

## **Husqvarna Motorcycles 2022 TE 300i Rockstar Edition**

The trusted 2-stroke is exceedingly simple to manage and features a host of developments that enhance its class-leading performance. The flagship TE 300i Rockstar Edition offers astonishing power in a light and agile package. While retaining solid reliability and low maintenance costs, the electronic fuel injection offers a smooth power delivery and impressive torque. With a class leading chassis and ergonomics, it delivers an even more controllable and thrilling ride. Additionally, the TE 300i Rockstar Edition features advanced technology with added colour, graphics, and part updates, to replicate the Rockstar Energy Husqvarna Factory Racing machines.

### Engine

The 300 cc 2-stroke engine is the benchmark for unrivalled power in a lightweight construction. The engine features precisely positioned shaft arrangements for optimal mass centralisation, a counter balancer shaft reducing vibration, a twin-valve controlled power valve, and 6-speed enduro gearbox.

The TE 300i Rockstar Edition features an advanced electronic fuel injection system. This comprises a set of fuel injectors positioned at the transfer ports, which deliver the ideal amount of fuel into the engine. This not only reduces fuel consumption and emissions but also provides a clean and smoother power delivery.

### Cylinder

The 72 mm bore cylinder features a twin valve-controlled power valve system, which delivers smooth and controlled power throughout the RPM range. Optimal exhaust port timing is achieved with the combination of a state-of-the-art, adjustable power valve drive and machined exhaust port window.

Additionally, the cylinder features two inlet positions located on the transfer ports at the rear of the cylinder where a pair of fuel injectors are mounted. The injectors deliver the fuel downwards into the transfer port, which guarantees excellent atomisation with the air travelling upward to the combustion chamber. This ensures a more efficient combustion resulting in reduced fuel consumption and emissions.

- Dual fuel injectors → excellent atomisation, reduced fuel consumption
- Power valve → machined port window

### Piston

The lightweight piston is perfectly matched to the cylinder and transmits minimal oscillating mass ensuring high levels of reliability and performance.

- Piston → fits perfectly to cylinder and combustion chamber

### Engine casings

The TE 300i Rockstar Edition engine is designed to improve mass centralisation. As a result, the lightweight, die-cast engine casings are developed to accommodate a shaft arrangement aimed at centralising oscillating mass and improving rideability. Additionally, the counter balancer shaft is integrated in a very compact manner having little effect on the overall design.

Additionally, the water pump casing is designed for effective cooling by optimising the flow of coolant.

- Die-cast engine casings → mass centralisation, optimal handling
- Water pump casing → optimal flow of coolant for effective cooling

#### Counter balancer shaft

The engine houses a laterally mounted counter balancer shaft. The balancer significantly reduces vibration resulting in a smoother and more comfortable ride.

- Counter balancer shaft → significantly reduced vibration

#### Crankshaft

The crankshaft features a 72 mm stroke and is balanced in conjunction with the counter balancer shaft for minimum vibration. By incorporating a heavier ignition rotor, the crankshaft produces more inertia than its motocross counterpart, which improves control in the lower RPM range.

#### Gearbox

A 6-speed Pankl Racing Systems gearbox features enduro specific ratios while an innovative shift lever reduces dirt build up guaranteeing easy operation in all conditions.

- 6-speed gearbox → enduro specific ratios
- Gear lever → prevents dirt build up and blockage

#### Clutch

The TE 300i Rockstar Edition features a Damped Diaphragm Steel (DDS) clutch. What this means is the clutch uses a single diaphragm spring instead of the more common coil spring design, resulting in a much lighter clutch action. This design also incorporates a damping system that increases both traction and durability. Additionally, the light and robust basket and inner hub guarantee optimal oil supply and cooling to the clutch.

Combined with the Brembo hydraulic system it guarantees a light and smooth clutch feeling, which is almost maintenance and adjustment free.

- DDS clutch → light action with integrated damping system, increased traction, and reliability
- Brembo hydraulic system → light and smooth clutch action, almost maintenance free

#### Oil tank and pump

The TE 300i Rockstar Edition features an electronic oil pump that feeds vital 2-stroke oil into the engine to keep it lubricated. The pump is located just below the oil tank and feeds the oil via the throttle body meaning oil is not mixed with the fuel, eliminating the need for pre-mixing as per traditional 2-stroke engines. The pump is controlled by the EMS and delivers the optimal amount of oil according to the current RPM and engine load. This reduces waste as well as excessive smoke being transmitted from the exhaust.

The oil tank is located beneath the fuel tank and is connected to a filler hose, which runs through the upper member of the frame to a filler cap conveniently located for easy refills. The oil tank capacity is 0.7 litres and is fitted with a sensor that illuminates a visible warning light to the rider when the oil needs to be refilled.

- Oil pump and tank → convenient solution, eliminates pre-mix