

# PANIGALE V4

## TORQUE SETTINGS – V4, V4S

VERSION 1.0

**WARNING! THIS IS NOT A CONTROLLED DOCUMENT. REFERENCE TO THIS DOCUMENT AND ANY CONSEQUENCES ARISING FROM ITS USE AND THE INFORMATION WITHIN IT, ARE AT YOUR OWN RISK. NO RESPONSIBILITY IS ASSUMED OR IMPLIED BY THE AUTHOR.**

\*Denotes +/- 5% tolerance

Parts	Qty	Size	Nm	Notes
<b>ACCESSORIES</b>				
Passenger footrests to rear sub-frame fasteners	4	M8	22.0	
Seat side panels (biposto) bracket to under-tray / tool compartment	2	M5	8.0	
Seat side panels (biposto) to side panels bracket	6	M4	3.0	
<b>HYDRAULICS</b>				
ABS support bracket to engine fasteners	2	M6	10.0	Pre-applied threadlock
Front brake master cylinder to handlebar fasteners	2	M6	10.0	(Seq: 1-(UP)-2-1)
Front brake reservoir bracket to master cylinder bolt	1	M6	10.0	
Front brake reservoir to bracket fastener	1	M5	5.0	LOCK 1
Front brake master cylinder banjo bolt	1	M10	23.0	
ABS banjo bolts	4	M10	23.0	
Brake caliper banjo bolts	3	M10	23.0	
ABS support bracket rubbers to support bracket fasteners	2	M6	6.8	LOCK 2
Front brake caliper bolts	4	M10	45.0	GREASE B Pre-torque 2Nm
Rear brake master cylinder fasteners	2	M6	8.0	LOCK 2
Rear brake reservoir fastener	1	M6	2.0	
Rear brake caliper bolts	2	M8	25.0*	GREASE B
Front brake line guide (front mudguard) fastener	1	M6	4.0	
Brake line guide bracket to clutch cover fasteners	3	M5	6.0	
Front brake line guide to front frame fastener	1	M5	5.0	LOCTITE 243
Rear brake line guide to swing arm fasteners	2	M5	5.0	
Rear brake line to swing arm fastener	1	M6	6.0	
<b>NUMBERPLATE HOLDER</b>				

Number plate holder top half to bottom half fasteners	4	AF	5.0	
Number plate bracket to number plate holder	2	M6	5.0	
Number plate holder to rear sub-frame	2	M5	6.0	
Rear reflector to number plate fasteners	2	M4	2.0	

## HANDLEBARS & CLUTCH

LH handlebar clamp to fork leg pinch bolt	1	M8	22.0	GREASE B
RH handlebar clamp to fork leg pinch bolt	1	M8	22.0	GREASE B
LH handlebar pinch bolts	2	M6	15.0	
RH handlebar pinch bolts	2	M6	15.0	
Bar end weight fasteners	1+1	M6	8.0	
Clutch master cylinder to handlebar fasteners	2	M6	10.0	(Seq: 1-(UP)-2-1)
Clutch reservoir bracket to master cylinder fastener	1	M6	10.0	
Clutch reservoir to bracket fastener	1	M5	5.0	LOCK 1
Banjo bolt to master cylinder	1	M10	23.0	
Banjo bolt to slave cylinder	1	M10	23.0	
Clutch slave cylinder to engine fastener	1	M6	10.0	
Clutch slave cylinder and metal plate to engine fastener	1	M6	10.0	

## REAR SUSPENSION

Upper suspension support bracket to rear cylinder head fasteners	2	M8	30.0*	GREASE B (only on thread)
Upper to lower suspension mounts to engine fasteners	2	M8	35.0*	GREASE B (only on thread)
Lower suspension support bracket to engine fasteners	2	M8	35.0*	GREASE B (only on thread)
Rocker link to lower support bracket fastener	1	M12	120.0*	GREASE B (only on thread)
Upper shock absorber bolt to upper support bracket	1	M10	54.0*	GREASE B (on thread & under head)
Lower shock absorber bolt to rocker arm	1	M10	54.0*	GREASE B (on thread & under head)
Suspension link rods to rocker arm fastener	1	M12	120.0*	GREASE B (only on thread)
Suspension link rods to swing arm fasteners	1	M12	120.0*	GREASE B (only on thread)

## PEDALS AND LEVERS

LH footrest to swing arm support fasteners	2	M8	25.0*	GREASE B
Gear change arm pinch bolt	1	M6	10.0	

DQS unit to gear change rod	1	M8	15.0	LOCK 1
DQS to gear change arm fastener	1	M6	10.0	Pre-applied threadlock
DQS to gear change pedal	1	M6	10.0	LOCK 1
LH heel guard fasteners	2	M5	6.0	LOCK 2
RH footrest to swing arm support fasteners	2	M8	25.0*	GREASE B
Gear change lever pivot bolt	1	M8	25.0*	GREASE D
RH heel guard fasteners	2	M5	6.0	LOCK 2

## FRAME

Tripod to rear cylinder head fasteners	3	M8	24.0*	GREASE B (on thread & under head)
Front frame to engine fasteners	4	M12	90.0*	GREASE B (on thread & under head)
Front sub-frame to front frame fasteners	4	M6	10.0	GREASE B
LH sub-frame cover to sub-frame fasteners	2	M4	3.0	
RH sub-frame cover to sub-frame fasteners	2	M4	3.0	
Sub-frame to front frame fasteners	1+1	M8	31.0*	Replace whenever removed/re-fitted
Sub-frame to rear cylinder head fasteners	1+1	M8	35.0*	Replace whenever removed/re-fitted
Sub-frame cross brace fasteners	2	M8	18.0	
Seat support bracket to sub-frame fasteners	4	M6	8.0	
Seat under-tray / tool compartment to rear sub-frame front fasteners	2	M8	22.0*	
Seat under-tray / tool compartment to rear sub-frame rear fastener	1	M8	22.0*	
Seat lock assembly to seat under-tray / tool compartment	2	M5	5.0	
Passenger grab handle to sub-frame fasteners	2	M8	18.0	

## FRONT WHEEL

Valve stem fastener	1		9.0	LOCK 2
Front brake disc bolts	10	M8	30.0*	
Front axle nut	1		63.0*	GREASE B (on thread & under head)

## REAR WHEEL

Eccentric hub assembly				GREASE B
Rear sprocket carrier nuts	6	M10	44.0*	LOCK 2
Axle nut (sprocket side)	1	M48	230.0*	GREASE B (on thread & under head)

Rear ABS ring fasteners	4	M5	8.0*	Pre-applied threadlock
Valve stem fastener	1		9.0	LOCK 2
Axle nut (wheel side)	1	M48	230.0*	GREASE B (on thread & under head)

## FUEL TANK

Front bracket to fuel tank fasteners	2	M6	6.0	LOCK 1
Fuel tank to rear sub-frame front fasteners	2	M5	6.0	
Fuel tank to rear sub-frame rear fasteners	2	M5	6.0	
Dual Lock / Velcro to fuel tank fasteners	4	M4	3.0	

## EXHAUST

Front exhaust manifold nuts	3+3	M6	10.0	GREASE B (on thread & under head)
Rear exhaust manifold nuts	3+3	M6	10.0	GREASE B (on thread & under head)
Silencer to LH semi support bracket fastener	1	M8	22.0	
Silencer to RH bracket fastener	1	M8	22.0	
LH silencer cover to silencer	2	M5	5.0	
RH silencer cover to silencer	2	M5	5.0	
Heat shield to front header fasteners	3	M5	5.0	
Heat shield to sub-frame fasteners	4	M6	8.0	Pre-applied threadlock
Starter motor heat shield to front exhaust heat shield	1	M5	5.0	

## OIL COOLER & RADIATOR

Oil cooler to radiator duct fasteners	2	M5	6.0	
Oil lines to oil cooler	2	M20	15.0	
Oil lines to engine sump fasteners	2	M6	10.0	LOCTITE 1
Radiator duct upper fasteners to front frame	2	M5	6.0	
Expansion tanks to radiator duct	3+3	M5	5.0	
Water coolant pipes - jubilee clips (all)			2.5	
Air conveyor to radiator duct fasteners	4	M5	6.0	

## AIRBOX AND FILTER

Air box cover to air box lower fasteners	2	M4	3.0	
Outer air filter duct to front frame fasteners	4	M5	6.0	
Inner air filter duct to front frame fasteners	4	M5	6.0	

Air separator to front frame fastener	1	M4	3.0	
<b>FUEL INJECTION</b>				
Fuel pump to fuel tank bolts	6	M5	5.0	GREASE B
Inlet manifold to cylinder head fasteners	8	M8	10.0*	
Throttle bodies to inlet manifold fasteners	16	M5	8.0	Pre-applied threadlock
Fixed trumpets to throttle body fasteners	8	M5	6.0	Pre-applied threadlock
Variable trumpet stud to throttle bodies	4	M12	5.0	LOCK 5
Lever support to throttle body fasteners	4	M5	8.0	LOCK 1
Injector caps to throttle body fasteners	4	M4	3.0	
Fuel distributor to bottom of air box fastener	1	AF	1.0	
Injector caps to air box cover fasteners	4	M4	3.0	
Fuel canister bracket to engine fasteners	2	M6	10.0	
<b>BODYWORK</b>				
Headlight fairing to sub-frame fasteners	2	M5	5.0	
Plexiglass screen to headlight fairing	6	M4	0.2	Torx bolts
LH side fairing to LH lower fairing fasteners	3	M5	2.5	
LH upper fairing to headlight fairing	2	M5	2.5	
LH fairing to swing-arm support fastener	1	M5	6.0	
RH side fairing to RH lower fairing fasteners	3	M5	2.5	
RH upper fairing to headlight fairing	2	M5	2.5	
RH fairing to swing-arm support fastener	1	M5	6.0	
LH upper fairing to radiator duct fastener	1	M5	2.5	
RH upper fairing to radiator duct fastener	1	M5	2.5	
Battery cover to fairing fasteners	2+2	M5	2.5	
Instrument cover to front sub-frame fasteners	4	M5	3.0	
Ignition switch cover fasteners	2	M5	8.0	
Front mudguard bolts	4	M6	8.0	Pre-applied threadlock
Rear hugger to swing arm fasteners	5	M5	8.0	Pre-applied threadlock
Rider's seat pad fasteners	2	M5	5.0	
Sub-frame side cover to sub-frame fasteners	4	M5	6.0	
Under-seat panel to sub-frame	4	M5	2.5	
Under seat panel to seat under-tray / tool-kit compartment	2	M5	2.5	
Air duct covers to ignition switch cover	1+1	M5	2.5	
Air duct covers to instrument cover	1+1	M5	2.5	
<b>SWING ARM</b>				
LH swing arm support to engine fasteners	2	M8	25.0	GREASE B
LH swing arm pinch bolt	1	M8	20.0*	GREASE B

RH swing arm support to engine fasteners	2	M8	25.0	GREASE B
RH swing arm pinch bolt	1	M8	20.0*	GREASE B
LH swing arm pivot bolt	1	M20	100.0*	GREASE B
RH swing arm pivot bolt	1	M20	100.0*	GREASE B
Brake caliper support plate locating pin to swing arm	1	M12	33.0*	LOCK 5
Eccentric hub pinch bolts	2	M10	20.0*	GREASE B (seq: 1-2-1)
Chain guide to swing arm fasteners	4	M6	5.0	
Chain guide tunnel to swing arm fasteners	2	M6	5.0	

## ELECTRONICS / ELECTRICAL SYSTEM

Battery support to air box fasteners	4		3.0	
Battery cables to battery	2			
Battery cables to starter solenoid/relay fasteners	2	M6	4.0	
Starter motor cable fastener	1	M5	3.0	GREASE D
Voltage regulator to battery support fasteners	2	M5	5.0	
Wiring guide to bottom of air box	3	AF	1.0	
Exhaust valve motor to bracket fasteners	3	M5	6.0	
Exhaust valve closing cable to silencer bracket fastener	1	M6	2.5	
Exhaust valve opening cable to silencer bracket fastener	1	M6	2.5	
ECU to air box fastener	1	M4	3.0	
Smart EC to air box fastener	1	M4	3.0	
GPS blanking plug to instrument cover fastener	2	M4	1.5	
IMU to bracket fasteners	2	M6	4.0	
Silent block to IMU bracket fasteners	3	M5	3.0	
IMU bracket silent block to sub-frame fasteners	3	M5	3.0	
Rear brake light switch	1	M8	5.0	
Ignition switch to front frame fasteners	2	M6	10.0	
Horn to bottom yoke fastener	1	M8	18.0	LOCK 2
Side stand switch fasteners	2	M4	3.0	LOCK 2
VIS actuator to bracket fasteners	3	M5	6.0	
Secondary air actuator to support fasteners	2	M5	4.0	
MAP sensor support to air box fasteners	2	M4	3.0	
Front MAP sensors to air box fasteners	2	M4	3.0	
Front wheel speed sensor bolt	1	M6	10.0	
Rear wheel speed sensor bolt	1	M6	10.0	
Front lambda sensor	1	M12	25.0	Pre-applied grease
Rear lambda sensor	1	M12	25.0	Pre-applied grease

## SIDE STAND

Magnet to side stand				Swage edges of hole
Upper spring locating pin	1	M6	8.0	
Lower spring locating pin	1	M6	5.0	LOCK 5
Side stand pivot bolt	1	M8	25.0	GREASE B

## CHAIN & SPROCKETS

Front sprocket fastener	1	M10	55.0*	GREASE B
Sprocket cover and plate to engine fastener	1	M6	10.0	
Sprocket cover, plate and slave cylinder to engine fastener	1	M6	10.0	
Chain guard to silencer cover fastener	1	M5	--	

## LIGHTING / INDICATORS / MIRRORS

Headlight to front sub-frame fasteners	2	M5	5.0	GREASE B
Headlight to headlight fairing fasteners	2	M5	5.0	
Resonator to air conveyor fasteners	2	AF	0.5	
Resonator to headlight fasteners	2	AF	0.5	
Air conveyor to headlight fasteners	2	AF	0.5	
Rear indicator fasteners	2	M5	3.0	
Rear light to under tray / tool compartment	1	AF	3.0	
Rear view mirrors/indicators to front sub-frame	4	M5	6.0	

## INSTRUMENTATION

Silent block to instrument panel	3	M5	1.0	
Silent block to front sub-frame fasteners	3	M5	3.0	

## FRONT FORKS / STEERING

Steering shaft to lower yoke	1		40.0	
Lock stop fasteners	2		10.0	LOCK 2
Front axle pinch bolts	2+2		19.0*	GREASE B
Bottom yoke pinch bolts	6		8.0*	GREASE B
Splash guard to bottom yoke bolts	3		5.0	
Steering stem nut to steering shaft	1		35.0	GREASE D
Top yoke to fork pinch bolts	2		22.0	GREASE B
Tope yoke pinch bolt to steering stem nut	1		22.0	GREASE B
Steering damper to front frame fastener	1		10.0	LOCK 1
Rod end to steering damper (S model only)	1		10.0*	LOCK 2
Steering damper to RH handlebar clamp fastener	1		10.0	LOCK 1