



HWM-02-10-XXX-B-XXXX

Main harness for Yamaha GP1800
2021+ models
Revision B

Connector legend

Number	Connector name	Description
1	FUSE_BOX	Fuse / Relay box
2	RIDE_SIGNAL	Ride signal connector
3	RIDE_POWER	Ride power connector
4	WIDEBAND	Wideband connector
5	BILGE_PUMP	Bilge pump connector
6	STARTER_SOLENOID	Starter solenoid connector
7	BATTERY_12V	Battery 12V eyelet contact
8	ECU_A	ECU connector A
9	ECU_B	ECU connector B
10	TUNNEL_PRESSURE	Tunnel pressure connector for adapter harness
11	BOOST_SOLENOID	Boost solenoid connector
12	CRANK_POSITION_SENSOR	Crankshaft position sensor connector
13	ENGINE_GROUND_A	Engine block ground eyelet contact A
14	ENGINE_GROUND_B	Engine block ground eyelet contact B
15	ENGINE_GROUND_C	Engine block ground eyelet contact C
16	THROTTLE	Throttle body connector to OEM throttle body sub harness
17	COOLANT_TEMPERATURE_SENSOR	Coolant temperature sensor connector
18	CKP_RESISTOR	Crank trigger resistor connector
19	CAM_POSITION_SENSOR	Camshaft position sensor connector
20	FUEL_PRESSURE_SENSOR	Fuel pressure sensor connector
21	COIL_4	Coil #4 connector
22	COIL_3	Coil #3 connector
23	COIL_2	Coil #2 connector

24	COIL_1	Coil #1 connector
25	INJECTOR_4	Injector #4 connector
26	INJECTOR_3	Injector #3 connector
27	INJECTOR_2	Injector #2 connector
28	INJECTOR_1	Injector #1 connector
29	INLET_AIR_TEMP_SENSOR	Inlet air temperature sensor connector
30	CAN_BUS_AUXILIARY	Auxiliary CAN bus connector
31	NITROUS	Nitrous connector to adapter harness
32	OIL_PRESSURE	Oil pressure connector to adapter harness
33	MAIN_RELAY	Connector for main relay (PDM1)
34		
35	WIDEBAND_DISPLAY	Nano wideband module
36	FUEL_PUMP	Fuel pump connector
37	RIDE_CONTROLLER	Ride controller connector
38	GPS	GPS connector
39	START_SWITCH	Start switch connector
40	KILL_SWITCH	Kill switch connector
41	REVERSE_POSITION_SENSOR	Reverse position sensor connector
42		
43	PEDAL_POSITION_SENSOR	Accelerator pedal position sensor connector
44	TRIM	Trim connector

Connector data

All connections are pictured looking at the rear (wire side) of the connector.

FUSE_BOX

Overview

WARNING: Always replace fuses with a fuse of the same amperage. Putting a higher amperage fuse in any location will void the warranty. When replacing relays, use **ONLY** an approved relay.

Numbers are located at the bottom of the fuse box.

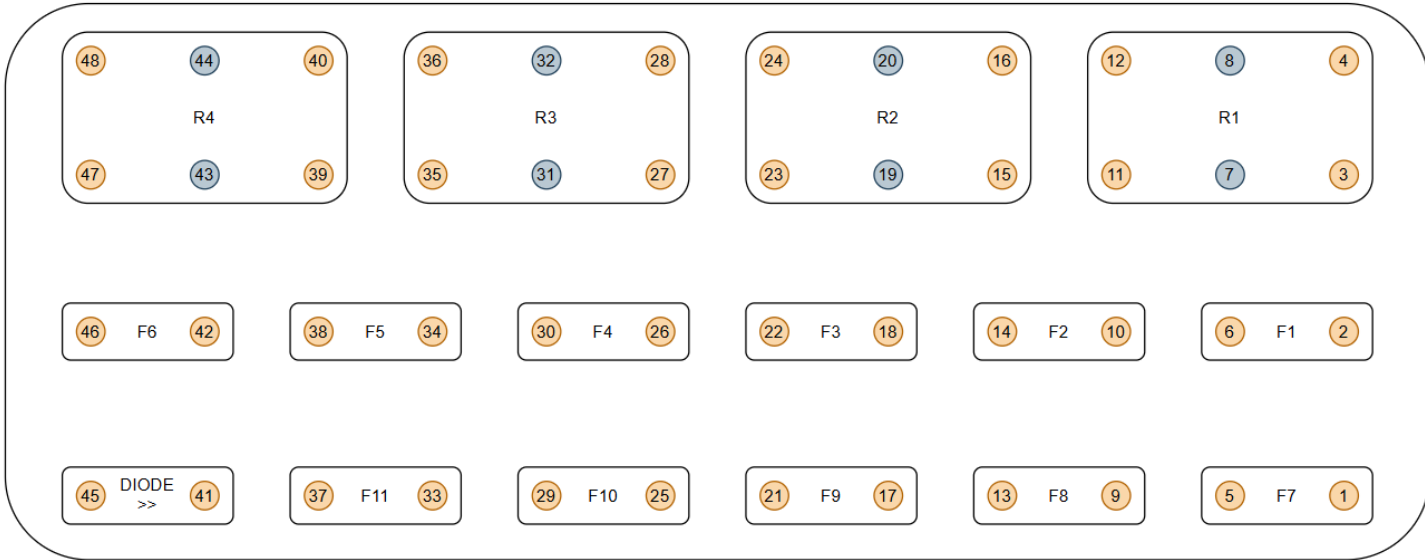
Please see below for available mating connectors and sub-harnesses

Part number	Description
YAM-GP-35A-RLY	35 Amp relay
YAM-GP-20A-RLY	20 Amp relay

Connector view



Diagram



- F1: 15A Coils
- F2: 3A GPS
- F3: 15A Nitrous
- F4: 20A Fuel pump
- F5: 3A Start switch
- F6: 20A Ride motor
- F7: 5A Bilge Pump
- F8: 10A ECU
- F9: 5A Wideband
- F10: 10A Injectors
- F11: 3A Boost solenoid
- F12: Diode

TOP VIEW

ID	Name	Value (Amps)
F1	Ignition coils fuse	15A
F2	GPS fuse	3A
F3	Nitrous solenoid fuse	15A
F4	Primary fuel pump fuse	20A
F5	Starter switch fuse	5A
F6	Ride / trim motor fuse	20A
F7	Bilge pump fuse	5A
F8	Engine control unit (ECU) fuse	10A
F9	Wideband fuse	5A

F10	Fuel injectors fuse	10A
F11	Boost solenoid fuse	3A
F12	Diode	
R1	Ignition coils relay	
R2	Primary fuel pump relay	
R3	Nitrous relay	
R4	Ride / trim relay	

Connection data

FUSE_BOX

Cavity	Size	Color	Conductor	Notes	To
1	20 AWG		W126.Red-White	Bilge pump 12V	BILGE_PUMP.1
2	16 AWG		W172.Red-Blue	Coils 12V	SPLICE_INJ_COILS.1
3	22 AWG		W130.Black-Yellow	Coils relay L.S.	ENGINE_GROUND_C
4	16 AWG		W83.Red	Coils relay B+	BATTERY_12V
5	20 AWG		W97.Red-White	Switched 12V to F7	SPLICE_12V_SWITCHED_1.8
6	16 AWG		W173.Red-Blue	Coils relay output	FUSE_BOX.11
7					
8					
9	18 AWG		W132.Red-Blue	ECU 12V	ECU_A.13
10	22 AWG		W143.Red-White	GPS 12V	GPS.1
11	16 AWG		W173.Red-Blue	Coils relay output	FUSE_BOX.6
12	22 AWG		W95.Red-White	Switched 12V to coils relay	SPLICE_12V_SWITCHED_1.9
13	18 AWG		W118.Red-White	Switched 12V to F8	SPLICE_12V_SWITCHED_1.3
14	22 AWG		W142.Red-White	Switched 12V to F2	SPLICE_12V_SWITCHED_1.4
15	22 AWG		W43.Violet-Brown	Nitrous relay L.S.	ECU_B.21
16	18 AWG		W67.Red	Nitrous relay B+	BATTERY_12V
17	20 AWG		W94.Red-White	Wideband 12V	WIDEBAND_DISPLAY.4
18	16 AWG		W13.Red-Green	Nitrous solenoid 12V	NITROUS.1
19					
20					
21	22 AWG		W3.Red-White	Switched 12V to F9	SPLICE_12V_SWITCHED_1.5
22	18 AWG		W174.Pink-Black	Nitrous relay output	FUSE_BOX.23
23	18 AWG		W174.Pink-Black	Nitrous relay output	FUSE_BOX.22
24	22 AWG		W116.Red-White	Switched 12V to nitrous relay	SPLICE_12V_SWITCHED_1.6
25	18 AWG		W99.Red-White	Injectors 12V feed	SPLICE_INJ_COILS.8
26	16 AWG		W57.Red-Blue	Fuel pump 12V	FUEL_PUMP.2
27	22 AWG		W135.Violet-Orange	Fuel pump L.S.	ECU_B.14
28	16 AWG		W79.Red	Fuel pump relay B+	BATTERY_12V
29	18 AWG		W110.Red-White	Switched 12V to F10	SPLICE_12V_SWITCHED_1.2
30	18 AWG		W175.Pink-Yellow	Fuel pump relay output	FUSE_BOX.35
31					
32					
33	22 AWG		W125.Red-White	Boost solenoid 12V	BOOST_SOLENOID.1
34	20 AWG		W22.Red	B+ to start SW	START_SWITCH.1
35	18 AWG		W175.Pink-Yellow	Fuel pump relay output	FUSE_BOX.30
36	22 AWG		W100.Red-White	Switched 12V to fuel pump relay	SPLICE_12V_SWITCHED_1.10
37	22 AWG		W115.Red-White	Switched 12V to F11	SPLICE_12V_SWITCHED_1.12
38	20 AWG		W72.Red	B+ to F5	BATTERY_12V
39	22 AWG		W139.Yellow-Red	Ground signal to Ride relay	RIDE_SIGNAL.11
40	14 AWG		W177.Red	Ride relay B+	BATTERY_12V
41	22 AWG		W113.Red-White	12V switched from diode	SPLICE_12V_SWITCHED_1.13
42	14 AWG		W176.Red-Blue	Ride motor relay 12V output	RIDE_POWER.2
43					
44					
45	20 AWG		W178.Pink	Start switch signal to PDM diode	SPLICE_START_STOP.2
46	14 AWG		W179.Red-Blue	Reverse relay output to F6	FUSE_BOX.47
47	14 AWG		W179.Red-Blue	Reverse relay output to F6	FUSE_BOX.46
48	22 AWG		W136.Gray-Red	12V signal to Ride relay	RIDE_SIGNAL.10

RIDE_SIGNAL

Connector view

8-pin black connector (Picture in progress)

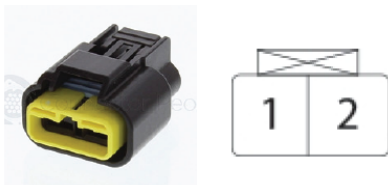
Connection data

RIDE_SIGNAL

Cavity	Size	Color	Conductor	Notes	To
1					
2	22 AWG		W145.Blue	CAN B LOW	ECU_B.3
3	22 AWG		W148.White	CAN B HIGH	ECU_B.4
4					
5					
6					
7					
8					
9	22 AWG		W74.Red-White	Ride 12V switched	SPLICE_INJ_COILS.6
10	22 AWG		W136.Gray-Red	12V signal to Ride relay	FUSE_BOX.48
11	22 AWG		W139.Yellow-Red	Ground signal to Ride relay	FUSE_BOX.39
12					
13	20 AWG		W92.Light Blue	Trim 1	TRIM.1
14	22 AWG		W69.Black	Trim 2	TRIM.2
15	22 AWG		W70.Green	Trim 3	TRIM.3
16					

RIDE_POWER

Connector view



Connection data

RIDE_POWER

Cavity	Size	Color	Conductor	Notes	To
1	14 AWG		W186.Black	Ride motor ground	ENGINE_GROUND_A
2	14 AWG		W176.Red-Blue	Ride motor relay 12V output	FUSE_BOX.42

WIDEBAND

Overview

This harness allows using Bosch LSU 4.9 or 4.2 sensors.

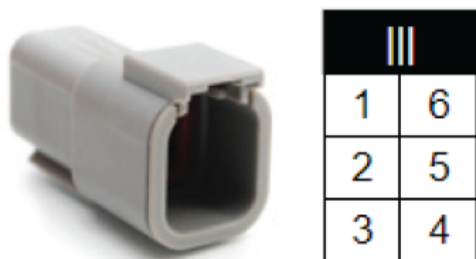
Please see below for available mating connectors and sub-harnesses

Part number	Description
HT-010726	Adapter harness for Bosch LSU 4.9 wideband sensor
HT-010727	Adapter harness for NTK wideband sensor
YAM-GP-WB-S	Sealing connector for applications that do not have a wideband sensor

WARNING!

The sensor being used MUST be configured correctly in the Nano Wideband software BEFORE powering the ecu with the sensor connected. Failure to do so will damage the sensor.

Connector view



Connection data

WIDEBAND_SENSOR

Cavity	Size	Color	Conductor	Notes	To
1	20 AWG		W194.Brown	Sensor positive signal	WIDEBAND_DISPLAY.3
2	22 AWG		W195.Orange	Sensor resistor calibration	WIDEBAND_DISPLAY.7
3	20 AWG		W196.Green	Sensor heater positive	WIDEBAND_DISPLAY.8
4	20 AWG		W197.Blue	Sensor heater negative	WIDEBAND_DISPLAY.9
5	22 AWG		W60.Yellow	Sensor negative signal	WIDEBAND_DISPLAY.2
6	20 AWG		W193.Red	IP	WIDEBAND_DISPLAY.1

BILGE_PUMP

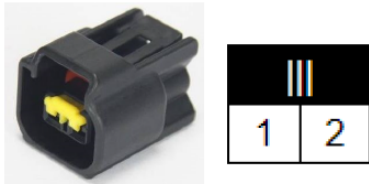
Overview

This harness is compatible with the OEM bilge pumps found on some Yamaha waverunners.

Please see below for available mating connectors and sub-harnesses

Part number	Description
YAM-GP-BILGE	OEM bilge pump with mating connector
YAM-GP-BILGE-S	Sealing connector for applications that do not have a bilge pump

Connector view



Connection data

BILGE_PUMP

Cavity	Size	Color	Conductor	Notes	To
1	20 AWG		W126.Red-White	Bilge pump 12V	FUSE_BOX.1
2	20 AWG		W162.Black-Yellow	Bilge pump ground	ENGINE_GROUND_B

STARTER_SOLENOID

Connector view



Connection data

STARTER_SOLENOID

Cavity	Size	Color	Conductor	Notes	To
1					
2					
3	20 AWG		W191.Red-White	Starter solenoid 12V	SPLICE_INJ_COILS.14
4	20 AWG		W109.Violet-Green	Starter solenoid ground	ECU_B.15

BATTERY_12V

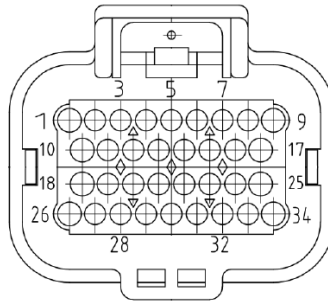
Connection data

BATTERY_12V

Size	Color	Conductor	Notes	To
16 AWG		W83.Red	Coils relay B+	FUSE_BOX.4
18 AWG		W67.Red	Nitrous relay B+	FUSE_BOX.16
16 AWG		W79.Red	Fuel pump relay B+	FUSE_BOX.28
20 AWG		W72.Red	B+ to F5	FUSE_BOX.38
14 AWG		W177.Red	Ride relay B+	FUSE_BOX.40
14 AWG		W182.Red	B+ to main relay	MAIN_RELAY.C

ECU_A

Connector view



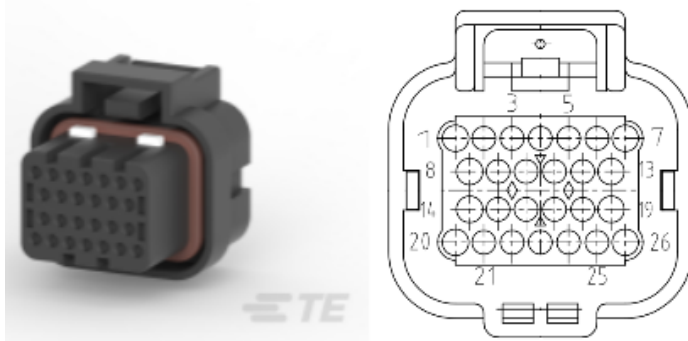
Connection data

ECU_A

Cavity	Size	Color	Conductor	Notes	To
1	20 AWG		W66.Blue	Injector 1 signal	INJECTOR_1.2
2	20 AWG		W65.Blue-Black	Injector 2 signal	INJECTOR_2.2
3	20 AWG		W64.Blue-Brown	Injector 3 signal	INJECTOR_3.2
4	20 AWG		W63.Blue-Red	Injector 4 signal	INJECTOR_4.2
5	20 AWG		W187.Blue-Orange	Secondary injector 1 signal	SECONDARY_INJECTORS.1
6	20 AWG		W188.Blue-Yellow	Secondary injector 2 signal	SECONDARY_INJECTORS.2
7	18 AWG		W76.Black	ECU ground	ENGINE_GROUND_B
8	22 AWG		W56.Yellow-Black	Coil 1 Trigger	COIL_1.1
9	22 AWG		W55.Yellow-Red	Coil 2 Trigger	COIL_2.1
10	22 AWG		W54.Yellow-Orange	Coil 3 Trigger	COIL_3.1
11	22 AWG		W53.Yellow-Green	Coil 4 Trigger	COIL_4.1
12	18 AWG		W77.Black	ECU ground	ENGINE_GROUND_B
13	18 AWG		W132.Red-Blue	ECU 12V	FUSE_BOX.9
14	22 AWG		W52.Orange	Sensor 5V	SPLICE_SENSOR_5V.2
15	22 AWG		W82.Blue	CAN A Low to ECU	SPLICE_CAN_LO
16	22 AWG		W88.White	CAN A High to ECU	SPLICE_CAN_HI
17	20 AWG		W25.Green	CMP Signal to ECU	CAM_POSITION_SENSOR.2
18	22 AWG		W198.Black	CKP signal -	SPLICE_TRIGGER_NEG
19	22 AWG		W71.White	CKP signal +	SPLICE_TRIGGER_POS
20	22 AWG		W44.White-Green	Throttle position sensor A signal	THROTTLE.1
21	22 AWG		W49.White-Black	Accelerator pedal position sensor A signal	PEDAL_POSITION_SENSOR.1
22	22 AWG		W78.Gray-Light Green	Reverse position sensor A signal	REVERSE_POSITION_SENSOR.1
23	22 AWG		W170.White-Violet	Accelerator pedal position sensor B signal	PEDAL_POSITION_SENSOR.4
24	22 AWG		W58.White-Violet	Coolant temperature sensor signal	COOLANT_TEMPERATURE_SENSOR.1
25	22 AWG		W81.Gray-Pink	Tunnel pressure sensor signal	TUNNEL_PRESSURE.2
26	22 AWG		W40.White-Gray	IAT signal	INLET_AIR_TEMP_SENSOR.1
N/C			CBL2.Shield	CKP signal shield	SPLICE_SHIELD

ECU_B

Connector view



Connection data

ECU_B

Cavity	Size	Color	Conductor	Notes	To
1	18 AWG		W161.Black	ECU ground	ENGINE_GROUND_B
2	18 AWG		W134.Black	ECU ground	ENGINE_GROUND_B
3	22 AWG		W145.Blue	CAN B LOW	RIDE_SIGNAL.2
4	22 AWG		W148.White	CAN B HIGH	RIDE_SIGNAL.3
5	22 AWG		W46.White-Yellow	Fuel pressure sensor signal	FUEL_PRESSURE_SENSOR.C
6	22 AWG		W180.Gray	Stop switch signal to ECU	SPLICE_START_STOP.3
7	22 AWG		W73.White	Oil pressure sensor signal	OIL_PRESSURE_TEMP.2
8	20 AWG		W189.Blue-Green	Secondary injector 3 signal	SECONDARY_INJECTORS.3
9	20 AWG		W190.Blue-Violet	Secondary injector 4 signal	SECONDARY_INJECTORS.4
10					
11					
12	20 AWG		W16.Pink	Start button signal to ECU	SPLICE_START_STOP.1
13	22 AWG		W144.Gray-Brown	GPS signal	GPS.2
14	22 AWG		W135.Violet-Orange	Fuel pump L.S.	FUSE_BOX.27
15	20 AWG		W109.Violet-Green	Starter solenoid ground	STARTER_SOLENOID.4
16					
17					
18	22 AWG		W146.White-Yellow	Fuel level signal	FUEL_LEVEL.1
19	22 AWG		W30.Light Green	Nitrous pressure sensor signal	NITROUS.3
20	22 AWG		W124.Violet-Black	Boost solenoid L.S.	BOOST_SOLENOID.2
21	22 AWG		W43.Violet-Brown	Nitrous relay L.S.	FUSE_BOX.15
22	20 AWG		W33.Brown-Black	Throttle Motor A	THROTTLE.3
23	20 AWG		W42.Brown-Red	Throttle Motor B	THROTTLE.6
24					
25					
26	22 AWG		W4.Black-White	ECU sensor ground	SPLICE_SENSOR_GROUND.10

TUNNEL_PRESSURE

Overview

This harness is equipped with a tunnel pressure sensor breakout connector.

Please see below for available mating connectors and sub-harnesses

Part number	Description
YAM-GP-TUNNEL-H-3F	3ft sub-harness that connects to a tunnel pressure sensor
YAM-GP-TUNNEL-S	Sealing connector for applications that do not require tunnel pressure monitoring

Connector view



Connection data

TUNNEL_PRESSURE

Cavity	Size	Color	Conductor	Notes	To
1	22 AWG		W9.Orange	Tunnel pressure sensor 5V	SPLICE_SENSOR_5V.12
2	22 AWG		W81.Gray-Pink	Tunnel pressure sensor signal	ECU_A.25
3	22 AWG		W8.Black-White	Tunnel pressure sensor ground	SPLICE_SENSOR_GROUND.9

BOOST_SOLENOID

Overview

This harness is equipped with a boost solenoid control connector. Dual solenoid (CO2) is not supported in this installation.

Please see below for available mating connectors and sub-harnesses

Part number	Description
YAM-GP-BOOSTSOL-3P	3-port solenoid kit with mating connector and mounting bracket
YAM-GP-BOOST-S	Sealing connector for applications that do not require a boost solenoid

Connector view



Connection data

BOOST_SOLENOID

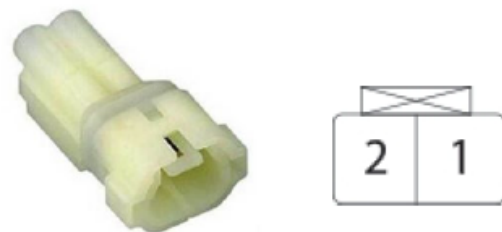
Cavity	Size	Color	Conductor	Notes	To
1	22 AWG		W125.Red-White	Boost solenoid 12V	FUSE_BOX.33
2	22 AWG		W124.Violet-Black	Boost solenoid L.S.	ECU_B.20

CRANK_POSITION_SENSOR

Overview

NOTE: Please ensure the crankshaft position sensor wires are in the original position. Some aftermarket ECUs require swapping the sensor wires and this can cause problems. If your sensor wires have been previously modified in any way, make sure these are back to factory settings before attempting to start the engine.

Connector view



Connection data

CRANK_POSITION_SENSOR

Cavity	Size	Color	Conductor	Notes	To
1	20 AWG		CBL2.Black	CKP Signal -	SPLICE_TRIGGER_NEG
2	20 AWG		CBL2.White	CKP Signal +	SPLICE_TRIGGER_POS

ENGINE_GROUND_A

Connection data

ENGINE_GROUND_A

Size	Color	Conductor	Notes	To
18 AWG		W164.Black	Coil 1 ground	COIL_1.2
18 AWG		W165.Black	Coil 2 ground	COIL_2.2
18 AWG		W166.Black	Coil 3 ground	COIL_3.2
18 AWG		W167.Black	Coil 4 ground	COIL_4.2
14 AWG		W186.Black	Ride motor ground	RIDE_POWER.1

ENGINE_GROUND_B

Connection data

ENGINE_GROUND_B

Size	Color	Conductor	Notes	To
20 AWG		W162.Black-Yellow	Bilge pump ground	BILGE_PUMP.2
18 AWG		W76.Black	ECU ground	ECU_A.7
18 AWG		W77.Black	ECU ground	ECU_A.12
18 AWG		W161.Black	ECU ground	ECU_B.1
18 AWG		W134.Black	ECU ground	ECU_B.2
16 AWG		W133.Black	Fuel pump ground	FUEL_PUMP.1

ENGINE_GROUND_C

Connection data

ENGINE_GROUND_C

Size	Color	Conductor	Notes	To
22 AWG		W130.Black-Yellow	Coils relay L.S.	FUSE_BOX.3
20 AWG		W15.Black-Yellow	Main relay ground	MAIN_RELAY.B
16 AWG		W17.Black	Nitrous solenoid ground	NITROUS.2
18 AWG		W192.Black-Yellow	Splice ground	SPLICE_ENGINE_GROUND.2

THROTTLE

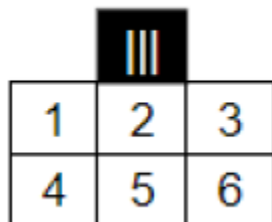
Overview

This harness is compatible with the Yamaha OEM throttle body. Other adapters are available to convert to different throttle bodies.

Please see below for available mating connectors and sub-harnesses

Part number	Description
YAM-GP-BOSCHTPS-H	Adapter harness to convert to a Bosch DBW throttle body
YAM-GP-MANUALTPS-H	Adapter harness to convert to manual throttle body

Connector view



Connection data

THROTTLE

Cavity	Size	Color	Conductor	Notes	To
1	22 AWG		W44.White-Green	Throttle position sensor A signal	ECU_A.20
2	22 AWG		W21.Orange	Throttle position sensor 5V	SPLICE_SENSOR_5V.10
3	20 AWG		W33.Brown-Black	Throttle Motor A	ECU_B.22
4					
5	22 AWG		W23.Black-White	Throttle position sensor ground	SPLICE_SENSOR_GROUND.8
6	20 AWG		W42.Brown-Red	Throttle Motor B	ECU_B.23

COOLANT_TEMPERATURE_SENSOR

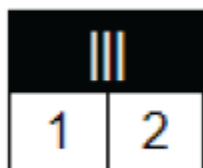
Overview

This harness is compatible with the OEM Yamaha coolant temperature sensor. Adapter harnesses are available to convert to other sensors.

Please see below for available mating connectors and sub-harnesses

Part number	Description
YAM-GP-GMCTS-H	Adapter harness to convert to a GM-style coolant temperature sensor

Connector view



Connection data

COOLANT_TEMPERATURE_SENSOR

Cavity	Size	Color	Conductor	Notes	To
1	22 AWG		W58.White-Violet	Coolant temperature sensor signal	ECU_A.24
2	22 AWG		W34.Black-White	Coolant temperature sensor ground	SPLICE_SENSOR_GROUND.2

CAM_POSITION_SENSOR

Connector view



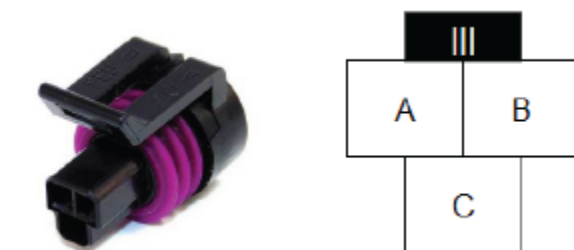
Connection data

CAM_POSITION_SENSOR

Cavity	Size	Color	Conductor	Notes	To
1	22 AWG		W6.Orange	Cam position sensor 5V	SPLICE_SENSOR_5V.1
2	20 AWG		W25.Green	CMP Signal to ECU	ECU_A.17
3	22 AWG		W41.Black-White	CMP Ground	SPLICE_SENSOR_GROUND.1

FUEL_PRESSURE_SENSOR

Connector view



Connection data

FUEL_PRESSURE_SENSOR

Cavity	Size	Color	Conductor	Notes	To
A	22 AWG		W12.Black-White	Fuel pressure sensor ground	SPLICE_SENSOR_GROUND.3
B	22 AWG		W51.Orange	Fuel pressure sensor 5V	SPLICE_SENSOR_5V.3
C	22 AWG		W46.White-Yellow	Fuel pressure sensor signal	ECU_B.5

COIL_4

Connector view



Connection data

COIL_4

Cavity	Size	Color	Conductor	Notes	To
1	22 AWG		W53.Yellow-Green	Coil 4 Trigger	ECU_A.11
2	18 AWG		W167.Black	Coil 4 ground	ENGINE_GROUND_A
3	18 AWG		W89.Pink-Orange	Coil 4 +12v	SPLICE_INJ_COILS.5

COIL_3

Connector view



Connection data

COIL_3

Cavity	Size	Color	Conductor	Notes	To
1	22 AWG		W54.Yellow-Orange	Coil 3 Trigger	ECU_A.10
2	18 AWG		W166.Black	Coil 3 ground	ENGINE_GROUND_A
3	18 AWG		W87.Pink-Orange	Coil 3 +12v	SPLICE_INJ_COILS.4

COIL_2

Connector view



Connection data

COIL_2

Cavity	Size	Color	Conductor	Notes	To
1	22 AWG		W55.Yellow-Red	Coil 2 Trigger	ECU_A.9
2	18 AWG		W165.Black	Coil 2 ground	ENGINE_GROUND_A
3	18 AWG		W86.Pink-Orange	Coil 2 +12v	SPLICE_INJ_COILS.3

COIL_1

Connector view



Connection data

COIL_1

Cavity	Size	Color	Conductor	Notes	To
1	22 AWG		W56.Yellow-Black	Coil 1 Trigger	ECU_A.8
2	18 AWG		W164.Black	Coil 1 ground	ENGINE_GROUND_A
3	18 AWG		W85.Pink-Orange	Coil 1 +12v	SPLICE_INJ_COILS.2

INJECTOR_4

Overview

This harness is offered with different style injector connectors. Please find the picture below that matches the harness.

Connector view



Connection data

INJECTOR_4

Cavity	Size	Color	Conductor	Notes	To
1	20 AWG		W75.Red-White	Injector 4 +12V	SPLICE_INJ_COILS.12
2	20 AWG		W63.Blue-Red	Injector 4 signal	ECU_A.4

INJECTOR_3

Overview

This harness is offered with different style injector connectors. Please find the picture below that matches the harness.

Connector view



Connection data

INJECTOR_3

Cavity	Size	Color	Conductor	Notes	To
1	20 AWG		W121.Red-White	Injector 3 +12V	SPLICE_INJ_COILS.11
2	20 AWG		W64.Blue-Brown	Injector 3 signal	ECU_A.3

INJECTOR_2

Overview

This harness is offered with different style injector connectors. Please find the picture below that matches the harness.

Connector view



Connection data

INJECTOR_2

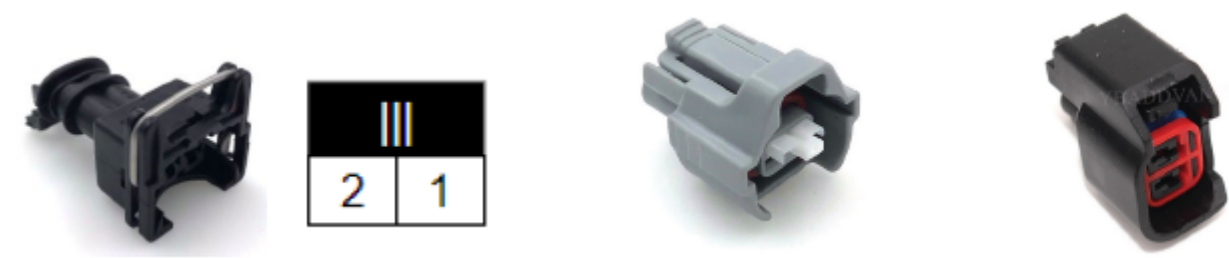
Cavity	Size	Color	Conductor	Notes	To
1	20 AWG		W122.Red-White	Injector 2 +12V	SPLICE_INJ_COILS.10
2	20 AWG		W65.Blue-Black	Injector 2 signal	ECU_A.2

INJECTOR_1

Overview

This harness is offered with different style injector connectors. Please find the picture below that matches the harness.

Connector view



Connection data

INJECTOR_1

Cavity	Size	Color	Conductor	Notes	To
1	20 AWG		W123.Red-White	Injector 1 +12V	SPLICE_INJ_COILS.9
2	20 AWG		W66.Blue	Injector 1 signal	ECU_A.1

INLET_AIR_TEMP_SENSOR

Connector view



Connection data

INLET_AIR_TEMP_SENSOR

Cavity	Size	Color	Conductor	Notes	To
1	22 AWG		W40.White-Gray	IAT signal	ECU_A.26
2	22 AWG		W19.Black-White	IAT ground	SPLICE_SENSOR_GROUND.4

NITROUS

Overview

This harness is equipped with a nitrous breakout connector that allows control of a nitrous solenoid and also monitors nitrous bottle pressure in the ECU.

Please see below for available mating connectors and sub-harnesses

Part number	Description
YAM-GP-NITROUS-H	Nitrous sub-harness with solenoid and bottle pressure sensor connectors
YAM-GP-NITROUS-SOL	Nitrous solenoid with mating connector wired
YAM-GP-NITROUS-S	Sealing connector for applications that do not use nitrous

Connector view



Connection data

NITROUS

Cavity	Size	Color	Conductor	Notes	To	Length
1	16 AWG		W13.Red-Green	Nitrous solenoid 12V	FUSE_BOX.18	45.25 in
2	16 AWG		W17.Black	Nitrous solenoid ground	ENGINE_GROUND_C	45 in
3	22 AWG		W30.Light Green	Nitrous pressure sensor signal	ECU_B.19	81 in
4	22 AWG		W14.Orange	Nitrous pressure sensor 5V	SPLICE_SENSOR_5V.4	13.5 in
5	22 AWG		W24.Black-White	Nitrous pressure sensor ground	SPLICE_SENSOR_GROUND.5	16.5 in
6						

OIL_PRESSURE

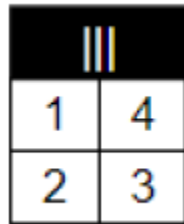
Overview

This harness is equipped with a breakout connector that allows monitoring of oil pressure through the ECU.

Please see below for available mating connectors and sub-harnesses

Part number	Description
YAM-GP-OILP-H	Sub-harness for applications that use an oil pressure sensor with the metri-pack connector
YAM-GP-OILTP-S	Sealing plug for applications that do not have oil pressure monitoring.

Connector view



Connection data

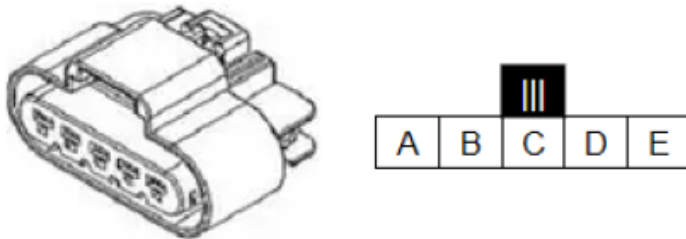
OIL_PRESSURE

Cavity	Size	Color	Conductor	Notes	To
1	22 AWG		W20.Orange	Oil pressure sensor 5V	SPLICE_SENSOR_5V.5
2	22 AWG		W73.White	Oil pressure sensor signal	ECU_B.7
3	22 AWG		W36.Black-White	Oil pressure sensor ground	SPLICE_SENSOR_GROUND.6
4					

MAIN_RELAY

Overview

Connector view



Connection data

MAIN_RELAY

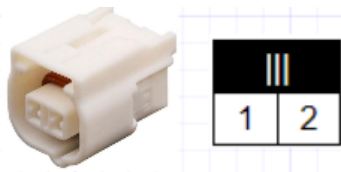
Cavity	Size	Color	Conductor	Notes	To
A	22 AWG		W181.Gray	Stop switch signal to main relay	SPLICE_START_STOP.4
B	20 AWG		W15.Black-Yellow	Main relay ground	ENGINE_GROUND_C
C	14 AWG		W182.Red	B+ to main relay	BATTERY_12V
D	14 AWG		W183.Red-Blue	Main relay 12V output	SPLICE_12V_SWITCHED_1.1
E	22 AWG		W114.Red-White	12V switched to main relay	SPLICE_12V_SWITCHED_1.14

FUEL_PUMP

Overview

This connector supplies 12 volts and ground to the fuel pump.

Connector view



Connection data

FUEL_PUMP

Cavity	Size	Color	Conductor	Notes	To
1	16 AWG		W133.Black	Fuel pump ground	ENGINE_GROUND_B
2	16 AWG		W57.Red-Blue	Fuel pump 12V	FUSE_BOX.26

FUEL_LEVEL

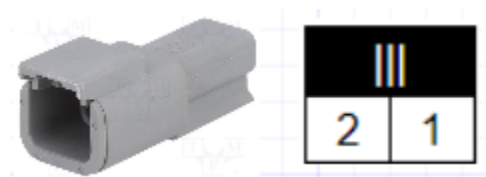
Overview

The fuel level sensor must be wired to the ECU via a supplied connector. At this time, the mating Yamaha connector does not exist, so an extension must be made using the connector that came with the OEM dash.

Please see below for available mating connectors and sub-harnesses

Part number	Description
YAM-GP-FUELLEV-H	Mating ATM 2-pin connector with pigtail wires for Fueltech fuel level wiring

Connector view



Connection data

FUEL_LEVEL

Cavity	Size	Color	Conductor	Notes	To
1	22 AWG		W146.White-Yellow	Fuel level signal	ECU_B.18
2	22 AWG		W29.Black-Yellow	Fuel level ground	SPLICE_ENGINE_GROUND.3

WIDEBAND_DISPLAY

Overview

Connector for the Fueltech Nano wideband display

Connector view



Connection data

WIDEBAND_DISPLAY

Cavity	Size	Color	Conductor	Notes	To
1	20 AWG		W193.Red	IP	WIDEBAND_SENSOR.6
2	22 AWG		W60.Yellow	Sensor negative signal	WIDEBAND_SENSOR.5
3	20 AWG		W194.Brown	Sensor positive signal	WIDEBAND_SENSOR.1
4	20 AWG		W94.Red-White	Wideband 12V	FUSE_BOX.17
5					
6	22 AWG		W61.White	CAN A HI	SPLICE_CAN_HI
7	22 AWG		W195.Orange	Sensor resistor calibration	WIDEBAND_SENSOR.2
8	20 AWG		W196.Green	Sensor heater positive	WIDEBAND_SENSOR.3
9	20 AWG		W197.Blue	Sensor heater negative	WIDEBAND_SENSOR.4
10	20 AWG		W7.Black-Yellow	Wideband display ground	SPLICE_ENGINE_GROUND.7
11	20 AWG		W5.Black-Yellow	Wideband display ground	SPLICE_ENGINE_GROUND.8
12	22 AWG		W68.Blue	CAN A LO	SPLICE_CAN_LO

CKP_RESISTOR

Overview

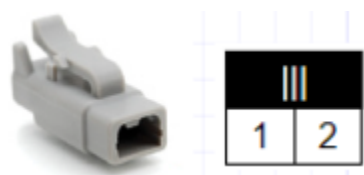
The Fueltech FT550 ECU requires a resistor in order to work with the Yamaha crankshaft position sensor. Some sensors are more sensitive than others and might experience high RPM loss of synchronization. The harness comes equipped with a 420 Ohm resistor connector plug which caps the CKP_RESISTOR connector. It should be connected at all times for the ECU to synchronize properly.

Different value resistors are available for different applications. If you are having synchronization problems, please contact support@kareltuning.com.

Please see below for available mating connectors and sub-harnesses

Part number	Description
YAM-GP-CKP330	330 Ohm crank position resistor plug
YAM-GP-CKP420	420 Ohm crank position resistor plug
YAM-GP-CKP500	500 Ohm crank position resistor plug

Connector view



Connection data

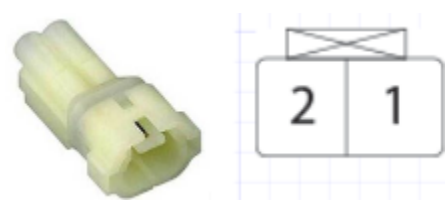
CKP_RESISTOR					
Cavity	Size	Color	Conductor	Notes	To
1	22 AWG		W151.White	CKP positive to resistor	SPLICE_TRIGGER_POS
2	22 AWG		W199.Black	CKP negative to resistor	SPLICE_TRIGGER_NEG

START_SWITCH

Overview

Connects to the OEM start switch connector on most models 2017-2022

Connector view



Connection data

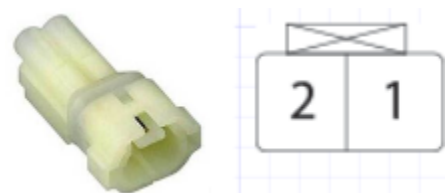
START_SWITCH					
Cavity	Size	Color	Conductor	Notes	To
1	20 AWG		W22.Red	B+ to start SW	FUSE_BOX.34
2	20 AWG		W62.Pink	Starter signal from switch	SPLICE_START_STOP.6

STOP_SWITCH

Overview

Connects to the stop switch connector on 2017-2022 GP1800 and other models

Connector view



Connection data

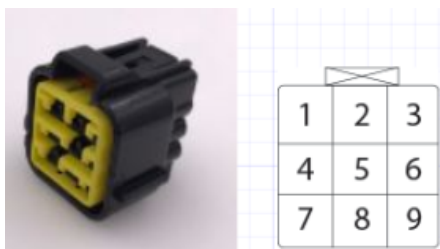
STOP_SWITCH

Cavity	Size	Color	Conductor	Notes	To
1	22 AWG		W80.Violet-Yellow	Kill switch signal	SPLICE_START_STOP.5
2	22 AWG		W2.Black-Yellow	Kill switch ground	SPLICE_ENGINE_GROUND.6

PEDAL_POSITION_SENSOR

Overview

Connector view



Connection data

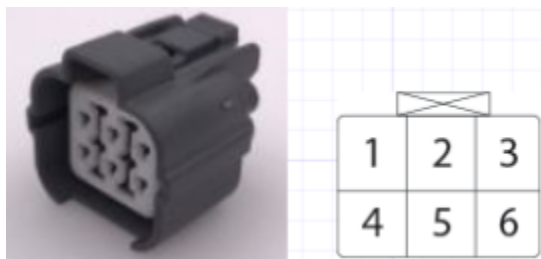
PEDAL_POSITION_SENSOR

Cavity	Size	Color	Conductor	Notes	To
1	22 AWG		W49.White-Black	Accelerator pedal position sensor A signal	ECU_A.21
2	22 AWG		W26.Black-White	Accelerator pedal position sensor A ground	SPLICE_SENSOR_GROUND.12
3	22 AWG		W48.Orange	Accelerator pedal position sensor A 5V	SPLICE_SENSOR_5V.6
4	22 AWG		W170.White-Violet	Accelerator pedal position sensor B signal	ECU_A.23
5	22 AWG		W27.Black-White	Accelerator pedal position sensor B ground	SPLICE_SENSOR_GROUND.13
6	22 AWG		W50.Orange	Accelerator pedal position sensor B 5V	SPLICE_SENSOR_5V.8
7					
8					
9					

REVERSE_POSITION_SENSOR

Overview

Connector view



Connection data

REVERSE_POSITION_SENSOR

Cavity	Size	Color	Conductor	Notes	To
1	22 AWG		W78.Gray-Light Green	Reverse position sensor A signal	ECU_A.22
2	22 AWG		W37.Black-White	Reverse position sensor A ground	SPLICE_SENSOR_GROUND.14
3	22 AWG		W28.Orange	Reverse position sensor A 5V	SPLICE_SENSOR_5V.9
4					
5					
6					

TRIM

Overview

Connector view



Connection data

TRIM

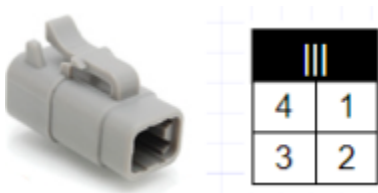
Cavity	Size	Color	Conductor	Notes	To
1	20 AWG		W92.Light Blue	Trim 1	RIDE_SIGNAL.13
2	22 AWG		W69.Black	Trim 2	RIDE_SIGNAL.14
3	22 AWG		W70.Green	Trim 3	RIDE_SIGNAL.15

CAN_BUS_AUXILIARY

Overview

This connector allows using CAN-bus devices such as EGT modules. These must be wired individually as per the connections below.

Connector view



Connection data

CAN_BUS_AUXILIARY

Cavity	Size	Color	Conductor	Notes	To
1	20 AWG		W128.Red-White	CAN bus 12V	SPLICE_INJ_COILS.7
2	20 AWG		W102.Black-Yellow	CAN ground	SPLICE_ENGINE_GROUND.1
3	22 AWG		W91.White	Auxiliary CAN bus HI	SPLICE_CAN_HI
4	22 AWG		W101.Blue	Auxiliary CAN bus LO	SPLICE_CAN_LO

GPS

Overview

This connector allows the use of a GPS with PWM output. It must be wired according to the connection table below.

Please see below for available mating connectors and sub-harnesses

Part number	Description
YAM-GP-HALTECHGPS	Haltech GPS with correct mating connector

Connector view



Connection data

GPS

Cavity	Size	Color	Conductor	Notes	To
1	22 AWG		W143.Red-White	GPS 12V	FUSE_BOX.10
2	22 AWG		W144.Gray-Brown	GPS signal	ECU_B.13
3	22 AWG		W131.Black-Yellow	GPS ground	SPLICE_ENGINE_GROUND.4