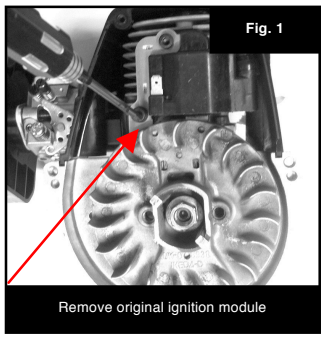
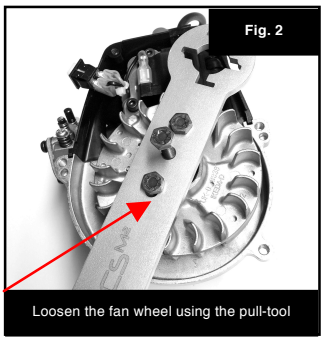
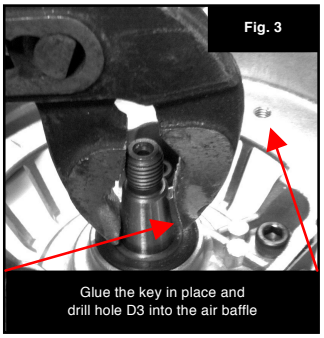
SCS M2 Engineering GmbH, Sportplatzstr. 19, 87493 Lauben, Germany

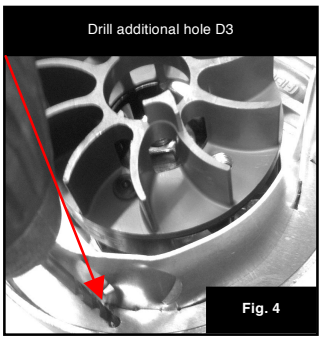
Assembly instructions for Power Fan Wheel 60, 64, 68, 72

Read the following instructions and information carefully before installing and using the Power Fan Wheel.
In case of doubt, please feel free to contact us.



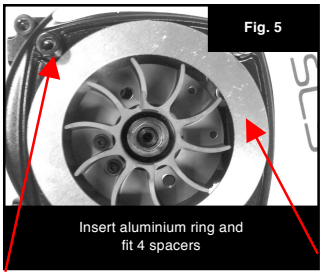


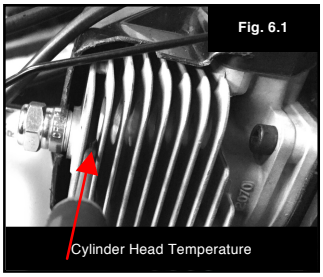


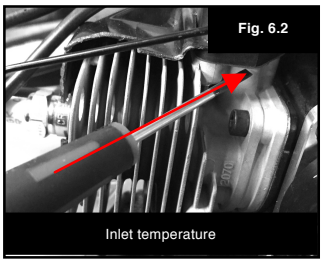


Tools needed

- Pull-tool (M50015)
- Pipe spanner
- 3 mm drill
- 4 mm Allen key
- Phillips head screwdriver
- 12 mm socket with extension







Removing standard fan wheel

- Remove starter and housing cover separately.
- Remove existing ignition module (Fig. 1).
- Keep the plastic spacers from the ignition module to one side.
- Holding the fan wheel with the pull-tool (M50015), loosen and remove the nut using a 12mm socket.
- Line up the pull-tool using 2 x M6 screws, then undo the fan wheel (Fig. 2).

Power Fan Wheel and Air Baffle Assembly

- Fit the key to the camshaft with Loctite, using a pipe spanner to press it on (Fig. 3).
- Line up the air baffle plate with the M5x25 screw on the engine housing, and tighten it up (to line up, hold the fan wheel on the camshaft and centre the plate)(Figs. 3 and 4).
- Drill an additional 3 mm diameter hole into the engine housing (Fig. 4).
- Fit the air baffle using an M3 pan head screw, lock nut and also locking varnish.
- Apply locking varnish to the camshaft and contact points on the fan wheel.
- Then screw the fan wheel in place onto the camshaft.
    - Make sure that the key is not slipping.
    - We specifically recommend NOT using a piston stop tool.
- Hold the fan wheel using the SCS M2 Power pull-tool and tighten the nut following Zenoah specifications.
- Check once again that the key is not slipping.
- Fit the new ignition module mounting plate (without plastic spacers), and insert the screws using Loctite 243LT.
- Then fit the refurbished ignition module which was supplied with the set.
- You might have to open up the slot holes, depending on the particular engine tuner, as the cylinder head spacing might not be the same because of different seals.
- The gap between the ignition module and the fan wheel must be set at a distance of at least **0.5 mm**. (Thermal expansion for the fan wheel is >0.1 mm)
- Then fit the emergency stop switch.
- Attach the housing cover (without starter).
- Insert the aluminium ring (Fig. 5).
- Place the 4 spacers over the 4 centre points for the starter on the housing cover (Fig. 5).
- Screw the starter into place on the housing.
- All screws should be checked again for tightness following initial use.

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Additional information/running-in

- Max. cylinder temperature measured at the upper cooling fin (TDC): 125 °C (anything above 130 °C will damage the engine in the long term) (Fig 6.1).
- Max. inlet temperature measured below the isolator: 80 °C (above 85 °C, the engine/carburettor begins to run leaner) (Fig 6.2).
- Recommended 2-stroke engine oil: Motul or Panolin off-road oil (spin-resistant oil up to 23,500 rpm).
- Mixture >175ml oil to 5000ml Aral Ultimate 102 octane
- Recommended type of spark plug: NGK
- At high outdoor temperatures above 25 °C, you should use a spark plug with heat range number 8, below 25 °C a spark plug with heat range number 7.

- The engine temperature and fan wheel should be checked in 3 stages. The engine temperature and ignition module gap should be checked after each test run.
  - 1st check after running for 3 minutes
  - 2nd check after running for 6 minutes
  - 3rd check after running for 15 minutes

- The following suggestions might help to keep the temperature rise to a minimum:
  - The compression is too high with some engines, so we recommend using a cylinder head gasket which is 0.2 mm thicker, for the standard engine with SCS M2 Power Fan Wheel 64.
  - In general, SCSM2 Engineering recommends the Power Fan Wheel 72 Offroad (M50026) for maximum cooling.
  - The SCSM2 adjustable ignition bracket (M50025) can be used to adjust the ignition timing.
  - All body vents, especially the radiator grille, must be open to achieve the best engine/carburettor cooling.
  - Use a steel exhaust system, including a steel manifold, as steel has a 3 times higher thermal conductivity than titanium.

- We recommend the following additional engine parts:
  - SCSM2 Power Insulator/Isolator 25.5 mm (M50029) including carburettor support (M50048)
  - SCSM2 cylinder head bracket (M50039/M50044)
  - SCSM2 Power Airbox Adapter (M50050)
  - SCSM2 Start-Adapter for E-Starter (M50034)

Safety precautions

- This is a part which is subjected to extreme loads in order to achieve maximum performance in model sport (1:5 scale).
- This part was designed for performance and not for longevity.
- There should be a visual inspection for damage before starting each time.
- The fan wheel, air baffle plate and between the cylinder head cooling fins should also be checked for grass or dirt.
- The engine cooling capacity is lower relative to a standard fan wheel, therefore this fan wheel might not be suitable for all engines or remote controls. It is up to the user to gauge this.
- Damage can dramatically reduce or limit longevity, strength and functionality.
- Engines set incorrectly can increase the thermal load on the engine and fan wheel, which can lead to the engine coatings coming off and the fan wheel becoming partly demagnetised. It is therefore imperative to take the basic engine setting into account. If “H” range engines are set leaner by 1/8 of a turn compared to the basic setting, the engine and fan wheel should be checked immediately in order to avoid permanent damage.
- Damage can lead to unbalance and thus damage the part or the engine.
- If damage is discovered, the fan wheel should not continue to be used, for safety reasons.
- Never crank the engine up to high revs on no load when stationary.
- Children and young people under 18 should only use the fan wheel under supervision.
- SCSM2 accepts no liability for any damage caused by the product due to improper handling or failure to carry out checks.

Included in delivery