

There are over 120 major engine remanufacturers, more than 6000 rebuilding shops and thousands of individuals who claim to know how to rebuild and install engines. How do you know who to select to protect your investment?

Q: What are the Typical Symptoms of Engine Problems?

A: Excessive smoke from tailpipe; excessive oil consumption; knocking or tapping sounds; low oil pressure; low compression; water mixing in oil; oil getting into the air cleaner and/or radiator.

Q: What are the Typical Causes?

A: Normal mileage wear and tear; lubrication problems; excessive overheating.

Q: How do I Find Out what can be Done to Correct the Problem?

A: Take your vehicle to a reputable service shop, dealer or installation center and get a second opinion. Not all engine problems call for engine replacement - often the problems are not serious and may only require relatively minor repair or maintenance.

Q: If the Problems are Serious, What are the Alternatives?

A: Whether you plan to keep or sell your car, continued operation in this instance will require engine overhaul or replacement. The basic options are: a) rebuild the same engine, b) replace it with a locally rebuilt engine, c) install a factory-supplied remanufactured engine or d) put in a new engine. New engines are not always available for all makes/models and are much more costly than remanufactured units.

Q: Should I Invest in an Engine or Buy a New Car?

A: That depends on your financial situation, the overall condition of the car and your personal preferences. Engine replacement is more affordable than many people realize. As a rule, replacing the engine only makes good economic sense if the rest of the car is in relatively good condition and will have a market value close to blue book after installation.

Q: Do I have to Go to a Dealer for Engine Replacement?

A: No. While dealers generally install quality remanufactured engines, the cost is usually high. A specialized engine replacement shop carrying the same or better quality engines will almost always give a better overall value - in terms of quality, service and price.

Q: What are the Typical Costs and Savings?

A: Installation of a quality remanufactured engine will usually cost about 10-15% of a typical new car cost. Additional savings in annual insurance costs and personal personal property taxes can also be significant compared to a new car.

Q: How do you Know if the Engine is Rebuilt or Remanufactured?

A: Be sure to ask the installer before you commit. Warranty for a rebuilt engine is normally provided only by the local installer and is usually short in duration. A remanufactured engine should carry a nationwide or regional guarantee backed by the engine maker for a longer period.

Q: What is Different about Rebuilding and Remanufacturing?

A: Typically a rebuilt engine will have a much shorter life than a remanufactured unit because the process is much less precise and, therefore, less predictable. Here are a few key differences:

Rebuilding is done mostly in local shops. Each job is handled differently and depends upon the judgment and skill of the individual mechanic. Parts believed to be serviceable are cleaned and reused to

the maximum extent possible. Only worn or broken parts are actually replaced. If reused components subsequently fail or break, diagnosis and repair can be very costly.

Remanufacturing is a factory process. It starts with a sound, undamaged engine core that is carefully cleaned, conditioned and machined to OEM tolerance specifications. All wearable components are systematically replaced with new parts including pistons, piston rigs, valves, lifters, etc. Remanufacturing is similar to building a new engine - including standardized procedures and quality controls- and final factory testing before shipment.

Q: Are all Remanufactured Engines Built to the Same Quality Levels?

A: No. As for every product, some manufacturers are better than others, and some are far superior. Quality suppliers conform to strict manufacturing and testing standards, use only OEM quality components, and back their products with solid warranties. Only a relatively small number are fully certified by original car makers. For example, of dozens of suppliers in the US, only five are fully certified under Ford Motor Companies stringent Q-1 program. Dr. Motorworx handles only quality remanufactured engines from Q-1 companies and other proven, reliable suppliers.

Q: How Important is the Installation Process?

A: Very important. For a good quality remanufactured engine, the chance of a defect is well under 5%. The risk of problems can increase to over 50%, however, with improper installation. Replacing an engine is a skillful and complex task requiring knowledgeable and experienced people. Dr. Motorworx specializes in this business and employs the right equipment, tools and highly experienced mechanics who typically replace more engines per week compared to what may be only 1 or 2 in an entire month at general repair centers or dealerships. Be sure to check on the experience of the installer before investing in a replacement engine.

Q: How Long will the Replacement Engine Last?

A: A quality remanufactured engine, with proper maintenance, is capable of lasting as long as a new engine. Rebuilt engines or lesser quality remanufactured engines are less predictable and may only last through the limited warranty period or not much beyond.

Q: What Warranty Period should I Get?

A: A minimum to look for is 12 months/12,000 miles with some suppliers providing 24 months/24,000 miles or longer. Be careful about short warranties with expensive extended warranty plans. This is not necessary for a high quality engine that is backed by the manufacturer.

Q: Why Dr. Motorworx?

A: Dr. Motorworx has done the research for you - you can be assured of the best quality, installation and price. Before investing money in your car's engine, be sure to check with Dr. Motorworx where the very best really does cost much less.