



ENGINEERED TOWN!
20R - 22R - 22RE - 2RZ - 3RZ - 5VZ

The Company Newsletters Online Catalog

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- Tech Line
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General Automotive Tech: 22R Block and Head Identification

Technical Introduction

LC Engineering's Technical Department has provided some basic information as well as identification information to assist you in modifications to the 20R - 22R - 22RE Toyota 4 Cylinder engines. Along with our catalog, you should refer to the factory Toyota service manual for more in-depth information

We also provide our customers with a technical support phone line to assist in determining what product or products will deliver the best performance for your application and budget.

As you have seen in our catalog, we offer packages and products from mild modifications to wild modifications.

Cylinder Head Identification

1975 - 1980 20R Cylinder Head

- Round Intake Port
- Round Exhaust Port
- 80/81 C.C. Chamber
- Intake Valve Diameter 43mm
- Exhaust Valve Diameter 35mm

1981 - 1984 22R Cylinder Head

- Square Intake Port
- Round Exhaust Port
- 82/83 C.C. Chamber
- Intake Valve Diameter 44.5mm
- Exhaust Valve Diameter 36.5mm

1985 - 1995 22R-22RE Cylinder Head

- Square Intake Port
- Pear Shape Exhaust Port
- 52/54 C.C. Combustion Chamber
- 82/83 C.C. Chamber (Turbo) Intake Valve Diameter 44.5mm
- Exhaust Valve Diameter 36.5mm

Engine Block Identification

1975 - 1980 20R Block

- Deck Height 11.280"
- Stock Bore 88.5mm - 3.484"
- Maximum Over Bore 90.0mm - 3.544"

1981 - 1984 22R Block

- Deck Height 11.280"
- Stock Bore 92.0mm - 3.622"
- Maximum Over Bore 93.0mm - 3.662"
- Big Bore Forged Piston Kit 94.0mm - 3.701"

1985 - 1995 22R-22RE "Laser Block"

- Deck Height 11.090"
- Stock Bore 92.0mm - 3.622"
- Maximum Over Bore 93.0mm - 3.6662"
- Big Bore Forged Piston Kit 94.0mm - 3.701"

All Toyota 20R - 22R - 22RE engines use the same crankshaft and connecting rods. To accommodate the different deck heights, Toyota changed the compression height (piston pin location).

Crankshaft (Forged)

- Stroke All 20R - 22R - 22RE 89mm - 3.5039"
- Rod Journal 2.0861 to 2.086" (standard)
- Main Journal 2.3614 to 2.13622" (standard)

Connecting Rod (Forged)

Center to center length 5.830"

