

## 2024 SNOWMOBILE WIRING DIAGRAMS

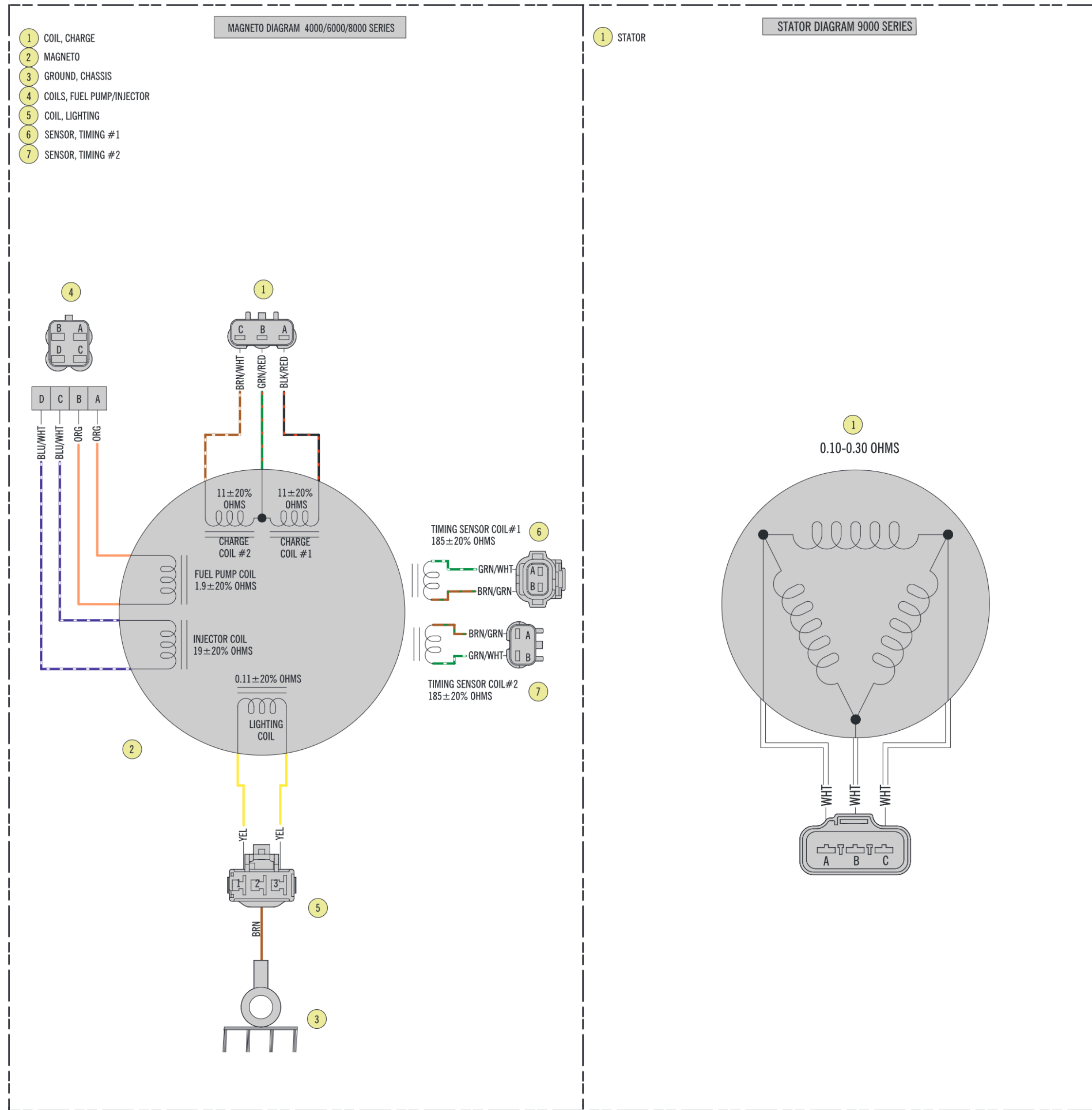
This chart is designed to direct the technician to the appropriate Harness Wiring Diagram. Select the snowmobile model from the chart to determine the correct diagram:

Model	Ignition/Main Harness	Hood/Console Harness	Handlebar Harness
<b>ZR 120</b>	<b>p. 2</b>	<b>N/A</b>	<b>N/A</b>
<b>ZR 200</b>	<b>p. 3</b>	<b>N/A</b>	<b>N/A</b>
<b>4000</b>	<b>p. 4</b>	<b>p. 9</b>	<b>N/A</b>
<b>600</b>	<b>p. 5</b>	<b>p. 10</b>	<b>p. 13</b>
<b>8000 without Electric Start</b>	<b>p. 6</b>	<b>p. 11</b>	<b>p. 13</b>
<b>8000 with Electric Start</b>	<b>p. 7</b>	<b>p. 11</b>	<b>p. 13</b>
<b>9000</b>	<b>p. 8</b>	<b>p. 12</b>	<b>p. 13</b>

■NOTE: Magneto diagrams on p. 1 and iACT Main Harness on p. 14.



# Magnetos

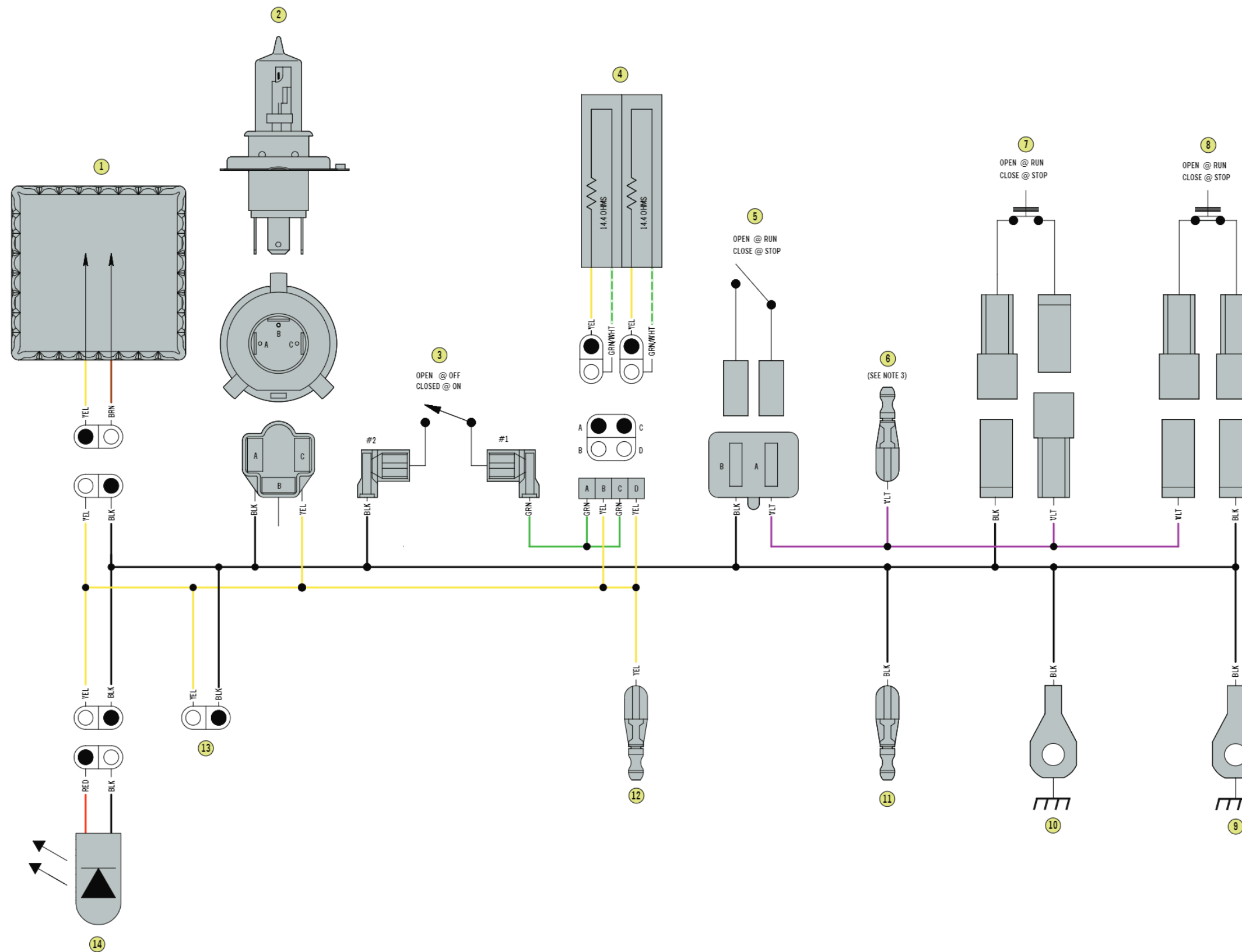


NOTES:

1. CONNECTORS SHOWN FROM MATING SURFACE SIDE, WHERE APPLICABLE.
2. ● MALE PIN TERMINAL  
○ FEMALE RECEPTACLE TERMINAL

# Main Harness (p/n 1686-794) ZR 120

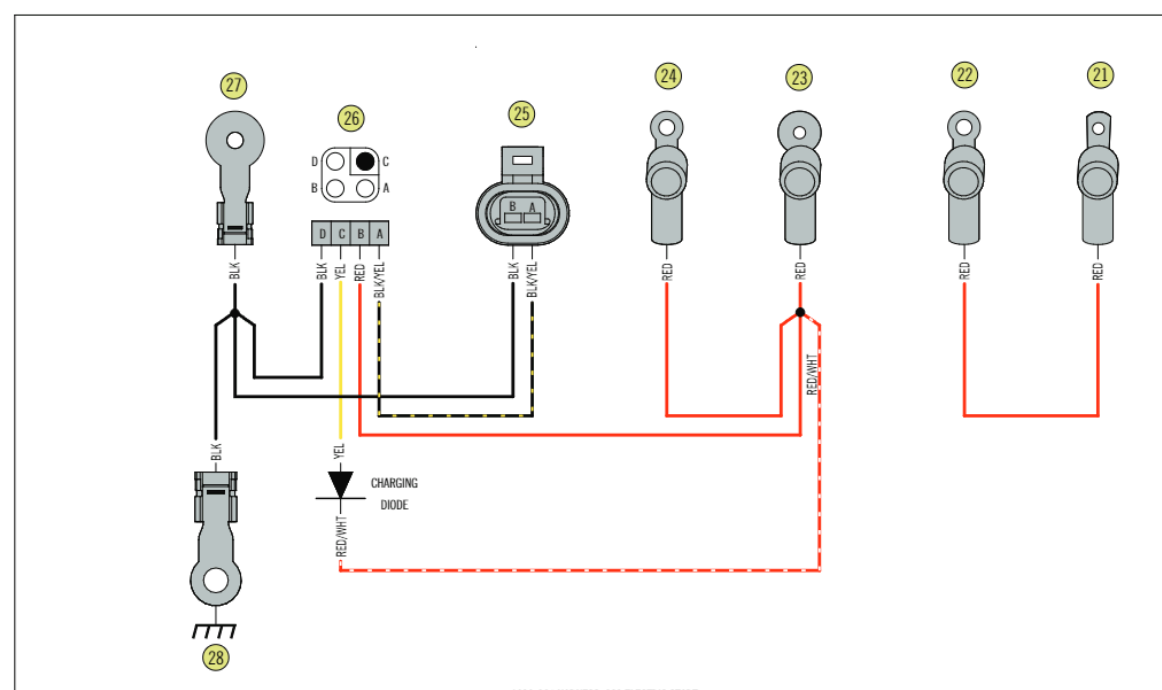
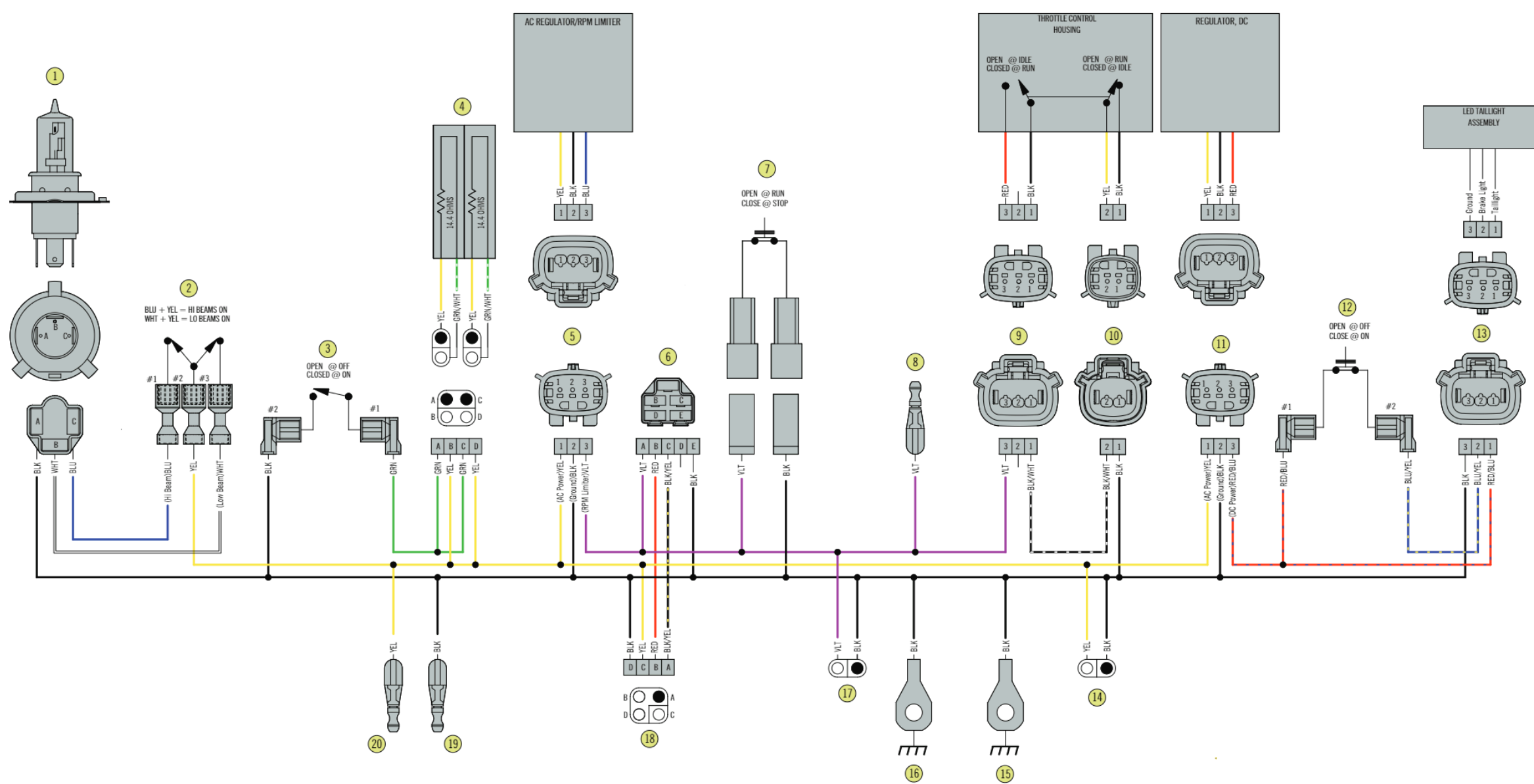
- 1 REGULATOR, AC
- 2 HEADLIGHT
- 3 SWITCH, WARMER
- 4 ELEMENTS, HANDWARMER
- 5 SWITCH, KEY
- 6 CONNECTOR, ENGINE STOP
- 7 SWITCH, TETHER
- 8 SWITCH, STOP
- 9 CONNECTOR, CHASSIS GROUND
- 10 CONNECTOR, ENGINE GROUND
- 11 CONNECTOR, MAGNETO #2 (-)
- 12 CONNECTOR, MAGNETO #1 (+)
- 13 CONNECTOR, ACCESSORY
- 14 TAILLIGHT



- NOTES:
- 1. CONNECTORS SHOWN FROM MATING SURFACE SIDE.
  - 2. ● MALE PIN TERMINAL  
○ FEMALE RECEPTACLE TERMINAL
  - 3. NORMALLY OPEN IGNITION; MAIN HARNESS VLT WIRE MUST BE OPEN TO RUN, GROUNDED TO STOP IGNITION.

# Main Harness (p/n 1686-863) ZR 200

- 1 HEADLIGHT
- 2 SWITCH, HEADLIGHT
- 3 SWITCH, HANDWARMER
- 4 ELEMENTS, HANDWARMER
- 5 AC REGULATOR/RPM LIMITER
- 6 SWITCH, KEY
- 7 SWITCH, STOP
- 8 CONNECTOR, ENGINE STOP
- 9 SWITCH, IDLE
- 10 SWITCH, THROTTLE
- 11 REGULATOR, DC
- 12 SWITCH, BRAKE
- 13 TAILLIGHT
- 14 CONNECTOR, ACCESSORY
- 15 GROUND, CHASSIS
- 16 GROUND, ENGINE
- 17 CONNECTOR, LEATHER
- 18 CONNECTOR, ELECTRIC START HARNESS
- 19 CONNECTOR, MAGNETO #2 NEGATIVE
- 20 CONNECTOR, MAGNETO #2 POSITIVE
- 21 CONNECTOR, STARTER
- 22 CONNECTOR, SOLENOID
- 23 CONNECTOR, BATTERY POSITIVE
- 24 CONNECTOR, SOLENOID
- 25 CONNECTOR, STARTER RELAY
- 26 CONNECTOR, MAIN HARNESS
- 27 CONNECTOR, BATTERY NEGATIVE
- 28 CONNECTOR, ENGINE GROUND

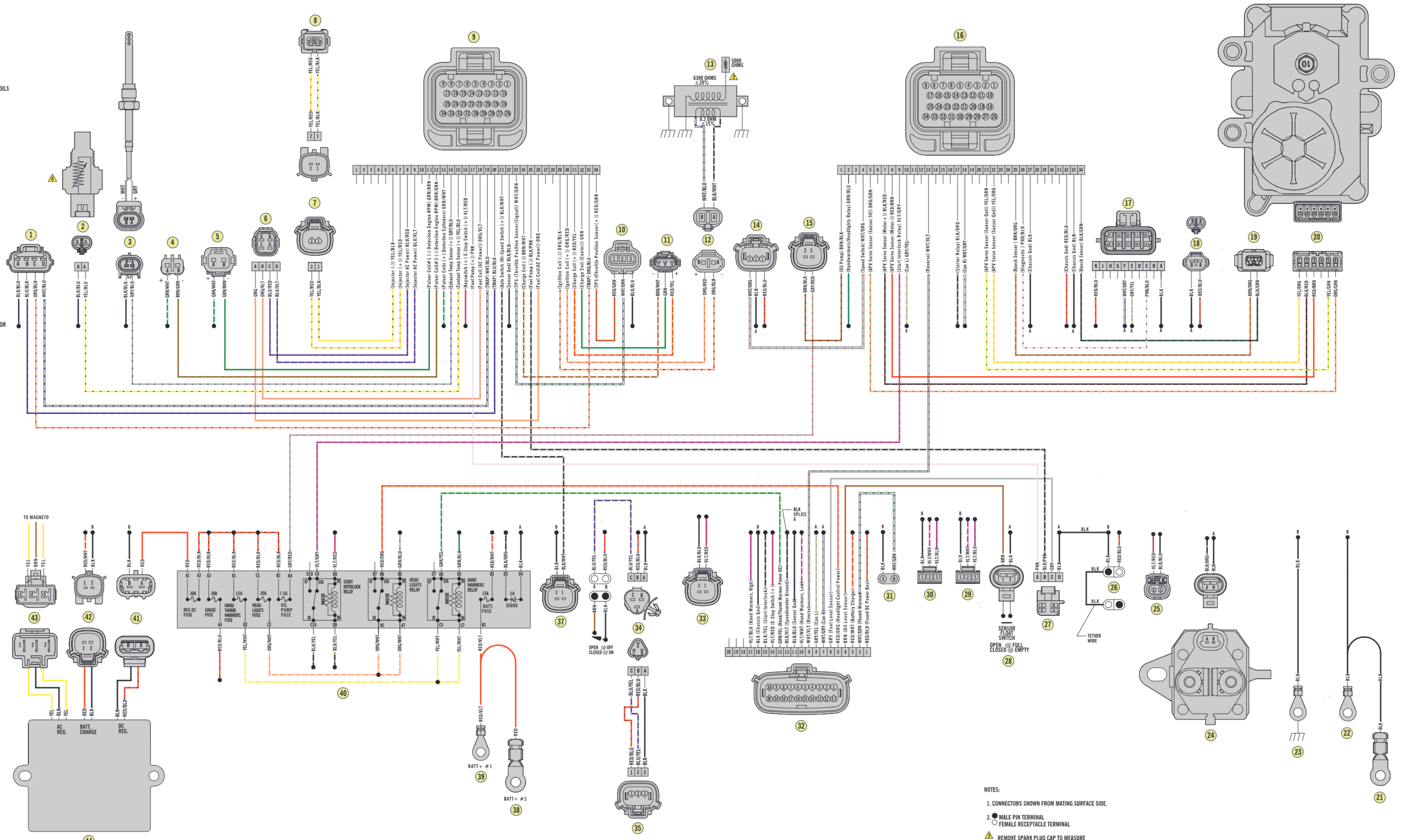


- NOTES:
- 1 CONNECTORS SHOWN FROM MATING SURFACE SIDE.
  - 2 ● MALE PIN TERMINAL
  - FEMALE RECEPTACLE TERMINAL

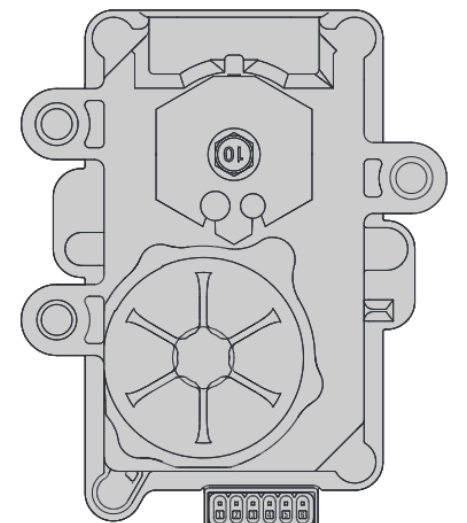


# Main Harness (p/n 1686-930) 4000 Models

- 1 SENSOR, TMAP
- 2 SENSOR, COOLANT TEMPERATURE
- 3 SENSOR, EXHAUST TEMPERATURE
- 4 CONNECTOR, TIMING SENSOR #2
- 5 CONNECTOR, TIMING SENSOR #1
- 6 CONNECTOR, FUEL PUMP INJECTOR COILS
- 7 HARNESS, INJECTOR
- 8 CONNECTOR, INJECTOR
- 9 CONNECTOR, ECU #1
- 10 SENSOR, THROTTLE POSITION
- 11 CONNECTOR, CHARGE COIL
- 12 COIL, IGNITION
- 13 CAP, SPARK PLUG
- 14 CONNECTOR, SPEED SENSOR
- 15 CONNECTOR, OIL PUMP
- 16 CONNECTOR, ECU #2
- 17 CONNECTOR, DIAGNOSTIC
- 18 CONNECTOR, DIAGNOSTIC POWER
- 19 SENSOR, KNOCK SENSOR
- 20 SERVOMOTOR, APV
- 21 CONNECTOR, BATTERY NEG. #2
- 22 CONNECTOR, BATTERY NEG. #1
- 23 CONNECTOR, CHASSIS GROUND
- 24 CONNECTOR, STARTER RELAY
- 25 CONNECTOR, TETHER BASE
- 26 CONNECTOR, ACCESSORY
- 27 CONNECTOR, FUEL PUMP/LEVEL SENSOR
- 28 SENSOR, OIL LEVEL
- 29 CONNECTOR, HANDWARMER #2
- 30 CONNECTOR, HANDWARMER #1
- 31 CONNECTOR, THUMBWARMER
- 32 CONNECTOR, CONSOLE HARNESS
- 33 CONNECTOR, EMERGENCY STOP
- 34 CONNECTOR, TAILLIGHT
- 35 HARNESS, TAILLIGHT EXTENSION
- 36 SWITCH, BRAKE
- 37 CONNECTOR, RPS
- 38 CONNECTOR, BATTERY POS. #2
- 39 CONNECTOR, BATTERY POS. #1
- 40 PDM
- 41 CONNECTOR, DC REGULATOR
- 42 CONNECTOR, BATTERY CHARGE
- 43 CONNECTOR, STATOR
- 44 REGULATOR



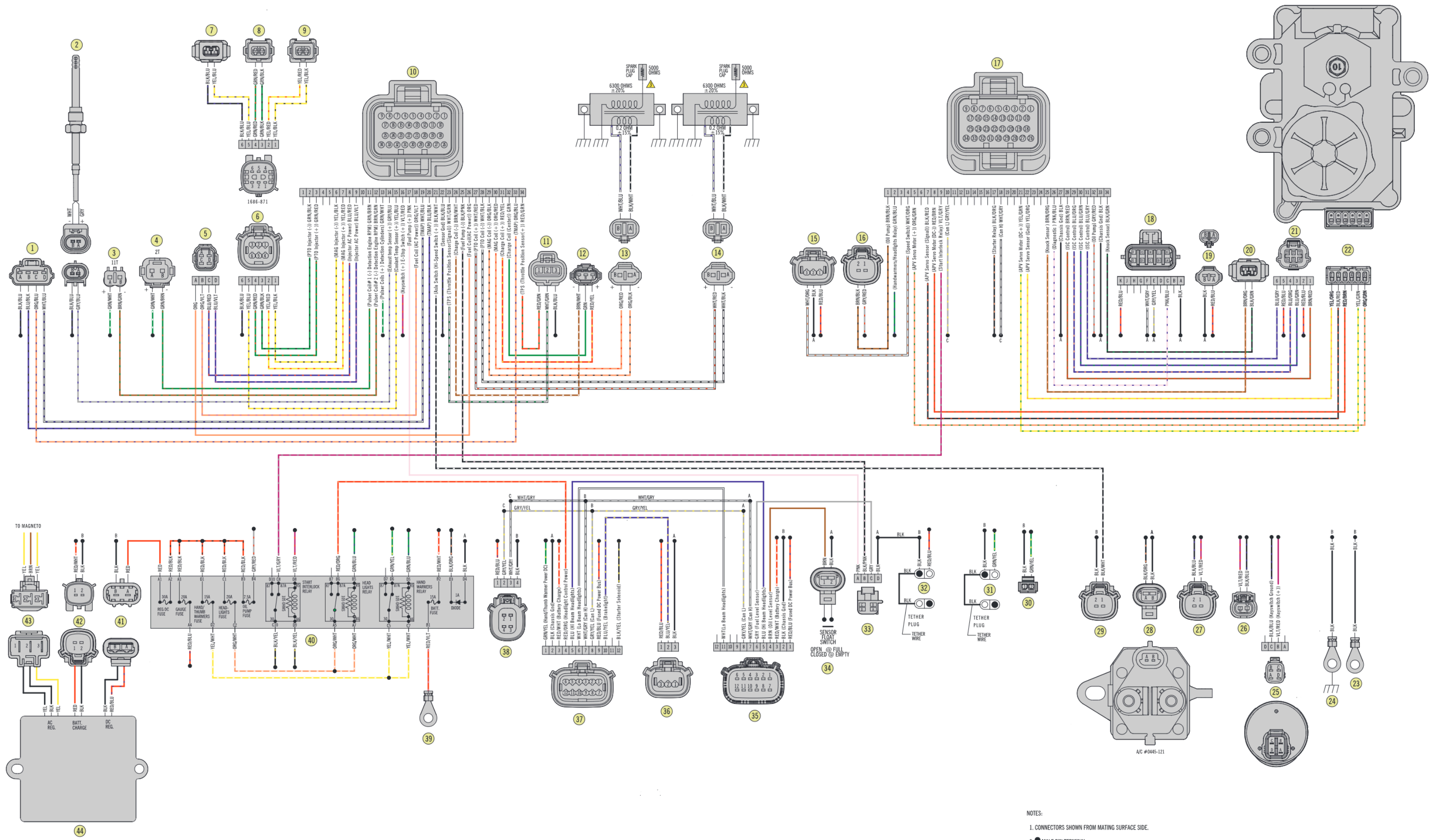
- NOTES:
- 1. CONNECTORS SHOWN FROM MATING SURFACE SIDE.
  - 2. ● MALE PIN TERMINAL  
○ FEMALE RECEPTACLE TERMINAL
  - ▲ REMOVE SPARK PLUG CAP TO MEASURE SECONDARY COIL RESISTANCE AND SPARK PLUG CAP RESISTANCE.
  - ▲ RESISTANCE VARIES BY TEMPERATURE. SEE CHART IN SERVICE MANUAL FOR RESISTANCE VALUE.
  - 5. BLK. ● INDICATES WIRE SPLICE. THIS EXAMPLE INDICATES BLK SPLICE A.



0753-856

# Main Harness (p/n 1686-945) 600 Models

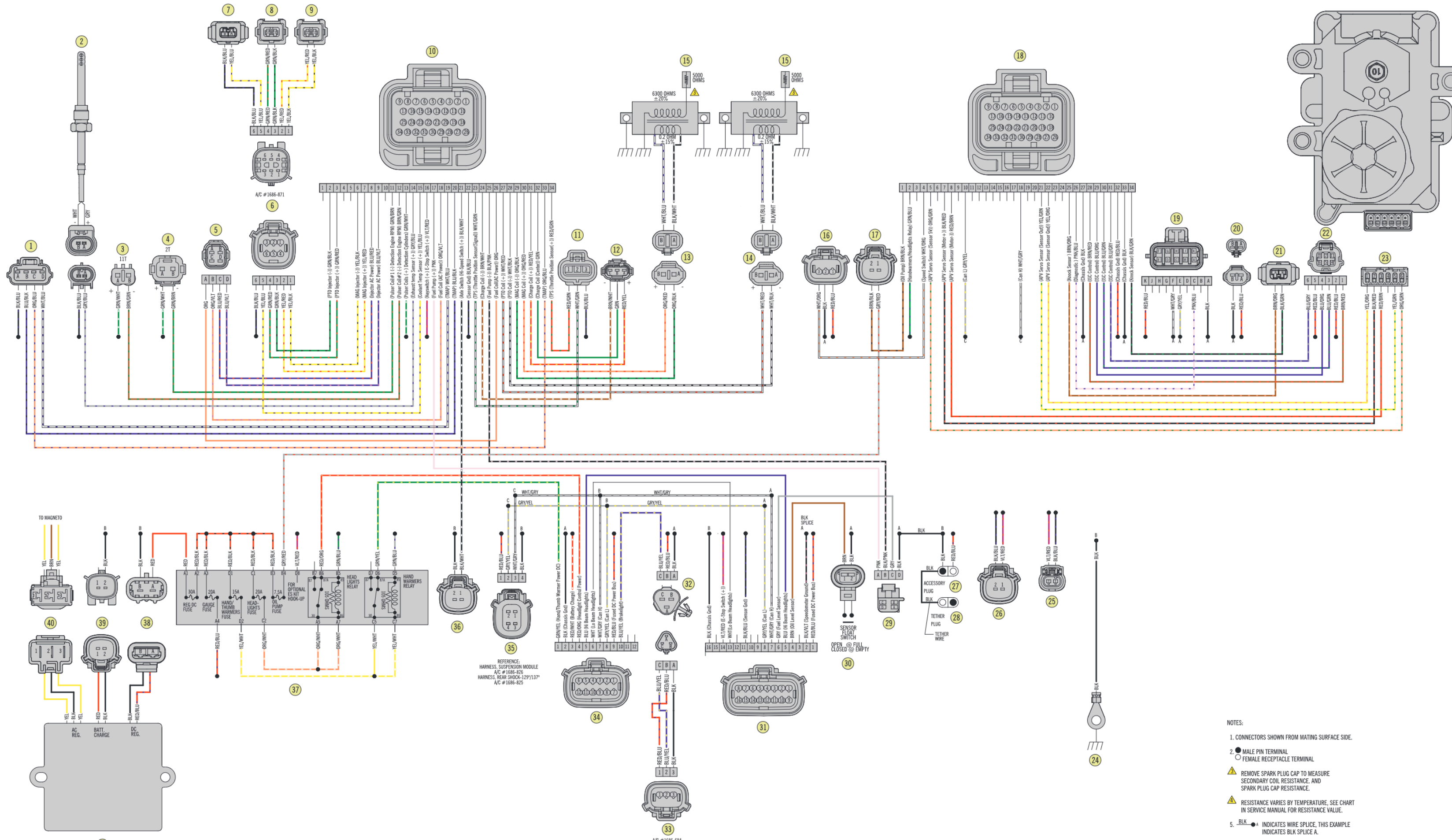
- 1 SENSOR, TMAP
- 2 SENSOR, EXHAUST TEMPERATURE
- 3 CONNECTOR, TIMING SENSOR #1
- 4 CONNECTOR, TIMING SENSOR #2
- 5 CONNECTOR, FUEL PUMP
- 6 HARNESS, INJECTOR
- 7 SENSOR, TEMPERATURE
- 8 INJECTOR, PTO
- 9 INJECTOR, MAG
- 10 CONNECTOR, ECU #1
- 11 SENSOR, THROTTLE POSITION
- 12 CONNECTOR, CHARGE COIL
- 13 COIL, MAG, IGNITION
- 14 COIL, PTO, IGNITION
- 15 CONNECTOR, SPEED SENSOR
- 16 CONNECTOR, OIL PUMP
- 17 CONNECTOR, ECU #2
- 18 CONNECTOR, DIAGNOSTIC COVER PLUG
- 19 CONNECTOR, DIAGNOSTIC POWER
- 20 CONNECTOR, KNOCK SENSOR
- 21 CONNECTOR, ISC
- 22 SERVO MOTOR, APV
- 23 CONNECTOR, BATTERY NEG.
- 24 CONNECTOR, CHASSIS GROUND
- 25 KEYSWITCH
- 26 CONNECTOR, TETHER BASE
- 27 CONNECTOR, EMERGENCY STOP
- 28 CONNECTOR, STARTER RELAY
- 29 CONNECTOR, RPS
- 30 CONNECTOR, HEATED SHIELD
- 31 CONNECTOR, ACCESSORY 2 /TETHERED COVER
- 32 CONNECTOR, ACCESSORY 1 /TETHERED COVER
- 33 CONNECTOR, FUEL PUMP/LEVEL SENSOR
- 34 SENSOR, OIL LEVEL
- 35 CONNECTOR, HOOD HARNESS
- 36 CONNECTOR, TAILLIGHT
- 37 CONNECTOR, HANDLEBAR HARNESS
- 38 CONNECTOR, SUSPENSION (0-ACT)
- 39 CONNECTOR, SOLENOID POSITIVE
- 40 PFM
- 41 CONNECTOR, DC REGULATOR
- 42 CONNECTOR, BATTERY CHARGE
- 43 CONNECTOR, STATOR
- 44 REGULATOR





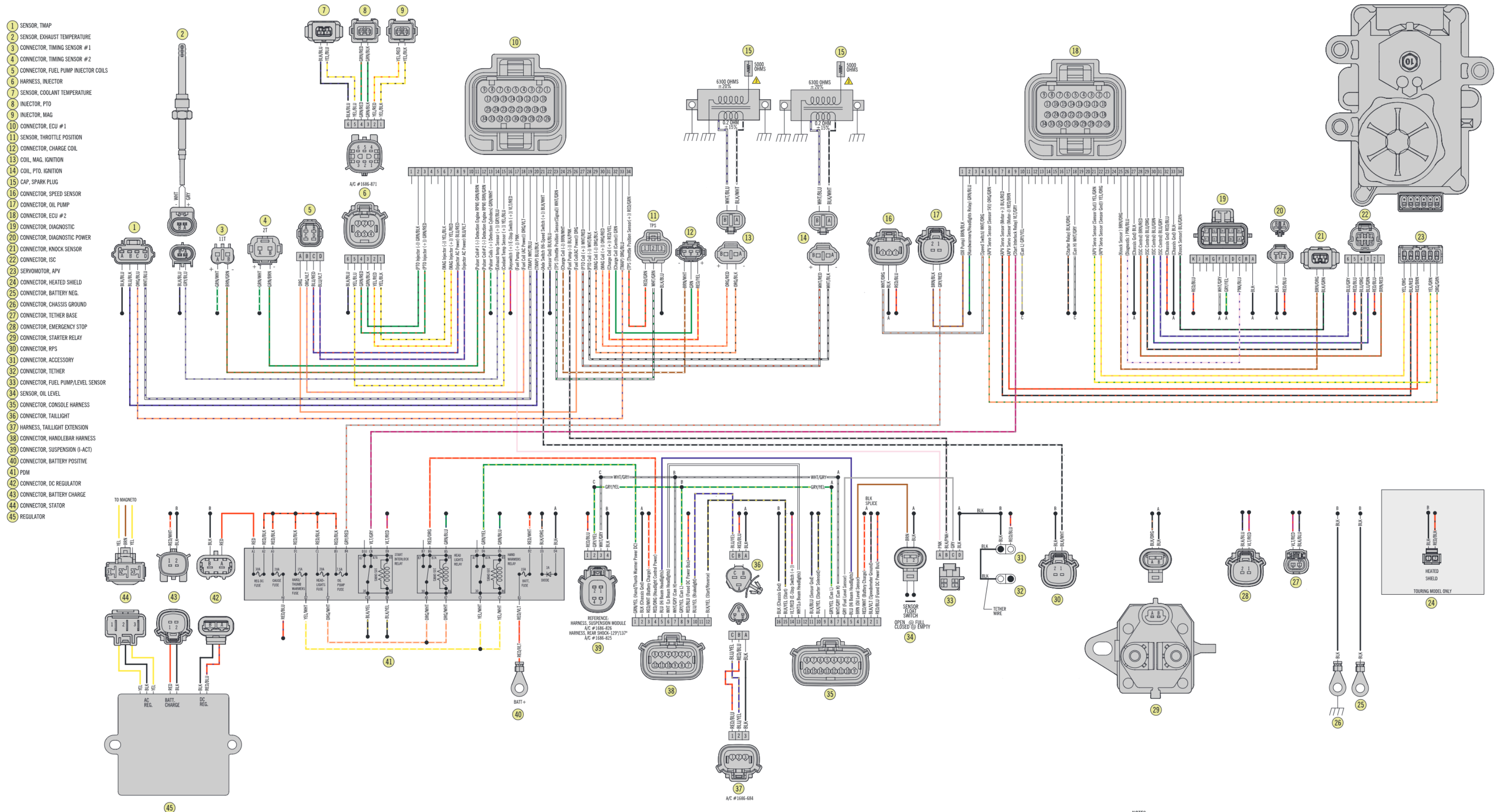
# Main Harness (p/n 1686-872) 8000 without ES

- 1 SENSOR, TMAP
- 2 SENSOR, EXHAUST TEMPERATURE
- 3 CONNECTOR, TIMING SENSOR #1
- 4 CONNECTOR, TIMING SENSOR #2
- 5 CONNECTOR, FUEL PUMP INJECTOR COILS
- 6 HARNESS, INJECTOR
- 7 SENSOR, COOLANT TEMPERATURE
- 8 INJECTOR, PTO
- 9 INJECTOR, MAG
- 10 CONNECTOR, ECU #1
- 11 SENSOR, THROTTLE POSITION
- 12 CONNECTOR, CHARGE COIL
- 13 COIL, MAG, IGNITION
- 14 COIL, PTO, IGNITION
- 15 CAP, SPARK PLUG
- 16 CONNECTOR, SPEED SENSOR
- 17 CONNECTOR, OIL PUMP
- 18 CONNECTOR, ECU #2
- 19 CONNECTOR, DIAGNOSTIC
- 20 CONNECTOR, DIAGNOSTIC POWER
- 21 CONNECTOR, KNOCK SENSOR
- 22 CONNECTOR, ISC
- 23 SERVO MOTOR, APV
- 24 CONNECTOR, CHASSIS GROUND
- 25 CONNECTOR, TETHER BASE
- 26 CONNECTOR, EMERGENCY STOP
- 27 CONNECTOR, ACCESSORY
- 28 CONNECTOR, TETHER
- 29 CONNECTOR, FUEL PUMP/LEVEL SENSOR
- 30 SENSOR, OIL LEVEL
- 31 CONNECTOR, CONSOLE HARNESS
- 32 CONNECTOR, TAILLIGHT
- 33 HARNESS, TAILLIGHT EXTENSION
- 34 CONNECTOR, HANDLEBAR HARNESS
- 35 CONNECTOR, SUSPENSION (I-ACT)
- 36 CONNECTOR, RPS
- 37 PDM
- 38 CONNECTOR, DC REGULATOR
- 39 CONNECTOR, BATTERY CHARGE
- 40 CONNECTOR, STATOR
- 41 REGULATOR



0753-161

# Main Harness (p/n 1686-873) 8000 ES Models



- 1 SENSOR, MAP
- 2 SENSOR, EXHAUST TEMPERATURE
- 3 CONNECTOR, TIMING SENSOR #1
- 4 CONNECTOR, TIMING SENSOR #2
- 5 CONNECTOR, FUEL PUMP INJECTOR COILS
- 6 HARNESS, INJECTOR
- 7 SENSOR, COOLANT TEMPERATURE
- 8 INJECTOR, PTO
- 9 INJECTOR, MAG
- 10 CONNECTOR, ECU #1
- 11 SENSOR, THROTTLE POSITION
- 12 CONNECTOR, CHARGE COIL
- 13 COIL, MAG, IGNITION
- 14 COIL, PTO, IGNITION
- 15 CAP, SPARK PLUG
- 16 SENSOR, SPEED SENSOR
- 17 CONNECTOR, OIL PUMP
- 18 CONNECTOR, ECU #2
- 19 CONNECTOR, DIAGNOSTIC
- 20 CONNECTOR, KNOCK SENSOR
- 21 CONNECTOR, APV
- 22 SERVO MOTOR, ISC
- 23 CONNECTOR, HEATED SHIELD
- 24 CONNECTOR, BATTERY NEG.
- 25 CONNECTOR, CHASSIS GROUND
- 26 CONNECTOR, TETHER BASE
- 27 CONNECTOR, EMERGENCY STOP
- 28 CONNECTOR, STARTER RELAY
- 29 CONNECTOR, RPS
- 30 CONNECTOR, ACCESSORY
- 31 CONNECTOR, TETHER
- 32 CONNECTOR, FUEL PUMP/LEVEL SENSOR
- 33 SENSOR, OIL LEVEL
- 34 CONNECTOR, CONSOLE HARNESS
- 35 CONNECTOR, TAILLIGHT
- 36 HARNESS, TAILLIGHT EXTENSION
- 37 CONNECTOR, HANDLEBAR HARNESS
- 38 CONNECTOR, SUSPENSION (I-ACT)
- 39 CONNECTOR, BATTERY POSITIVE
- 40 PSM
- 41 CONNECTOR, DC REGULATOR
- 42 CONNECTOR, BATTERY CHARGE
- 43 CONNECTOR, STATOR
- 44 REGULATOR

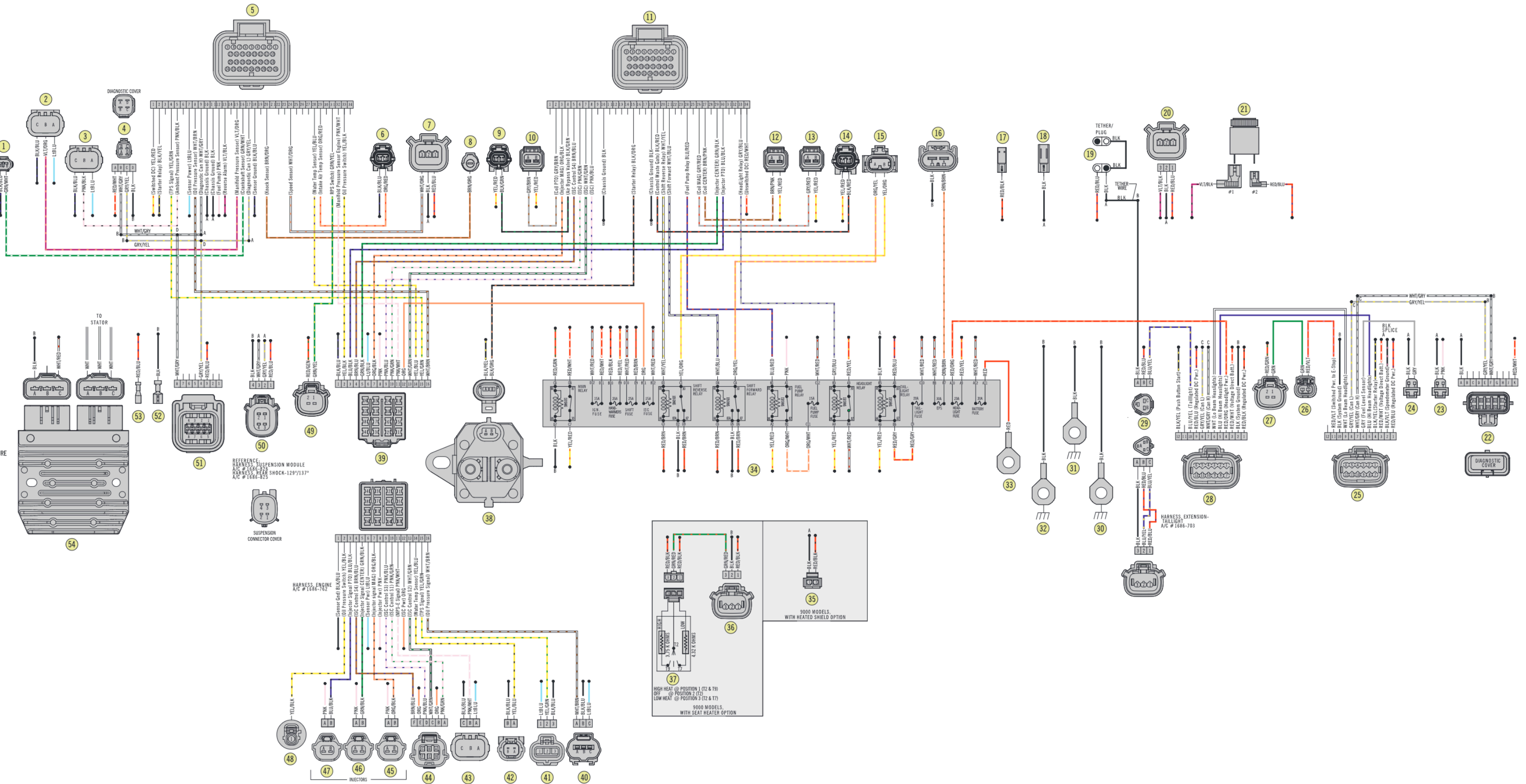
- NOTES:
- 1. CONNECTORS SHOWN FROM MATING SURFACE SIDE.
  - 2. MALE PIN TERMINAL
  - 3. FEMALE RECEPTACLE TERMINAL
  - 4. REMOVE SPARK PLUG CAP TO MEASURE SECONDARY COIL RESISTANCE AND SPARK PLUG CAP RESISTANCE.
  - 5. RESISTANCE VARIES BY TEMPERATURE. SEE CHART IN SERVICE MANUAL FOR RESISTANCE VALUE.
  - 6. BLK ● indicates WIRE SPLICE, THIS EXAMPLE INDICATES BLK SPLICE A.

0753-160



# Main Harness (p/n 1686-928) ZR 9000/Thundercat

- 1 CONNECTOR, CRANKSHAFT POSITION SENSOR
- 2 CONNECTOR, TURBO MANIFOLD PRESSURE SENSOR
- 3 CONNECTOR, AMBIENT PRESSURE SENSOR
- 4 CONNECTOR, DIAGNOSTIC 1
- 5 CONNECTOR, ECU 1
- 6 CONNECTOR, INTAKE AIR TEMPERATURE SENSOR
- 7 CONNECTOR, SPEED SENSOR
- 8 CONNECTOR, KNOCK SENSOR
- 9 CONNECTOR, AIR BYPASS VALVE
- 10 CONNECTOR, PTO IGNITION COIL
- 11 CONNECTOR, ECU 2
- 12 CONNECTOR, CENTER IGNITION COIL
- 13 CONNECTOR, MAG. IGNITION COIL
- 14 CONNECTOR, WASTE GATE VALVE
- 15 CONNECTOR, ELECTRIC POWER STEERING
- 16 CONNECTOR, 12V ACC. #1
- 17 CONNECTOR, 12V ACC. #2
- 18 CONNECTOR, TETHER PLUG/ACC.
- 19 CONNECTOR, REVERSE GEAR SWITCH
- 20 ALARM, REVERSE
- 21 CONNECTOR, DIAGNOSTIC 2
- 22 CONNECTOR, FUEL PUMP
- 23 CONNECTOR, FUEL LEVEL
- 24 CONNECTOR, CONSOLE HARNESS
- 25 CONNECTOR, TETHER BASE
- 26 CONNECTOR, EMERGENCY STOP
- 27 CONNECTOR, HANDLEBAR HARNESS
- 28 CONNECTOR, TAILLIGHT HARNESS
- 29 CONNECTOR, ENGINE GROUND
- 30 CONNECTOR, CHASSIS GROUND
- 31 CONNECTOR, BATTERY NEGATIVE
- 32 CONNECTOR, BATTERY POSITIVE
- 33 POWER DISTRIBUTION MODULE
- 34 CONNECTOR, HEAT SHIELD
- 35 CONNECTOR, SEAT HEATER
- 36 SWITCH, SEAT HEATER
- 37 RELAY, STARTER
- 38 CONNECTOR, ENGINE HARNESS
- 39 CONNECTOR, OIL PRESSURE SENSOR
- 40 CONNECTOR, THROTTLE POSITION SENSOR
- 41 CONNECTOR, COOLANT TEMPERATURE SENSOR
- 42 CONNECTOR, ENGINE MANIFOLD ABSOLUTE PRESSURE
- 43 CONNECTOR, ISC MOTOR
- 44 CONNECTOR, MAG FUEL INJECTOR
- 45 CONNECTOR, CENTER FUEL INJECTOR
- 46 CONNECTOR, PTO FUEL INJECTOR
- 47 CONNECTOR, OIL PRESSURE SWITCH
- 48 CONNECTOR, RUNAWAY PREVENTION SWITCH
- 49 CONNECTOR, I-ACT SUSPENSION
- 50 CONNECTOR, EPS SIGNAL
- 51 CONNECTOR, CUT VALVE HEATER #2
- 52 CONNECTOR, CUT VALVE HEATER #1
- 53 REGULATOR

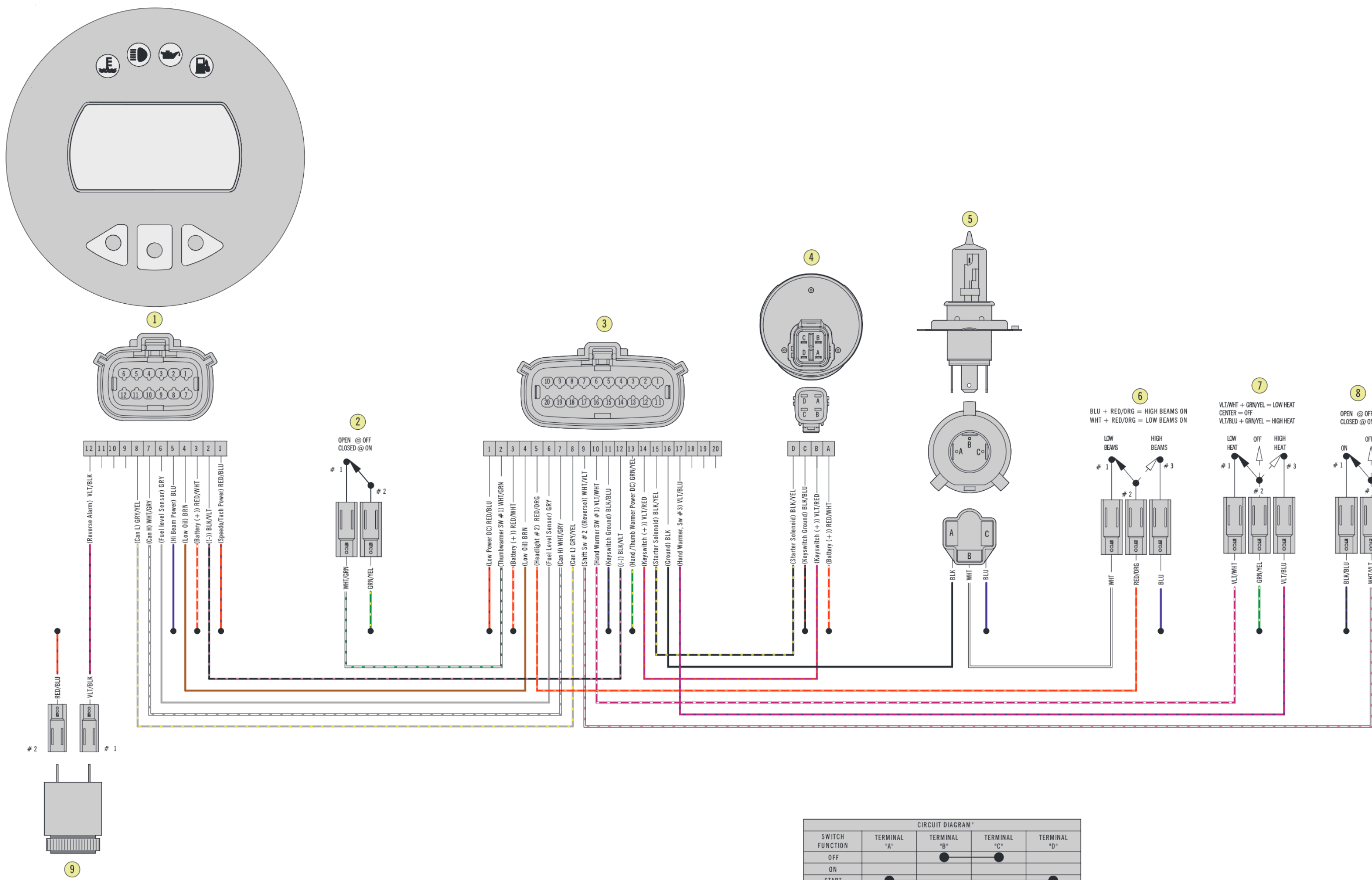


- NOTES:
- 1. CONNECTORS SHOWN FROM MATING SURFACE SIDE.
  - 2. ● MALE PIN TERMINAL  
○ FEMALE RECEPTACLE TERMINAL
  - 3. **BLK** ● INDICATES WIRE SPLICE, THIS EXAMPLE INDICATES BLK SPLICE A.

0753-613

# Hood Harness (p/n 1686-932) 4000 Models

- 1 SPEEDOMETER/TACHOMETER
- 2 SWITCH, THUMB WARMER
- 3 CONNECTOR, MAIN HARNESS
- 4 CONNECTOR, KEYSWITCH
- 5 HEADLIGHT
- 6 SWITCH, HEADLIGHT
- 7 SWITCH, HAND WARMER
- 8 SWITCH, SHIFT
- 9 ALARM, REVERSE

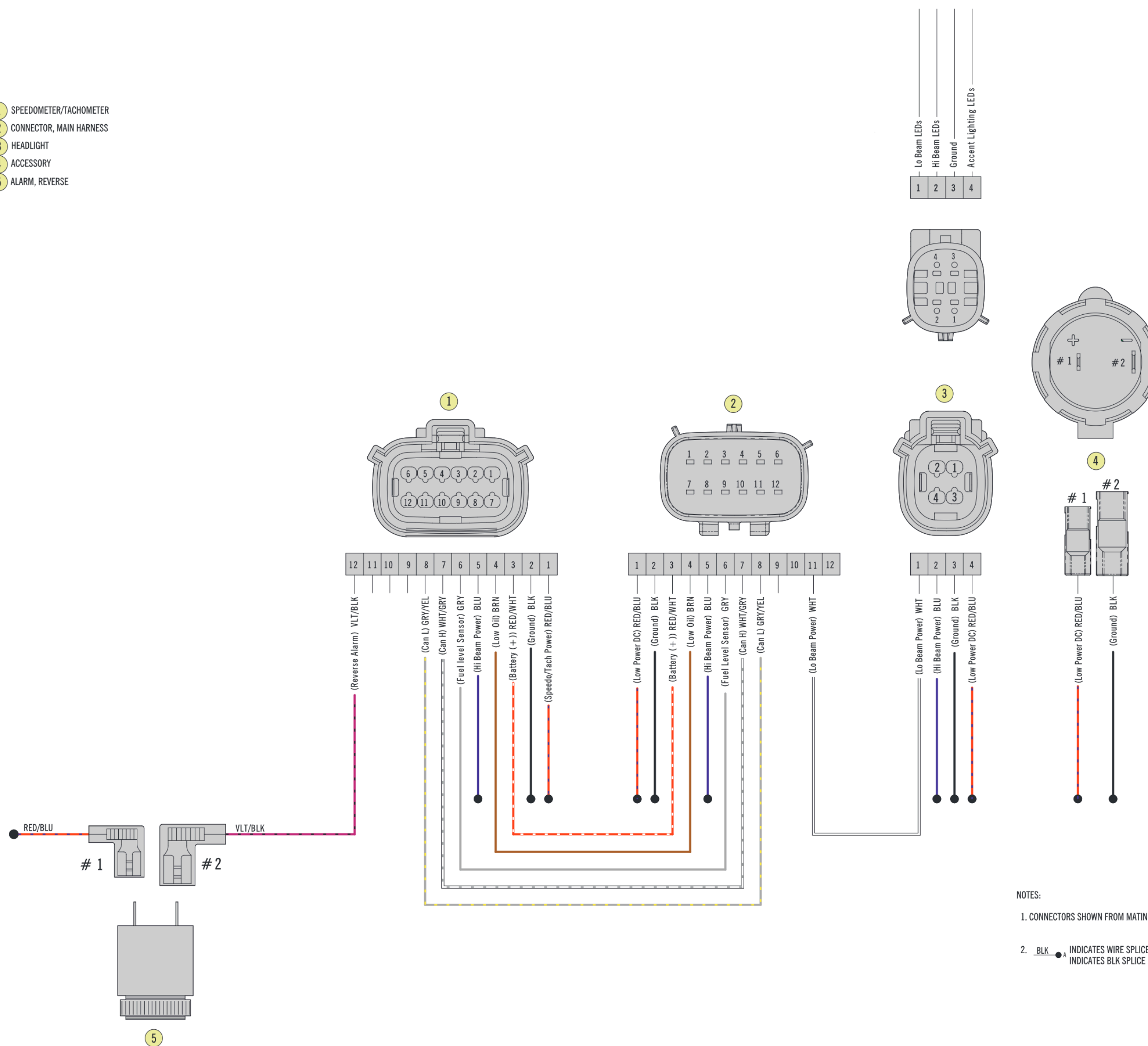


NOTES:  
 1. CONNECTORS SHOWN FROM MATING SURFACE SIDE.  
 2. **BLK** indicates wire splice, THIS EXAMPLE INDICATES BLK SPLICE A.

0753-857

# Hood Harness (p/n 1686-947) 600 Models

- 1 SPEEDOMETER/TACHOMETER
- 2 CONNECTOR, MAIN HARNESS
- 3 HEADLIGHT
- 4 ACCESSORY
- 5 ALARM, REVERSE

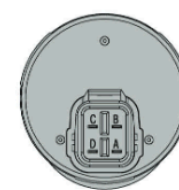
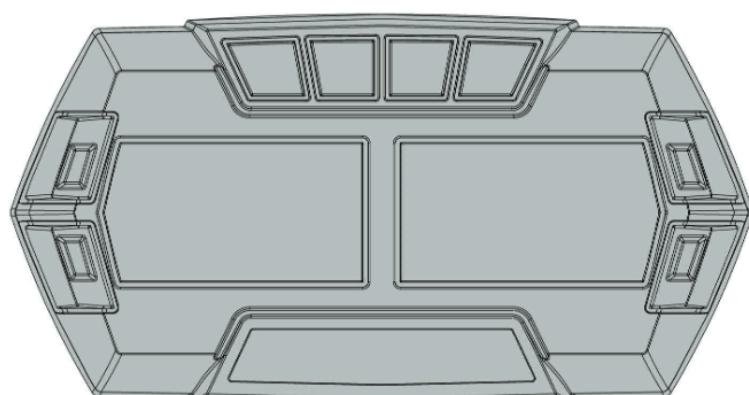
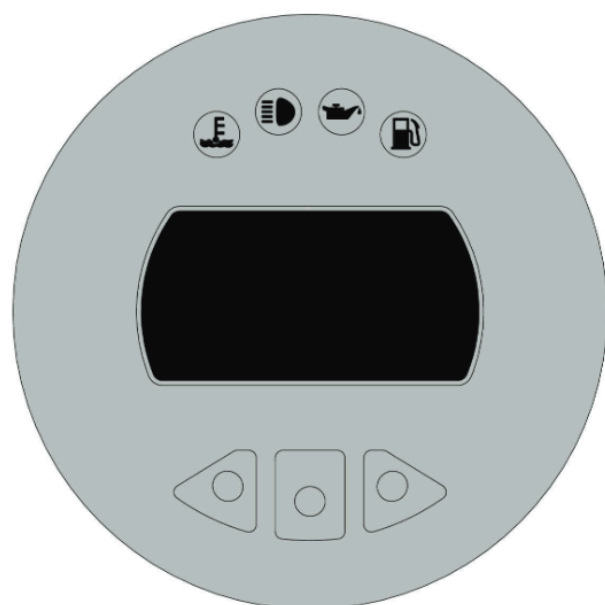


NOTES:  
 1. CONNECTORS SHOWN FROM MATING SURFACE SIDE.  
 2. BLK ● INDICATES WIRE SPLICE, THIS EXAMPLE INDICATES BLK SPLICE.

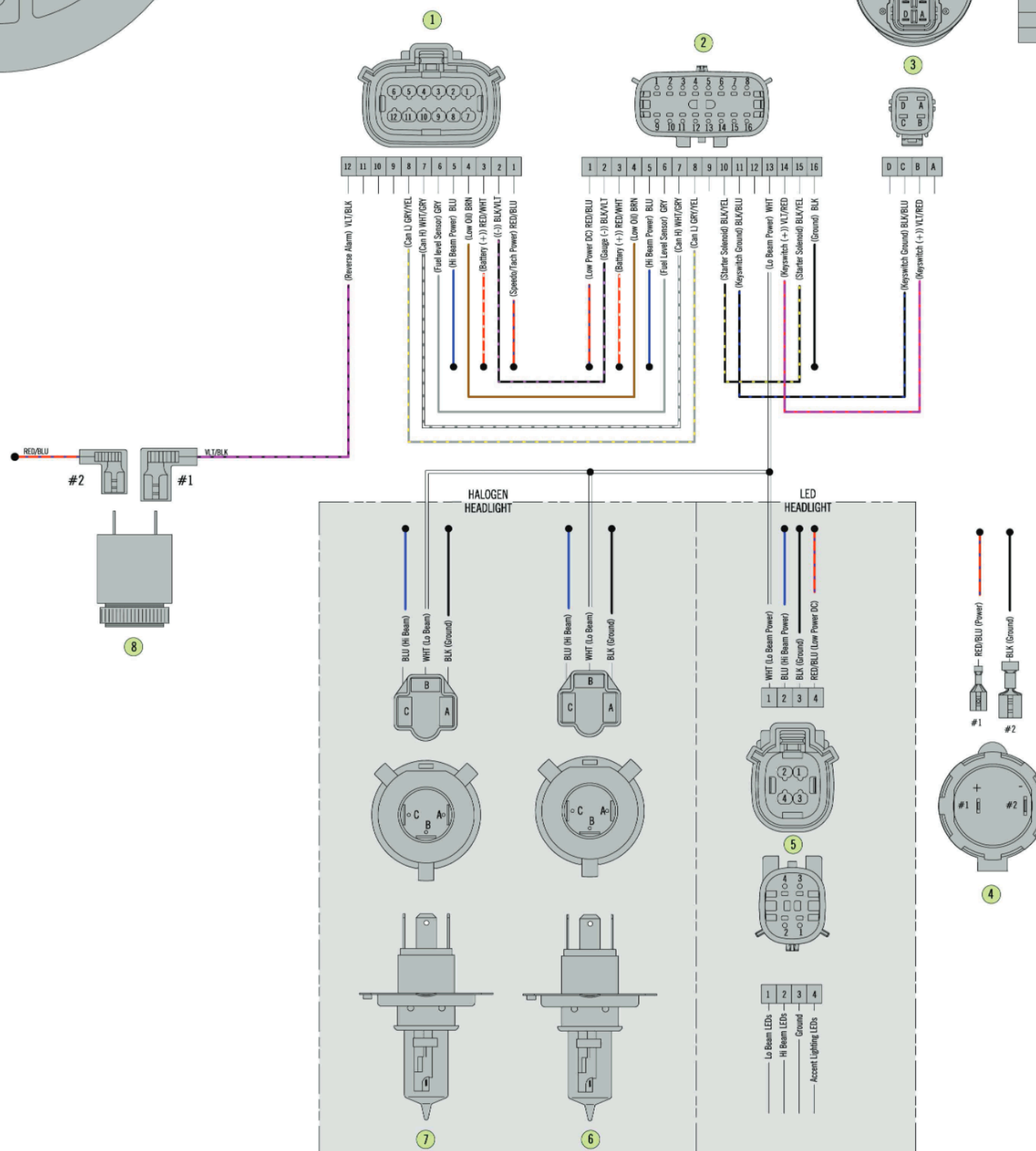


# Hood Harness (p/n 1686-856/857) 8000 Models

- 1 SPEEDOMETER/TACHOMETER
- 2 CONNECTOR, MAIN HARNESS
- 3 CONNECTOR, KEYSWITCH
- 4 OUTLET, 12V ACCESSORY
- 5 HEADLIGHT, LED
- 6 HEADLIGHT, HALOGEN B
- 7 HEADLIGHT, HALOGEN A
- 8 ALARM, REVERSE



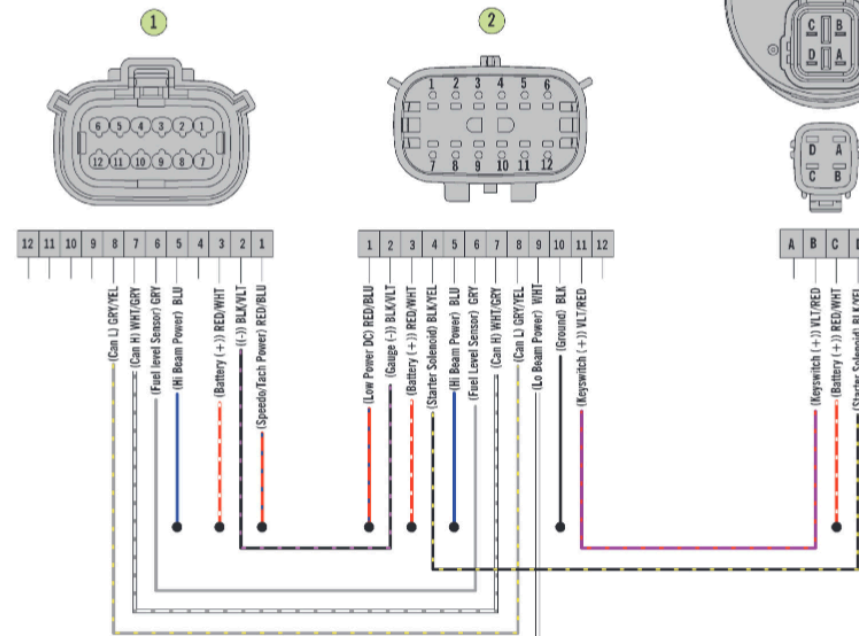
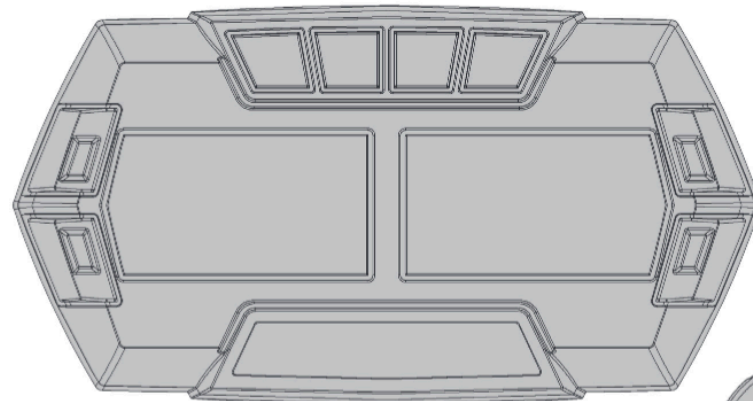
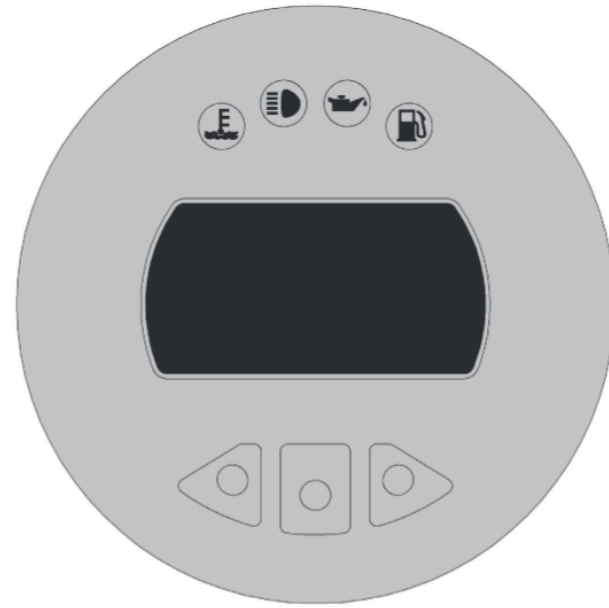
SWITCH FUNCTION	CIRCUIT DIAGRAM*			
	TERMINAL "M"	TERMINAL "B"	TERMINAL "Y"	TERMINAL "P"
OFF		●	●	
ON				
START				



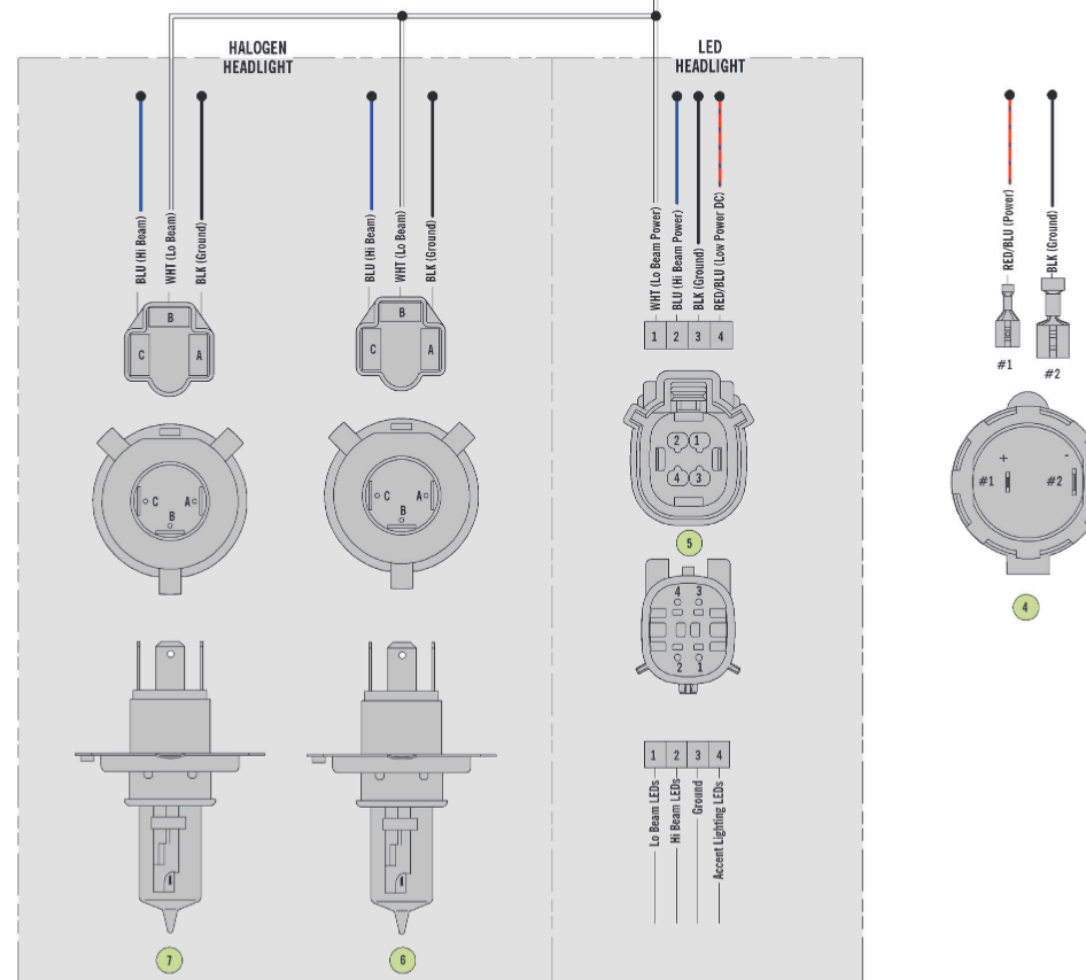
NOTES:  
1. CONNECTORS SHOWN FROM MATING SURFACE SIDE.  
2. **BLK** ● INDICATES WIRE SPLICE, THIS EXAMPLE INDICATES BLK SPLICE A.

# Hood Harness (p/n 1686-771) 9000 Models

- 1 SPEEDOMETER/TACHOMETER
- 2 CONNECTOR, MAIN HARNESS
- 3 CONNECTOR, KEYSWITCH
- 4 OUTLET, 12V ACCESSORY
- 5 HEADLIGHT, LED
- 6 HEADLIGHT, HALOGEN B
- 7 HEADLIGHT, HALOGEN A

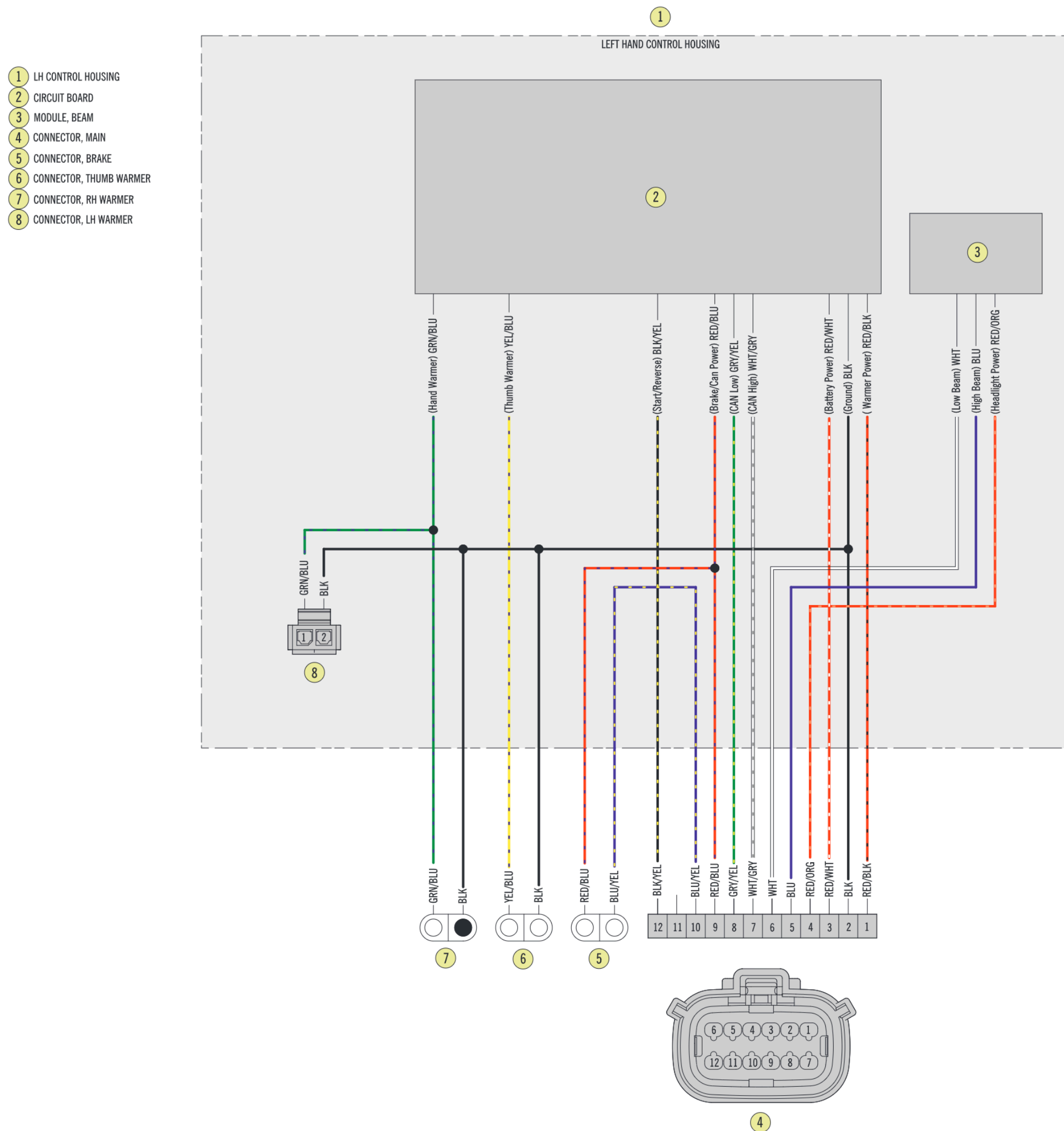


SWITCH FUNCTION	CIRCUIT DIAGRAM*			
	TERMINAL 'A'	TERMINAL 'B'	TERMINAL 'C'	TERMINAL 'D'
OFF	●	●	●	●
ON	●	●	●	●
START	●	●	●	●



- NOTES:
- 1. CONNECTORS SHOWN FROM MATING SURFACE SIDE.
  - 2. .BLK. ● indicates WIRE SPLICE, THIS EXAMPLE INDICATES BLK SPLICE A.

# Left-Side Handlebar Control (p/n 0609-843/971/973)



- 1 LH CONTROL HOUSING
- 2 CIRCUIT BOARD
- 3 MODULE, BEAM
- 4 CONNECTOR, MAIN
- 5 CONNECTOR, BRAKE
- 6 CONNECTOR, THUMB WARMER
- 7 CONNECTOR, RH WARMER
- 8 CONNECTOR, LH WARMER

0752-745



# ATAC Main Harness (p/n 1686-826)

- 1 CONNECTOR, SUSPENSION MODULE
- 2 CONNECTOR, LEFT SKI
- 3 CONNECTOR, RIGHT SKI
- 4 CONNECTOR, POWER CAN
- 5 CONNECTOR, REAR TRACK
- 6 CONNECTOR, REAR SHOCK
- 7 CONNECTOR, REAR TRACK

