
DB1131		✓		DB1205	✓	✓	
DB1132	✓	✓		DB1206	✓	✓	✓
DB1133		✓	✓	DB1208	✓	✓	✓
DB1136	✓			DB1209	✓	✓	✓
DB1139	✓			DB1211		✓	
DB1141	✓	✓	✓	DB1215	✓	✓	
DB1142		✓		DB1216		✓	✓
DB1146	✓	✓		DB1219		✓	
DB1147		✓	✓	DB1220	✓	✓	✓
DB1148	✓	✓	✓	DB1223	✓	✓	✓
DB1149	✓	✓		DB1224	✓	✓	✓
DB1155		✓	✓	DB1225W	✓		
DB1156	✓			DB1228		✓	
DB1157	✓			DB1229	✓	✓	
DB1158	✓	✓	✓	DB1230		✓	
DB1159		✓	✓	DB1231	✓	✓	
DB1163		✓	✓	DB1232		✓	✓
DB1164		✓	✓	DB1236		✓	
DB1165		✓	✓	DB1238		✓	
DB1166		✓	✓	DB1239		✓	
DB1167	✓	✓	✓	DB1241	✓	✓	
DB1168	✓	✓		DB1242	✓	✓	
DB1169	✓	✓		DB1244		✓	
DB1170	✓	✓	✓	DB1245	✓	✓	✓
DB1171	✓	✓		DB1247		✓	✓



Part Number	  			Part Number	  		
	Ultra	QikStop	Eco		Ultra	QikStop	Eco
DB1249		✓	✓	DB1325	✓	✓	
DB1251	✓			DB1326	✓	✓	
DB1252	✓	✓	✓	DB1327W	✓		
DB1253	✓			DB1328		✓	
DB1254		✓	✓	DB1330	✓	✓	
DB1255	✓	✓	✓	DB1331	✓	✓	✓
DB1256	✓			DB1332	✓	✓	✓
DB1257	✓			DB1333	✓	✓	
DB1258	✓			DB1334	✓	✓	
DB1259		✓		DB1335		✓	
DB1261	✓	✓		DB1336	✓	✓	
DB1262		✓		DB1339	✓		
DB1265		✓	✓	DB1341	✓		
DB1267	✓	✓	✓	DB1342	✓	✓	
DB1270	✓	✓		DB1345	✓	✓	✓
DB1271		✓	✓	DB1347		✓	✓
DB1273	✓	✓	✓	DB1349	✓		
DB1275		✓	✓	DB1350	✓	✓	
DB1277	✓	✓	✓	DB1351	✓	✓	
DB1280	✓	✓		DB1358	✓	✓	✓
DB1281		✓	✓	DB1359	✓	✓	✓
DB1284	✓			DB1360	✓		
DB1285	✓	✓		DB1361	✓	✓	
DB1286		✓	✓	DB1362	✓	✓	✓
DB1288	✓			DB1363	✓	✓	
DB1290	✓			DB1364	✓	✓	
DB1291		✓	✓	DB1365	✓	✓	
DB1295	✓			DB1366	✓	✓	
DB1296	✓			DB1367		✓	
DB1297	✓	✓		DB1368		✓	✓
DB1299		✓		DB1369		✓	
DB1301	✓			DB1370		✓	✓
DB1302	✓	✓	✓	DB1372		✓	✓
DB1304		✓		DB1373		✓	
DB1308	✓	✓	✓	DB1375	✓	✓	✓
DB1310	✓			DB1376	✓	✓	✓
DB1311		✓		DB1378		✓	✓
DB1312	✓	✓		DB1379	✓	✓	✓
DB1313		✓		DB1381	✓		
DB1316	✓			DB1382	✓		
DB1318		✓		DB1383	✓	✓	
DB1320	✓			DB1388	✓	✓	
DB1321	✓			DB1389	✓	✓	
DB1322	✓	✓		DB1390	✓		
DB1323	✓	✓		DB1391		✓	



Part Number	Ultra	QikStop	Eco	Part Number	Ultra	QikStop	Eco
DB1397	✓	✓		DB1481	✓	✓	
DB1400	✓			DB1482	✓		
DB1401	✓			DB1484		✓	
DB1403	✓			DB1485		✓	
DB1404	✓			DB1487		✓	
DB1405	✓	✓		DB1489		✓	
DB1406	✓			DB1491		✓	
DB1407	✓			DB1493		✓	
DB1408	✓			DB1503		✓	
DB1409	✓	✓		DB1507		✓	
DB1414	✓	✓		DB1509		✓	
DB1415	✓			DB1510	✓	✓	
DB1418	✓			DB1511	✓	✓	
DB1422		✓	✓	DB1515		✓	
DB1424	✓	✓	✓	DB1665	✓	✓	
DB1425	✓	✓	✓	DB1672		✓	
DB1426	✓	✓		DB1674	✓	✓	
DB1427	✓			DB1675		✓	
DB1428	✓			DB1679		✓	
DB1429		✓		DB1682	✓	✓	
DB1431		✓		DB1686		✓	
DB1432	✓	✓	✓	DB1714			✓
DB1433		✓		DB1718		✓	
DB1436	✓	✓	✓	DB1724		✓	
DB1439		✓		DB1739		✓	
DB1443	✓			DB1741		✓	
DB1444	✓			DB1765		✓	
DB1445	✓			DB1766		✓	
DB1449		✓		DB1778		✓	
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DB1451		✓		DB1805		✓	
DB1452		✓		DB1808		✓	
DB1453	✓			DB1820		✓	
DB1454	✓	✓		DB1832		✓	
DB1455	✓	✓	✓	S776		✓	
DB1456	✓			7532		✓	
DB1464	✓	✓		7545A		✓	
DB1466		✓		7690		✓	
DB1467	✓						
DB1468	✓						
DB1471		✓	✓				
DB1472		✓					
DB1473	✓	✓	✓				
DB1474	✓	✓	✓				
DB1475		✓					

Brake Pad Wear and Replacement



Checking for Brake Pad Wear

Uneven pad wear can often indicate problems with the caliper, such as faulty seals or sticking or bent slide pins. If not addressed they can lead to ongoing braking issues. If uneven pad wear is evident then check the following:

- ▶ Inspect the condition of the caliper seals for signs of leaking. Faulty seals can often be identified by wet patches on the caliper, indicating leaking brake fluid. Ensure all seals and caps are in good condition.
- ▶ Ensure slide pins are not sticking or bent. If necessary re-lubricate or replace.
- ▶ Check brake hoses for wear and tear (both sides of the vehicle). A leaking or obstructed hose will result in braking imbalance.

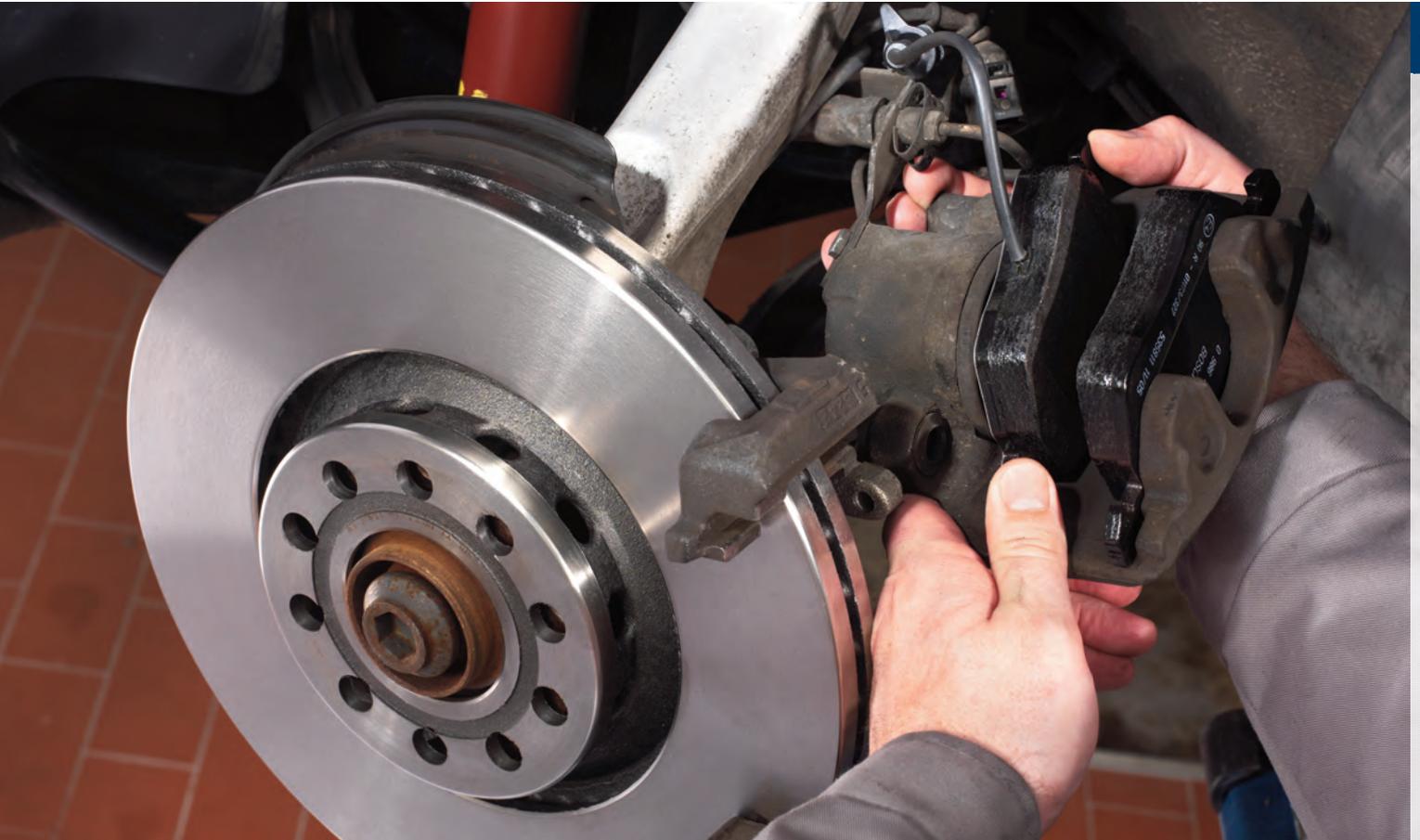
If any of these components show signs of deterioration they will need to be replaced.

If the friction material of the brake pads is worn down to a thickness of 2mm, the brake pads must be replaced.

Bosch Tip:

Match pads to suit braking style.

The rate at which brake pads wear is dependent on the properties of the friction material, the manner in which the vehicle is driven and the loads it carries. Remember to speak to your customers about their driving style. Check the brake pads currently on their vehicle and assess whether these are potentially not the right pads for their driving style.



Replacing Brake Pads

Brake pads should always be fitted following the relevant vehicle manufacturer's handbook instructions. Keep the following tips in mind to ensure a professional job.

1. Replace the brake pads on both sides of the vehicle at the same time, to ensure consistent performance.
2. The pads need to be fitted to the caliper body or anchor bracket and the caliper then re-assembled. Make sure that all components are correctly installed.
3. Flush and replace the brake fluid at this stage, unless the service records show that it has been recently replaced (within the last twelve months).
4. The brakes then need to be bled as per the procedure recommended by the manufacturer.
5. Use a dial gauge to set wheel bearing clearance to the exact vehicle manufacturer's specifications.

Bedding-In Process

Correct bedding-in is crucial once brake pads have been replaced. The following procedure must be adhered to:

- ▶ Accelerate car to between 40km/h and 60 km/h.
- ▶ Apply brakes using moderate pedal effort to reduce speed to 10Kph.
- ▶ Repeat steps 1 and 2 ten times allowing 1/3 kilometres between stops.
- ▶ Allow pads to cool down before returning car to customer.

Bosch Tip:

Do not apply excessive force during the bedding-in process. Brake performance can potentially be affected and problems such as abnormal noise levels can occur if the bedding-in procedure is not completed correctly.

Re-fitting the wheels after replacing the brake pads:

- ▶ A tension wrench must be used for the final tensioning of the wheel nuts. To avoid brake disc run-out, always tension wheel nuts to the vehicle manufacturer's specification.
- ▶ Air tools such as an impact wrench (rattle gun) should not be used for final tightening of wheel nuts.

Brake Shoe Program



Bosch brake shoes are manufactured using high quality, low wear friction material, designed to withstand operating temperatures of more than 350°C. This material contains no iron, unlike common semi-metallic linings, which assists in a lower rate of drum wear and provides reliable and stable friction performance. The specially developed Bosch formulation ensures good performance, especially in wet conditions and assists in keeping noise to a minimum. All shoes are pre-chamfered to ensure ease of fitment.

With nearly 200 part numbers in the range, Bosch brake shoes cover a significant number of vehicle applications. Older models of vehicles, such as Holden Commodores, Toyota Corollas and Volkswagen Beetles, along with newer models such as the Holden Rodeo and Toyota Hilux and Yaris, are all catered for in the Bosch range.

The Bosch range of brake shoes also includes part numbers for popular trailer applications.

Brake Shoe Program

- ▶ Low drum wear
- ▶ Low noise
- ▶ Pre-chamfered for easier fitment
- ▶ 1 year / 20,000 km warranty
- ▶ High coverage including shoes for trailers

Brake Shoe Wear and Replacement



Checking for Brake Shoe Wear and Adjustment

Checking the wear of brake shoes on drum brakes generally involves removing not only the wheels, but also the brake drums. On some vehicles, inspection holes allow for the brake shoe wear to be checked without the brake drums having to be removed, although they are inadequate for a thorough assessment of the overall brake shoe condition.

If there is still sufficient friction material remaining on the brake shoe and the drum brakes do not incorporate a self-adjusting mechanism, then adjustment of the shoes may be necessary to compensate for the wearing of the friction material. The need for readjustment of the brake shoes (drum brakes without a self-adjusting mechanism) can be detected by the amount of free play when pressing the brake pedal.

When adjusting brake shoes, the instructions of the manufacturer for the particular brakes in question should always be followed. However, the following basic principles will always apply:

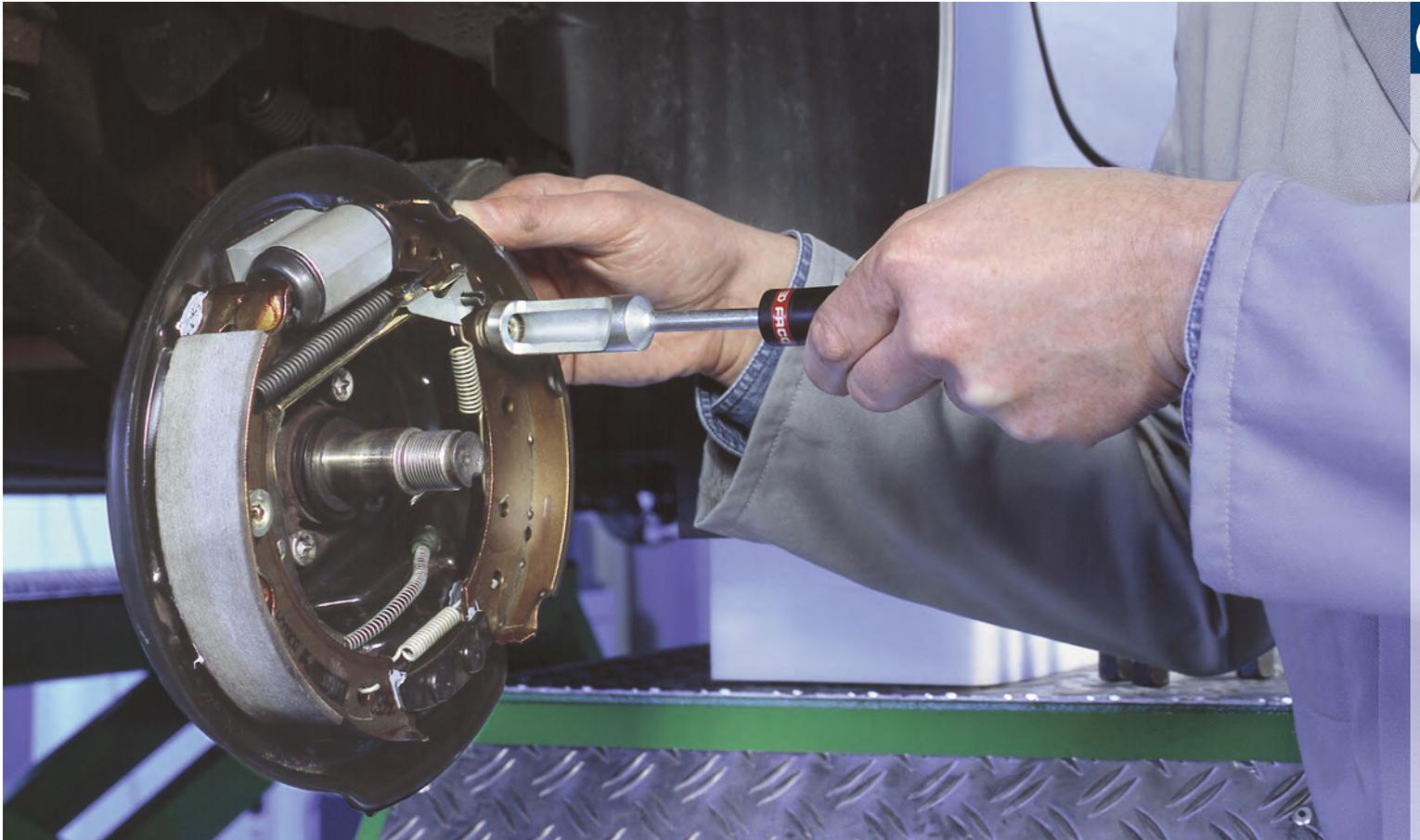
1. Regardless of the type of drum brake, the brakes on both sides must always be adjusted at the same time.
2. On vehicles with drum brakes all around, all four brakes must be adjusted at the same time.
3. The brakes must be cold before they are adjusted.
4. The service brakes should be adjusted before the handbrake.

If there is insufficient friction material left on the brake shoes then they must be replaced.

Bosch Tip:

Brake shoe friction lining thickness should be not less than:

- ▶ 1.5mm for passenger vehicles
- ▶ 4mm for commercial vehicles



Replacing Brake Shoes

Brake shoes should always be fitted following the relevant vehicle manufacturer's handbook instructions. Keep the following tips in mind to ensure a professional job. Replace the brake shoes on both sides of the vehicle at the same time, or the vehicle may "pull" to one side under braking.

1. Remove the brake drum (for one side of the axle)
2. Inspect and remove the brake shoes, wheel cylinder and mountings spring (leaving one half of the brake together as a reference for reassembly)
3. Reassemble with new brake shoes by reversing the procedure (replace with new hardware/springs and wheel cylinders if damaged or leaking)
4. Repeat for the other half of the drum brake and reinstall brake drum.
5. Repeat for the other side of the axle.
6. Adjust the shoes to complete the job then test drive the vehicle and bed-in the shoes.

Bosch Tip:

Always check the condition of brake drums and wheel cylinders when adjusting and/or replacing brake shoes and replace them if they are:

- ▶ excessively worn,
- ▶ showing signs of damage or cracking,
- ▶ have become "out of round".

Bedding-In Process

Correct bedding-in is crucial once brake shoes have been replaced. The following procedure must be adhered to:

- ▶ Accelerate car to between 40km/h and 60 km/h.
- ▶ Apply brakes using moderate pedal effort to reduce speed to 10Kph.
- ▶ Repeat steps 1 and 2 ten times allowing 1/3 kilometres between stops.
- ▶ Allow shoes to cool down before returning car to customer.

Robert Bosch Australia General Warranty Information



Introduction

All products manufactured and/or sold by Bosch Australia carry a statutory and voluntary warranty. Consumer's rights to such warranty are limited to failures and defects caused by a material or manufacturing fault within the specified warranty period.

This warranty information describes very broadly the general procedure for the settlement of warranty claims. Detailed information relating to the most commonly submitted non-warranty cases should also be reviewed prior to any warranty submission. Only genuine warranty cases are accepted.

What is a Warranty Case?

A warranty case exists when a Bosch product or spare part fails within the specified warranty period as a result of a manufacturing or material fault.

What are Non-warranty Cases?

A warranty case does not exist if the fault is caused by a violation of the operating, maintenance or installation instructions, inappropriate or improper use, incorrect handling or unauthorised repairs and modifications performed by third parties. Other examples of non-warranty cases are failures caused by foreign contamination and water entry.

Natural Wear and Tear

Damage caused by natural wear and tear does not constitute a warranty case even if it occurs within the warranty period.

Wrong Deliveries and Transit Damage

Wrong deliveries, incorrect or damaged packing and transit damage claims are not warranty cases and will not be processed as a warranty claim. Such cases should be directed to Bosch Customer Service on 1300 30 70 40.

Warranty Responsibility and Evaluation

All warranty claims are to be resolved in the most economical and efficient way, either by repair or replacement. In the case of Bosch brake pads and shoes, these must be sent to a Bosch Authorised Service Dealer for warranty evaluation and/or repair.

For details of your nearest Bosch Authorised Service Dealer please call our hotline on 1300 060 060 or visit www.bosch.com.au

Initiating a Claim

If a Bosch product fails within the specified warranty period as a result of a manufacturing or material fault, consumers should:

- ▶ Stop using the goods
- ▶ Let the seller know as soon as possible
- ▶ Look after the goods until they are returned
- ▶ Return the goods, including proof of purchase (while there are no time limits, this should be done as soon as possible).

Packaging

Goods do not have to be returned with the original packaging to obtain a refund.

Warranty Periods and Proof of Purchase

The warranty period begins from the date of sale to the customer (generally the consumer). The warranty period is not renewed nor extended as a result of a warranty repair or with the supply of a replacement part. The seller is entitled to ask for proof of purchase when goods are claimed under warranty and consumers are obligated to provide proof of purchase when claiming goods under warranty. Proof of purchase will generally indicate if the purchased product is covered under warranty.

All Bosch Ultra Brake Pads are covered by a 3 year or 30,000km warranty period. Bosch QikStop Brake Pads are covered by a 2 year or 20,000km warranty period. Bosch Eco Brake Pads are covered by a 1 year or 10,000km warranty period and and Bosch Brake Shoes are covered by a 1 year or 20,000km warranty period. Warranties are applicable for Australia and New Zealand.

Deadlines for submitting Warranty Claims

Bosch Australia aims to rectify genuine quality problems as a priority. This is generally achieved by investigating why defective products have failed and by introducing immediate corrective action measures to prevent re-occurring warranty failures. It is therefore critical that all warranty cases are promptly reported to Bosch Australia. Bosch reserves the right to request the prompt return of all defective parts.

Product Liability and Product Safety

Bosch Australia should be informed immediately about potential product safety concerns within and outside the warranty period. Bosch Australia is well aware of its product liability and product safety obligations and responsibilities. It is our aim to ensure appropriate product safety standards are met in order to avoid injury, loss and damage caused by defects in Bosch products.