

# 2021

## Tracer 9 GT



### Liquid Metal

\$14,899 MSRP\* \$425 Destination Charge\*



### Redline

\$14,899 MSRP\* \$425 Destination Charge\*

## NEW FOR 2021

### 1. All-New 890cc Liquid-Cooled 3-Cylinder DOHC Fuel-Injected Engine

The 2021 Tracer 9 GT features a newly developed 890cc liquid-cooled 3-cylinder, DOHC, 4-valve-per-cylinder fuel-injected (YCC-T) engine with a downdraft intake. The bore × stroke of 78 mm × 62.1 mm and 11.5:1 compression ratio provide outstanding torque with strong power delivery characteristics. Almost all of the fundamental parts of the engine, from the pistons and connecting rods to the crankshaft, camshafts and crankcase, have all been redesigned. The combustion efficiency results in an impressive 9% improvement as well as an increased fuel efficiency to 49 MPG.

### 2. New Lightweight Aluminum Frame

To achieve both sporty performance and excellent riding comfort, the new Tracer 9 GT adopts a newly developed lightweight aluminum frame with model-specific tuning. Using the latest Controlled Filling (CF) aluminum die-casting technology, this frame features the thinnest sections ever on a Yamaha die-cast frame at just 1.7 mm (thinnest section on the 2020 Tracer 900's frame is 3.5 mm).

### 3. KYB Electronically Controlled Suspension

Jointly developed with KYB to deliver both sporty performance and a comfortable ride, the Tracer 9 GT features an electronically controlled suspension. The suspension provides optimum damping force that is based on real-time running conditions for great riding comfort and feel from the road. Based on input from the 6-axis Inertial Measurement Unit (IMU), the Engine Control Unit (ECU) and the Hydraulic Unit (HU), the Suspension Control Unit (SCU) calculates the optimum settings for suspension damping. The damping adjustment mechanism is solenoid-driven which enables changes to the damping force to be reflected quickly, and big damping force changes are possible. This suspension system generates steady damping force even when the suspension piston is moving slower, which contributes to stabilizing the motorcycle's attitude when starting from a stop as well as stabilizing the chassis attitude when accelerating, braking and cornering. The electronically controlled system controls the rebound and compression damping for the front fork and rebound damping for the rear shock.



\*Manufacturer's Suggested Retail Price (MSRP) shown. Does not include tax, title, prep or destination charges. Actual prices set by dealer.

## FEATURES & BENEFITS

### NEW FOR 2021 - CONT.

#### 4. 6-Axis IMU

The 2021 Tracer 9 GT features a newly developed 6-axis Inertial Measurement Unit (IMU) that retains the base performance of proven IMU in the YZF-R1 but is 50% smaller and 40% lighter due to a thorough review of the sensor layout. The engine control unit (ECU) that receives and reflects the data from the IMU is equipped with three rider aids: a Traction Control System (TCS), Slide Control System (SCS) and the front-wheel LIFt control system (LIF). The Brake Control System is controlled by the Hydraulic Control Unit (separate unit from ECU) which modulates front and rear brake pressure based on data from the IMU as well as the front and rear wheel speed sensors. All three systems work together to help the rider concentrate on better extracting the machine's potential. Each of the systems can also be turned on or off and have their levels of intervention adjusted to preference.

#### 5. Full LED Lighting With Cornering Lights

The compact mono-focus (separate high and low beam units) LED headlights in a twin-eye arrangement provide excellent beam spread for the 2021 Tracer 9 GT. The edges of the beam have a softer contrast to be easy on the eyes while emitting a soft and even spread of illumination. Since the Tracer 9 GT uses not one but multiple LEDs to produce light, it can project a complex distribution of illumination across a broad field. The position lights also use LEDs for a wider field of illumination while the redesigned rear lights give off a smoother plane of light. New for 2021, the cornering lights help improve rider's confidence at night as the light strength grows as the lean angle increases. Following the FJR1300ES, this is the second Yamaha model to feature a cornering light system but the only one with a single LED unit per side that emits increasingly stronger source of light in a high-quality, highly functional design.

## TOP FEATURES

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#### Standard side cases

Standard side cases allow the ability and convenience to carry your gear with you.

## ENGINE

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### Redesigned Fuel Delivery System

The fuel delivery system has been completely redesigned. On former Tracer 9 GTs, the fuel injectors were attached directly to the cylinder head, but the fuel injectors of the 2021 Tracer 9 GT are now attached to the throttle valve side of the throttle bodies. The injectors now spray at the back of the intake valve heads to promote atomization of the fuel and reduce adhesion of fuel particles to the port walls, producing outstanding combustion efficiency. The throttle valve is operated using the Yamaha Chip Controlled Throttle (YCC-T) electronic system which has been widely proven on YZF series models as well as the earlier Tracer 9 GT models.

### Lightweight Forged Pistons

The lightweight forged pistons allow for smooth, high-revving power.

### Fracture-Split Connecting Rods

The forged connecting rods are made using the fracture-split method—where the big-end ring of the connecting rod is purposefully fractured and then reassembled—to ensure an unparalleled degree of manufacturing accuracy. This creates a pair of perfectly matching halves that produce a much more precise mating surface when the rods are bolted together again around the crankshaft.

### Offset and Direct-Plated Cylinders

The CP3 engine mounts its three cylinder bores forward, towards the exhaust side. This offset reduces the piston to cylinder wall friction, creating more power and improved fuel economy while the direct-plated ceramic-composite cylinder bores provide excellent heat dissipation and reduced friction.

### New Symmetrical Muffler with Dual Outlets

The new muffler on the 2021 Tracer 9 GT contributes to a lower mass centralization and also produces a low-frequency exhaust note at low speeds. The exhaust tailpipes are left-right symmetrical which directs sound pressure to both sides of the machine, creating an exhaust note that delivers a sense of torque to the rider. The newly designed stainless steel header pipes are each given a different curvature and length for an excellent pulse effect.

### New Intake System

The new intake system has been designed to suit the new engine and provides linear response when the rider opens and closes the throttle. The three intake ducts also contribute to the excellent engine sound at midrange and high rpm. These ducts are designed with different cross sections and lengths so that the intake sounds they produce individually resonate harmoniously at varying wavelength ranges. At the same time, the sound pressure has also been tuned to create a pleasing sound in the mid- and high-rpm range. The result is an air cleaner box that achieves both good intake efficiency and an enjoyable sound.

### Assist and Slipper Clutch

The 2021 Tracer 9 GT features an Assist and Slipper (A&S) clutch that has specifications selected to best match the new engine for a lighter clutch lever pull and smoother chassis behavior during downshifts.

### Optimized Transmission Ratios

The transmission ratios have been optimized, with the gear ratios for 1st and 2nd gear slightly higher than on previous models (1st gear: from 2.666 to 2.571; 2nd gear: from 2.000 to 1.947). Working in combination with the increased momentum of inertia of the crankshaft and the fuel injection settings, the transmission provides the right balance of a powerful torque feeling and ease of use, from acceleration to stopping.

## CHASSIS/SUSPENSION

### New Lightweight Aluminum Frame

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### Strong Steel Subframe

The 2021 Tracer 9 GT's steel subframe ensures excellent straight-line stability and cornering ability, even when outfitted with a large fuel tank and three hard rear luggage cases.

### Redesigned Lightweight, High-Rigidity Swingarm

The Tracer 9 GT features a new, longer swingarm that is now located inside of the frame. It has a boxed construction formed by welding together aluminum plates. The new swingarm helps achieve both high rigidity and lighter weight, conveying the feeling of drive force to the rider and aiding with excellent traction at high speeds and when cornering.

### Lightweight Spin Forged Aluminum Wheels

The 2021 Tracer 9 GT employs lightweight wheels. Manufactured using Yamaha-exclusive spinforging technology, these wheels contribute to outstanding handling. With a notable 11% decrease in the momentum of inertia at the rear, these wheels make for a big contribution to the Tracer 9 GT's agile handling character.

### Nissin Radial Front Brake Master Cylinder

To provide excellent controllability, Tracer 9 GT features a new radial Nissin master cylinder for the front brake. The piston in the master cylinder moves in a direction parallel to brake lever travel, contributing to a more linear supply of hydraulic pressure for excellent controllability.

### Adjustable Riding Position

The riding position was designed to accommodate riders of varying physiques and includes a two-level adjustable main seat. The handlebars and footpegs can also be adjusted to two different positions, allowing riders to set a position that gives them a secure feeling the moment they get on the bike. The handlebar clamps can be rotated 10mm forward changing the bar position 9mm forward and 4mm up, and the footpeg mounts can be raised 14mm higher as well as 4mm rearward.

**KYB Electronically Controlled Suspension**

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**Sport and Comfort Mode**

The 2021 Tracer 9 GT suspension has two modes: Sport (A-1) and Comfort (A-2). Sport mode is geared toward sporty riding on dry roads but can also accommodate wet conditions. Comfort mode is aimed at providing a comfortable ride on rough asphalt roads or roads with potholes.

**ELECTRONICS****6-Axis IMU**

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**Lean Angle-Sensitive Traction Control System**

The Traction Control System (TCS) detects the difference in speed between the front and rear wheels and helps to efficiently extract drive force from the rear tire during acceleration. The new TCS on the 2021 Tracer 9 GT uses this data for the lean angle, estimated by the IMU to adjust the degree of intervention by the TCS. As the lean angle increases, so does the amount of TCS intervention (1 = little intervention; 2 = moderate intervention; 3 = strong intervention).

**Lift Control System (LIF)**

The LIFT Control System (LIF) intervenes when the IMU predicts front-wheel lift to adjust the engine's output to compensate and assist the rider. On the 2021 Tracer 9 GT, the system settings are focused on providing smooth behavior once the intervention ceases. The LIFT system's intervention is set up to work together with the other rider aids, and with Mode M, the level of intervention can be chosen manually by the rider.

**MotoGP®-Developed Slide Control System (SCS)**

The 2021 Tracer 9 GT features the Slide Control System (SCS), just like the one on the acclaimed YZF-R1. When the IMU predicts that a sideward slide is occurring at the rear tire, the SCS responds by adjusting the power output to help the rider focus on riding. The degree of intervention is pre-set for the TCS with Mode 1 and Mode 2, but Mode M allows for the level of intervention to be selected or for the system to be turned off.

**Brake Control System with ABS**

With the Brake Control (BC) system, data for the front and rear wheel speed as well as data from the IMU is compiled and calculated in real-time in the hydraulic unit assembly (including the ABS control unit) to independently control and modulate the front and rear brake pressure. The rider can select between two intervention modes: BC1 and BC2. BC1 is a standard ABS-active mode that accommodates hard emergency braking in upright, straight-line braking conditions while BC2 controls the brake pressure in addition to ABS and operates in situations where machine behavior is likely to become unsettled, such as unavoidable panic braking mid-corner.

**Quick Shift System for Clutchless Upshifts and Downshifts**

The QSS on the Tracer 9 GT provides both clutchless upshifts and downshifts. When the sensor on the shift rod detects movement in the gearshift pedal, adjustments are made in the engine output according to ECU calculations to instantly cancel out the drive torque of the engaged gear to promote swifter shifting of gears.

**Ride-by-Wire YCC-T Throttle System with New APSG**

The Tracer 9 GT's Yamaha Chip Controlled Throttle (YCC-T) electronically governs the throttle valves, but unlike the system on former models that use a cable to relay throttle inputs via a pulley, the 2021 Tracer 9 GT features the new Accelerator Position Sensor Grip

**SPECIFICATIONS:**

<b>Engine Type</b>	890cc liquid-cooled, DOHC, inline 3-cylinder; 4 valves per cylinder
<b>Bore x Stroke</b>	78.0mm x 62.1mm
<b>Compression Ratio</b>	11.5:1
<b>Fuel Delivery</b>	Fuel injection with YCC-T
<b>Ignition</b>	TCI: Transistor Controlled Ignition
<b>Transmission</b>	6-speed; multiplate assist and slipper clutch
<b>Final Drive</b>	Chain
<b>Suspension / Front</b>	KYB 41mm inverted fork, electronically adjustable with preload adjustability; 5.1-in travel
<b>Suspension / Rear</b>	KYB single shock, electronically adjustable with remote preload adjustability; 5.4-in travel
<b>Brakes / Front</b>	Dual 298mm hydraulic disc; ABS
<b>Brakes / Rear</b>	245mm hydraulic disc; ABS
<b>Tires / Front</b>	120/70ZR17
<b>Tires / Rear</b>	180/55ZR17
<b>L x W x H</b>	85.6 in x 34.8 in x 56.3 in - 57.9 in
<b>Seat Height</b>	31.9 in or 32.5 in
<b>Wheelbase</b>	59.1 in
<b>Rake (Caster Angle)</b>	25.0°
<b>Trail</b>	4.3 in
<b>Maximum Ground Clearance</b>	5.3 in
<b>Fuel Capacity</b>	5.0 gal
<b>Fuel Economy**</b>	49 MPG
<b>Wet Weight***</b>	485 lb* (*does not include side cases)
<b>Warranty</b>	1 Year (Limited Factory Warranty)
<b>Color</b>	Liquid Metal; Redline

\*\*\* Wet weight includes the vehicle with all standard equipment and all fluids, including oil, coolant (as applicable) and a full tank of fuel. It does not include the weight of options or accessories. Wet weight is useful in making real-world comparisons with other models.