

**TECHNICAL DATA – ENGINE 450/540 SXS RACING 2003**

| Type                         | 450 SXS  | 540 SXS                   |
|------------------------------|--|---------------------------|
| Design                       | Liquid-cooled single cylinder 4-stroke engine with balancer shaft                      |                           |
| Displacement                 | 449,39 ccm   | 534,07 ccm                |
| Bore/Stroke                  | 95 / 63,4 mm (3,8 / 2,536 in)  | 100 / 68 mm (4 / 2,72 in) |
| Ratio                        | 12 : 1   |                           |
| Fuel                         | unleaded premium gasoline with at least RON 95   |                           |
| Valve Timing                 | 4 valves over rocker arm and 1 overhead camshaft, camshaft drive through single chain  |                           |
| Camshaft                     | 594/55   | 8/06                      |
| Valve diameter Intake        | 35 mm (1,4 in)   |                           |
| Valve diameter Exhaust       | 30 mm (1,2 in)   |                           |
| Valve clearance cold Intake  | 0,12 mm (0,0048 in)  |                           |
| Valve clearance cold Exhaust | 0,12 mm (0,0048 in)  |                           |
| Crank shaft bearing          | 2 cylinder roller bearing  |                           |
| Connecting rod bearing       | needle bearing   |                           |
| Top end bearing              | bronze bushing   |                           |
| Piston                       | aluminium alloy cast   |                           |
| Piston rings                 | 1 compression ring, 1 oil scraper ring   |                           |
| Engine lubrication           | pressure circulation lubrication with two rotor pumps                                  |                           |
| Engine oil                   | fullsynthetic oil (Motorex Power Synt 4T 10W50)  |                           |
| Quantity of engine oil       | 1,25 liters  |                           |
| Primary ratio                | straight geared spur wheels 33:76 t  |                           |
| Clutch                       | multi disc clutch in oil bath  |                           |
| Transmission claw shifted    | 4-speed  |                           |
| Gear ratio                   |  |                           |
| 1 <sup>st</sup> Gear         | 16:32  |                           |
| 2 <sup>nd</sup> Gear         | 18:30  |                           |
| 3 <sup>rd</sup> Gear         | 20:28  |                           |
| 4 <sup>th</sup> Gear         | 22:26  |                           |
| Ignition system              | contactless DC-CDI ignition with digital advanced system by KOKUSAN                    |                           |
| Generator                    | 12V 40W  |                           |
| Spark plug                   | NGK DCPR8 E  |                           |
| Spark plug gap               | 0,6 mm (0,024 in)  |                           |
| Cooling system               | liquid cooled, permanent rotation of cooling liquid through mechanic driven water pump |                           |
| Cooling liquid               | 1 liter, 40% antifreeze, 60% water, at least -25° (-13° F)                             |                           |
| Starting equipment           | kickstarter  |                           |

**BASIC CARBURETOR SETTING**

|                            | 450 SXS<br>RACING | 540 SXS<br>RACING |
|----------------------------|-------------------|-------------------|
| Type                       | Keihin FCR-MX 41  | Keihin FCR-MX 41  |
| Carb.-setting number       | 4122A             | 4125A             |
| Main jet                   | 185               | 190               |
| Jet needle                 | OBDTP             | OBDTP             |
| Idling jet                 | 40                | 42                |
| Main air jet               | 200               | 200               |
| Idling air jet             | 100               | 100               |
| Needle clip position       | 4.th from top     | 4.th from top     |
| Starting jet               | 85                | 85                |
| Mixture control screw open | 1                 | 1,5               |
| Throttle valve             | 15                | 15                |
| Stop pump membrane         | 858 / 2,15 mm     | 858 / 2,15 mm     |
| Hot start device           | 2,2 mm            | 2,5 mm            |