

## 2022 SNOWMOBILE WIRING DIAGRAMS

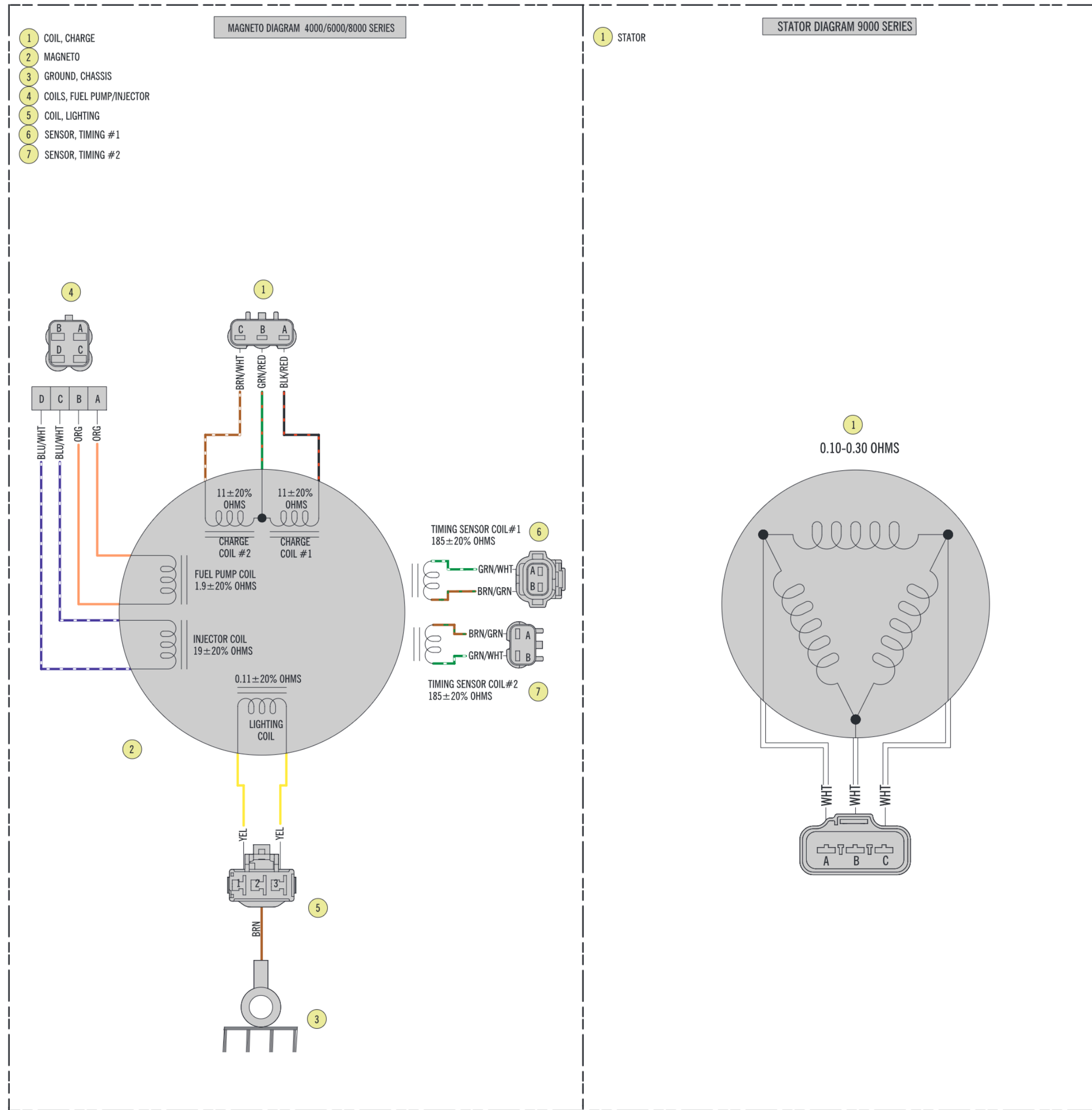
This chart is designed to direct the technician to the appropriate Harness Wiring Diagram. Select the snowmobile model from the chart to determine the correct diagram:

Model	Ignition/Main Harness	Hood/Console Harness	Handlebar Harness
ZR 120	p. 2	N/A	N/A
ZR 200	p. 3	N/A	N/A
4000	p. 4	p. 9	N/A
6000	p. 5	p. 10	p. 12
8000 without ES	p. 6	p. 10	p. 12
8000 with ES	p. 7	p. 10	p. 12
9000	p. 8	p. 11	p. 12

■NOTE: Magneto diagrams on p. 1 and iACT Main Harness on p. 13.



# Magnetos

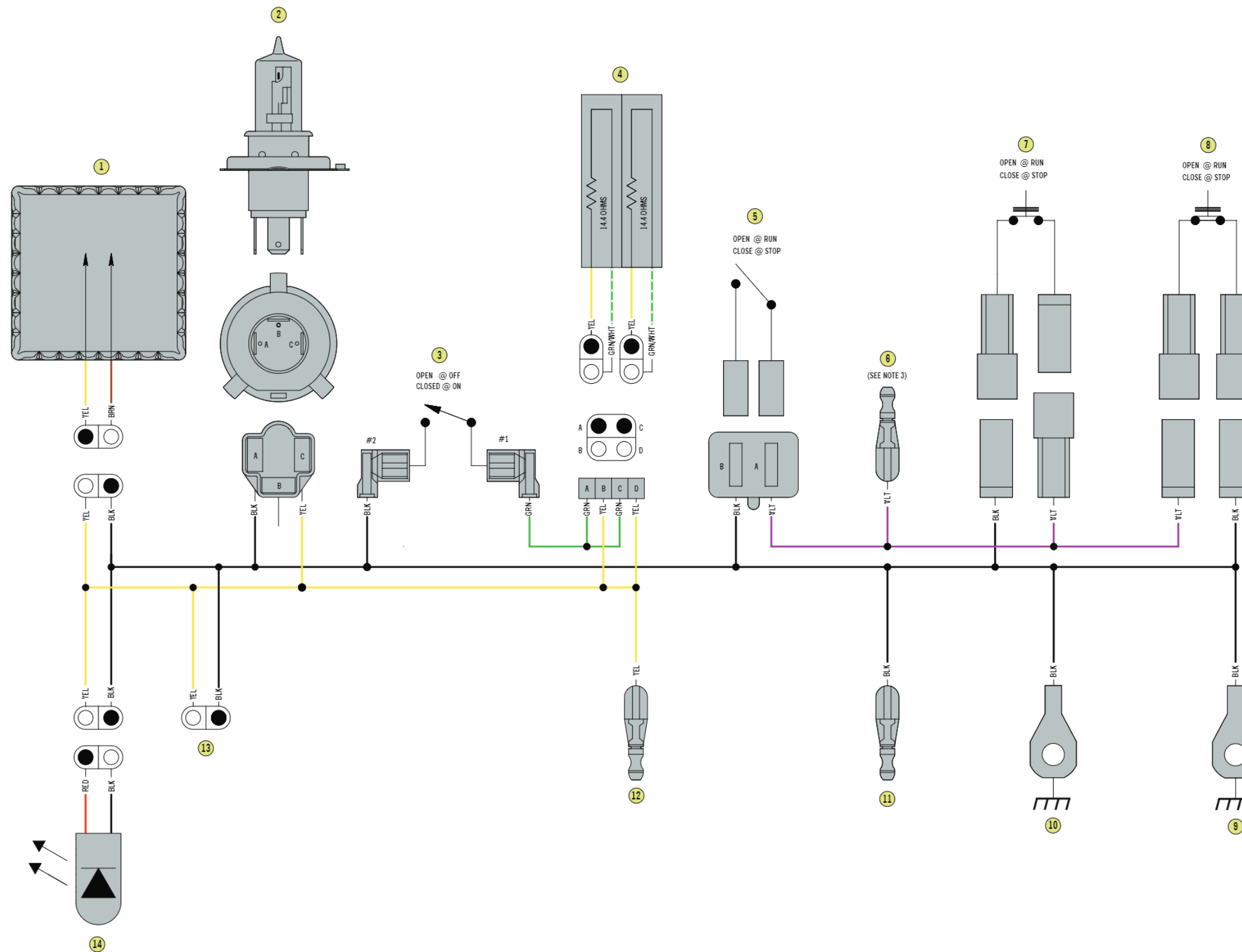


NOTES:

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

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

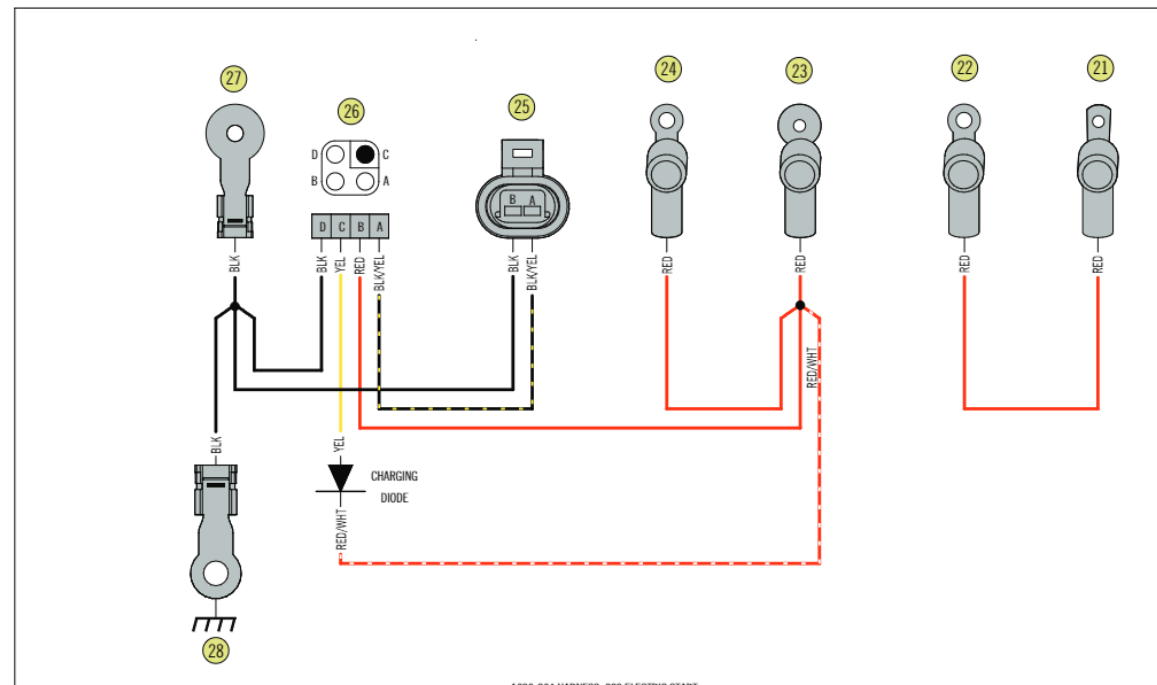
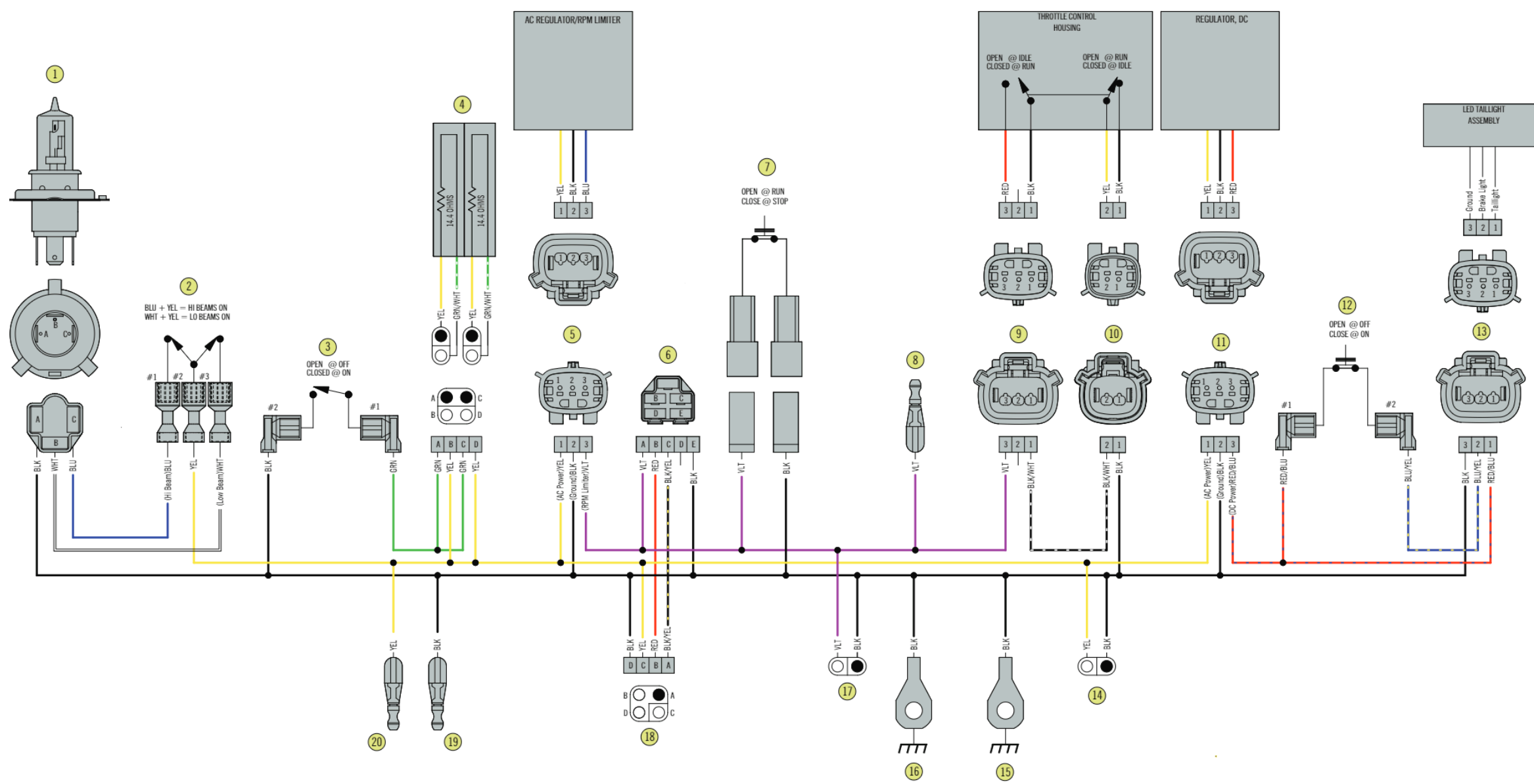
- 1 REGULATOR, AC
- 2 HEADLIGHT
- 3 SWITCH, WARMER
- 4 ELEMENTS, HANDWARMER
- 5 SWITCH, KEY
- 6 CONNECTOR, ENGINE STOP
- 7 SWITCH, TETHER
- 8 SWITCH, STOP
- 9 CONNECTOR, CHASSIS GROUND
- 10 CONNECTOR, ENGINE GROUND
- 11 CONNECTOR, MAGNETO #2 (-)
- 12 CONNECTOR, MAGNETO #1 (+)
- 13 CONNECTOR, ACCESSORY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

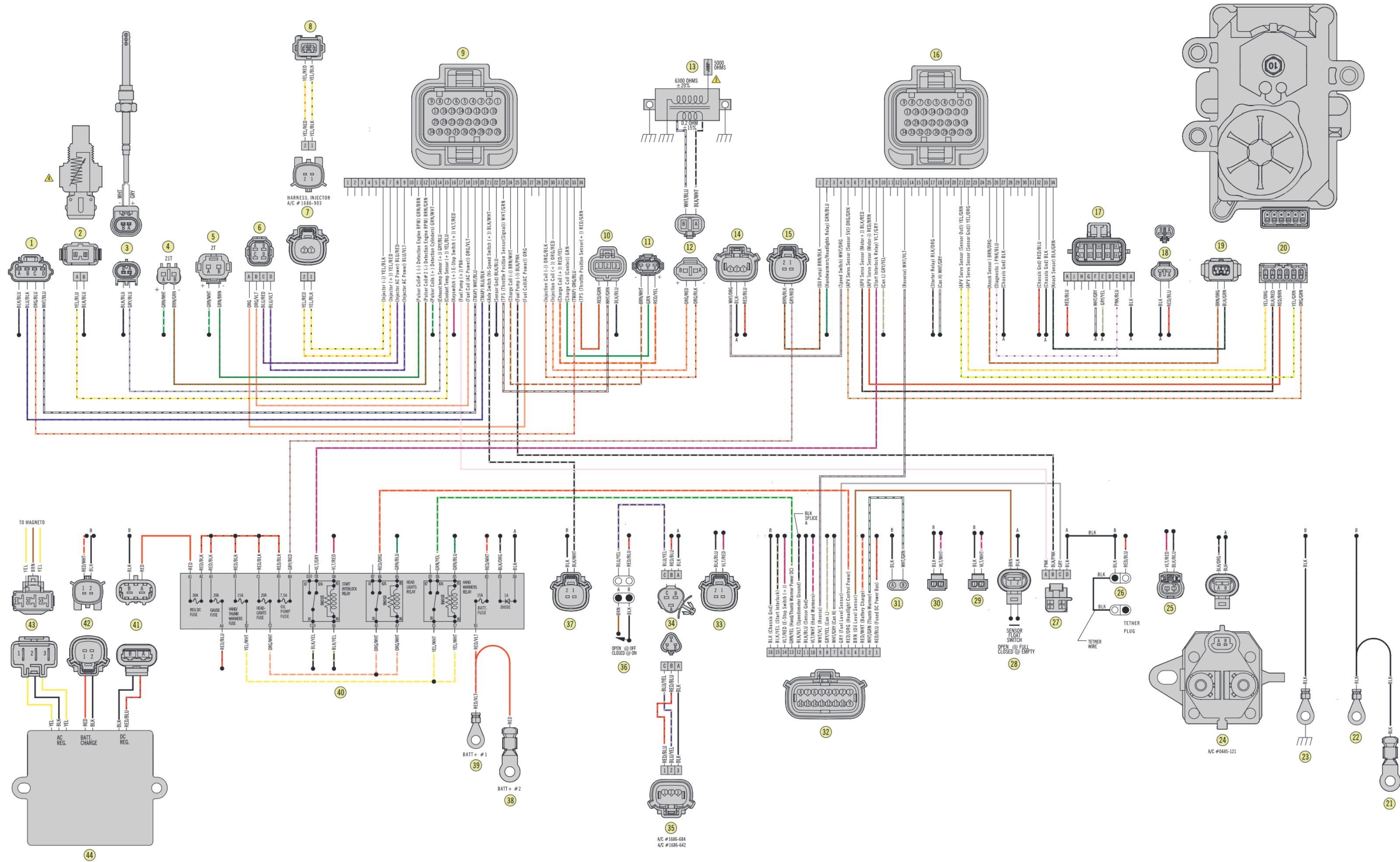


NOTES:  
 1 CONNECTORS SHOWN FROM MATING SURFACE SIDE.  
 2 ● MALE PIN TERMINAL  
 ○ FEMALE RECEPTACLE TERMINAL



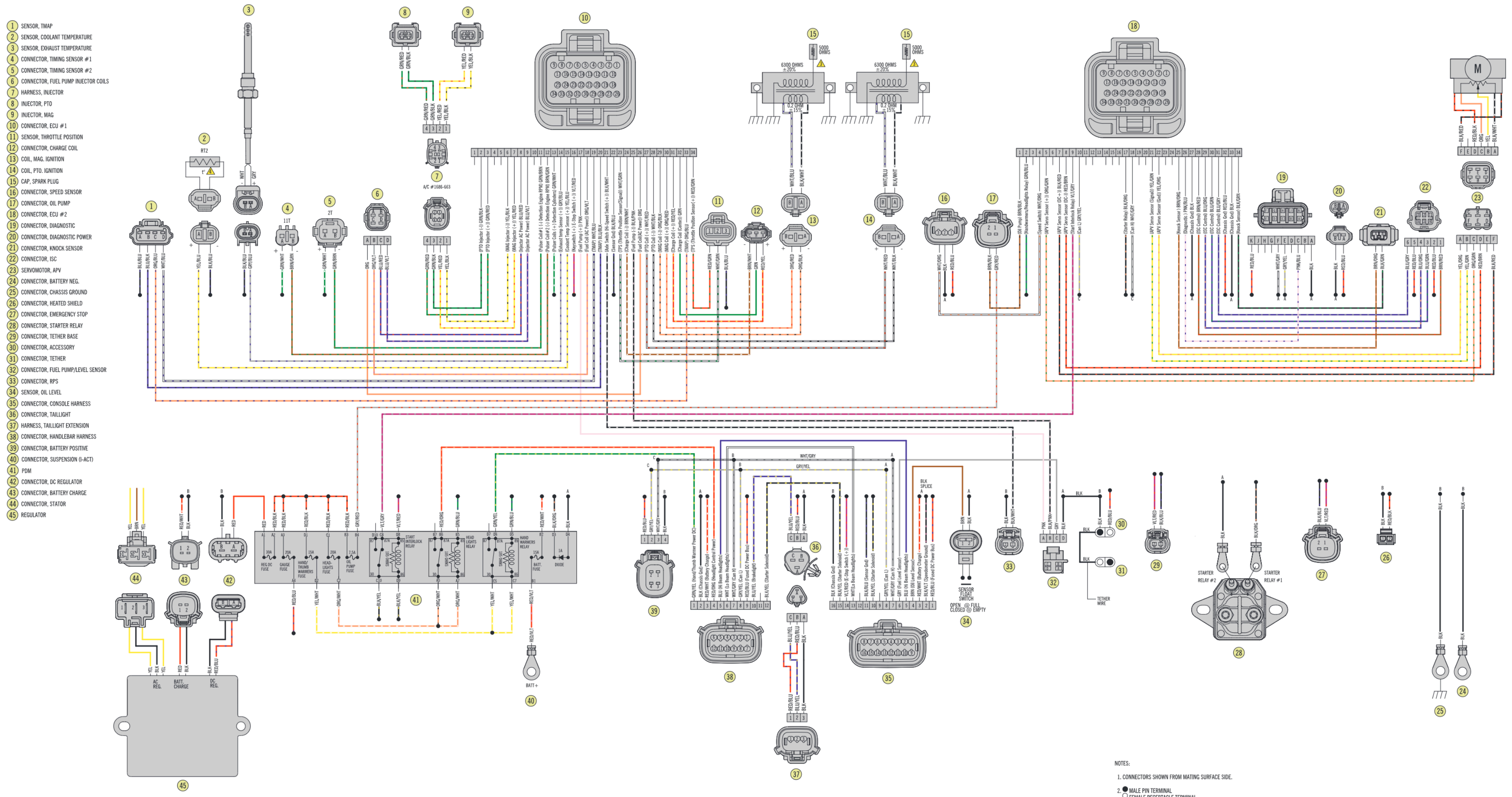
# Main Harness (p/n 1686-905) 4000 Models

- 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 SERVOMOTOR, APV
- 20 CONNECTOR, BATTERY NEG. #2
- 21 CONNECTOR, BATTERY NEG. #1
- 22 CONNECTOR, CHASSIS GROUND
- 23 CONNECTOR, STARTER RELAY
- 24 CONNECTOR, TETHER BASE
- 25 CONNECTOR, ACCESSORY
- 26 CONNECTOR, FUEL PUMP/LEVEL SENSOR
- 27 SENSOR, OIL LEVEL
- 28 CONNECTOR, HANDWARMER #2
- 29 CONNECTOR, HANDWARMER #1
- 30 CONNECTOR, THUMBWARMER
- 31 CONNECTOR, CONSOLE HARNESS
- 32 CONNECTOR, EMERGENCY STOP
- 33 CONNECTOR, TAILLIGHT
- 34 HARNESS, TAILLIGHT EXTENSION
- 35 SWITCH, BRAKE
- 36 CONNECTOR, RPS
- 37 CONNECTOR, BATTERY POS. #2
- 38 CONNECTOR, BATTERY POS. #1
- 39 PSM
- 40 CONNECTOR, DC REGULATOR
- 41 CONNECTOR, BATTERY CHARGE
- 42 CONNECTOR, STATOR
- 43 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. ●-● INDICATES WIRE SPLICE. THIS EXAMPLE INDICATES BLK SPLICE A.

# Main Harness (p/n 1686-834) 6000 Models



- 1 SENSOR, TMAP
- 2 SENSOR, COOLANT TEMPERATURE
- 3 SENSOR, EXHAUST TEMPERATURE
- 4 CONNECTOR, TIMING SENSOR #1
- 5 CONNECTOR, TIMING SENSOR #2
- 6 CONNECTOR, FUEL PUMP INJECTOR COILS
- 7 HARNESS, INJECTOR
- 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, BATTERY NEG.
- 25 CONNECTOR, CHASSIS GROUND
- 26 CONNECTOR, HEATED SHIELD
- 27 CONNECTOR, EMERGENCY STOP
- 28 CONNECTOR, STARTER RELAY
- 29 CONNECTOR, TETHER BASE
- 30 CONNECTOR, ACCESSORY
- 31 CONNECTOR, TETHER
- 32 CONNECTOR, FUEL PUMP/LEVEL SENSOR
- 33 CONNECTOR, RPS
- 34 SENSOR, OIL LEVEL
- 35 CONNECTOR, CONSOLE HARNESS
- 36 CONNECTOR, TAILLIGHT
- 37 HARNESS, TAILLIGHT EXTENSION
- 38 CONNECTOR, HANDLEBAR HARNESS
- 39 CONNECTOR, BATTERY POSITIVE
- 40 CONNECTOR, SUSPENSION (0-ACT)
- 41 PSM
- 42 CONNECTOR, DC REGULATOR
- 43 CONNECTOR, BATTERY CHARGE
- 44 CONNECTOR, STATOR
- 45 REGULATOR

NOTES:

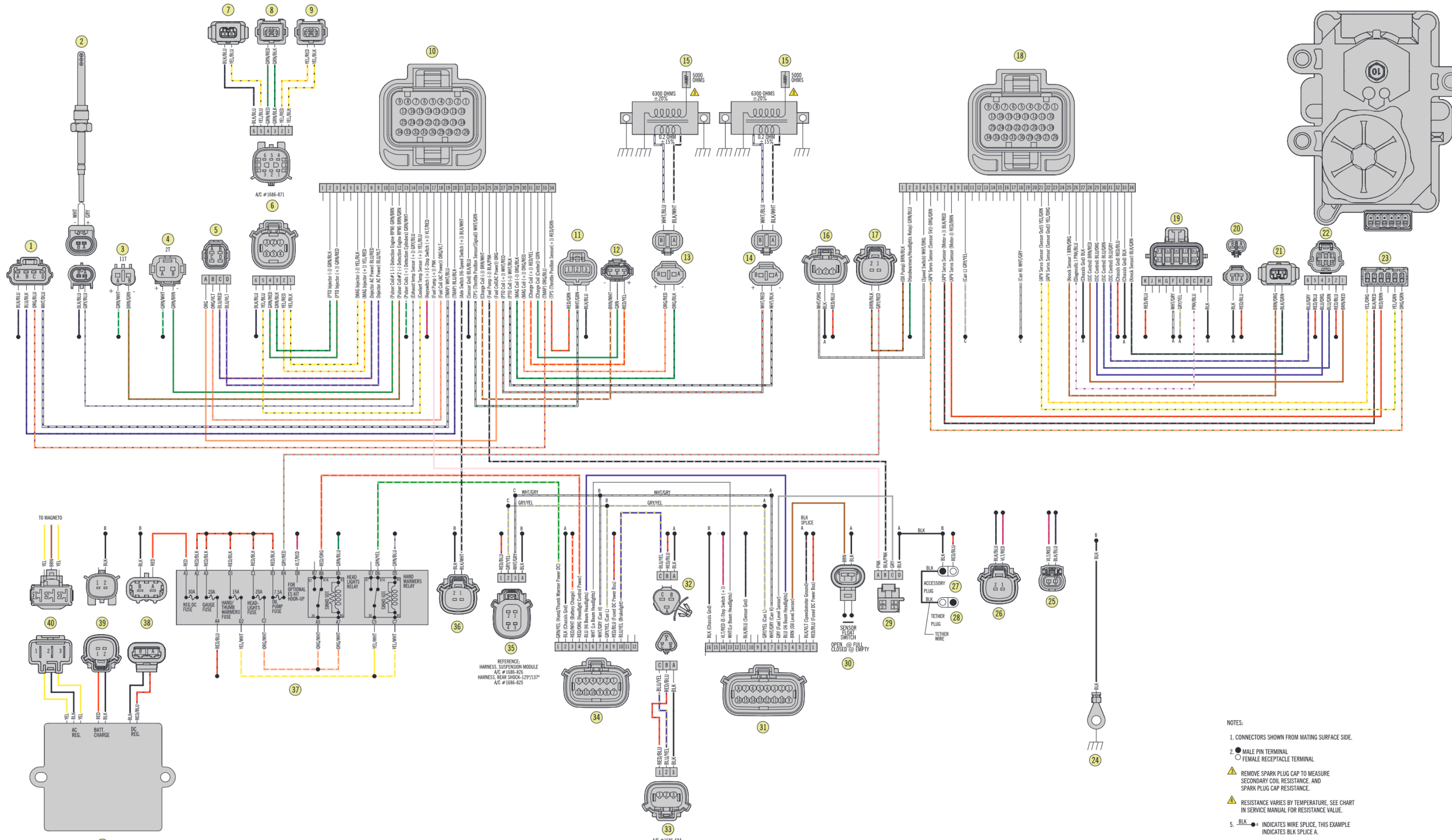
- 1. CONNECTORS SHOWN FROM MATING SURFACE SIDE.
- 2. ● MALE PIN TERMINAL  
○ FEMALE RECEPTACLE TERMINAL
- ▲ REMOVE SPARK PLUG CAP TO MEASURE SECONDARY COIL RESISTANCE AND SPARK PLUG CAP RESISTANCE.
- ▲ RESISTANCE VARIES BY TEMPERATURE. SEE CHART IN SERVICE MANUAL FOR RESISTANCE VALUE.
- 5. .BLK. ● INDICATES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

0752-747



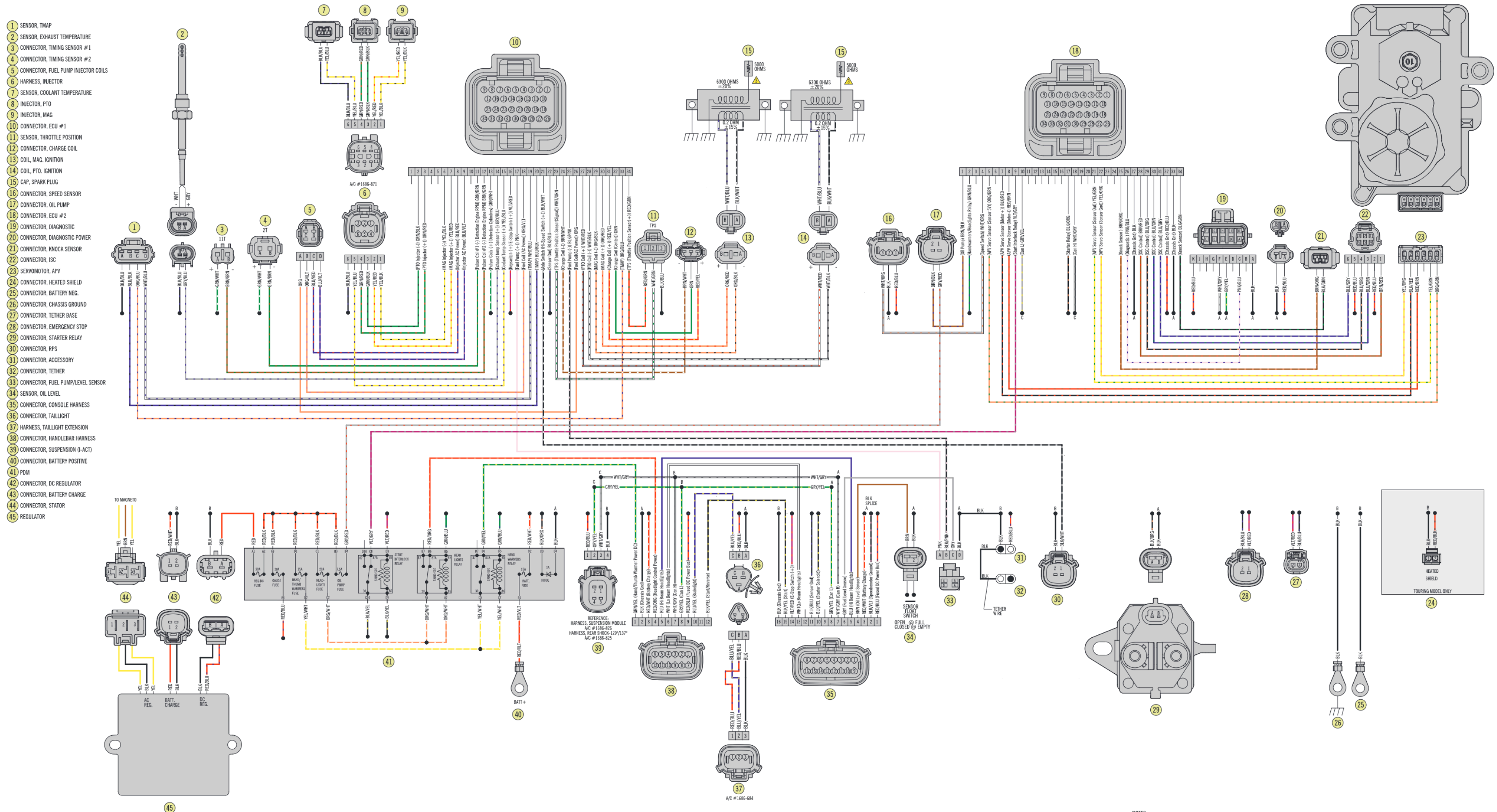
# Main Harness (p/n 1686-872) 8000 without ES

- 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



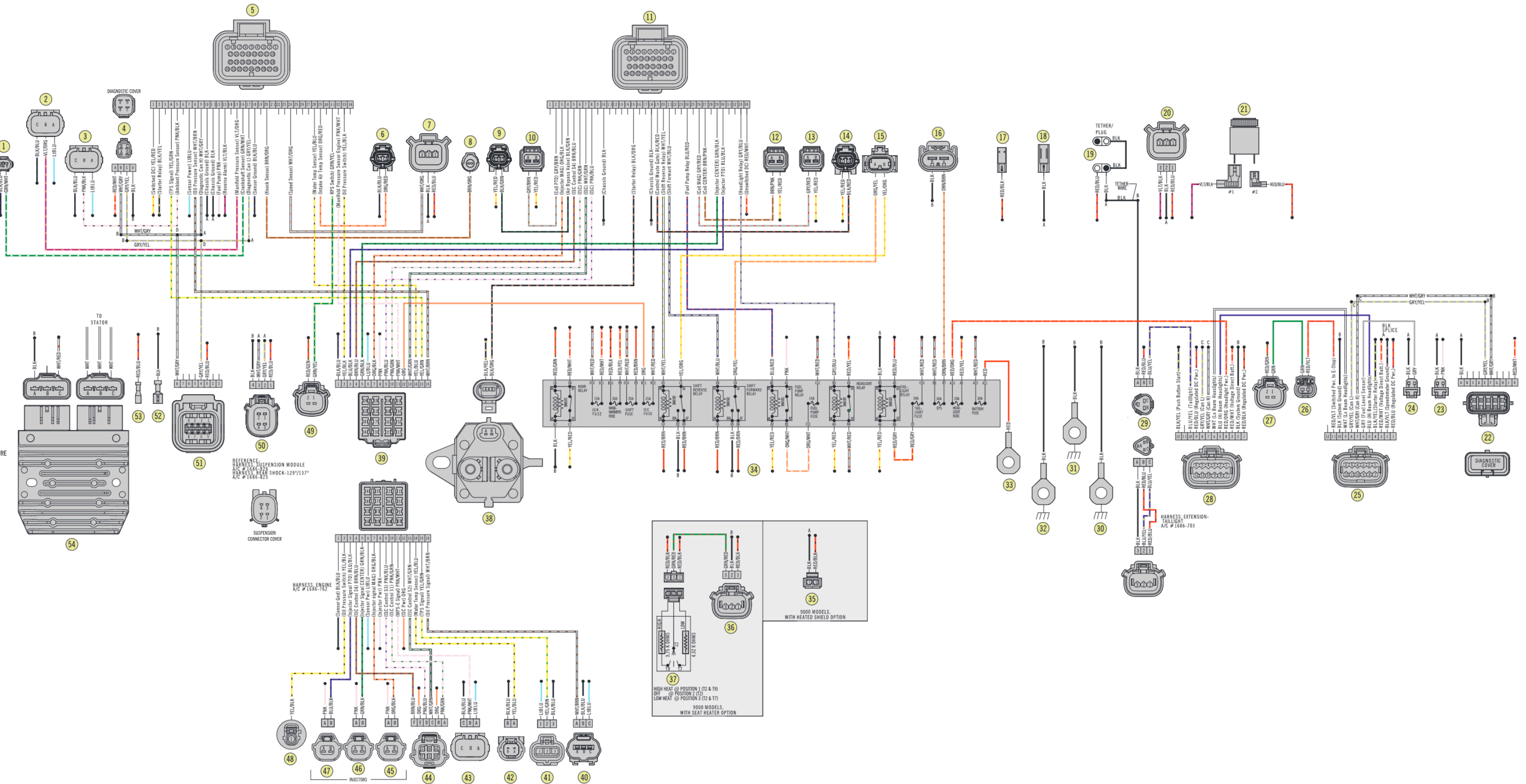
NOTES:

- CONNECTORS SHOWN FROM MATING SURFACE SIDE.
- 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.
- BLK indicates WIRE SPLICE, THIS EXAMPLE INDICATES BLK SPLICE A.



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

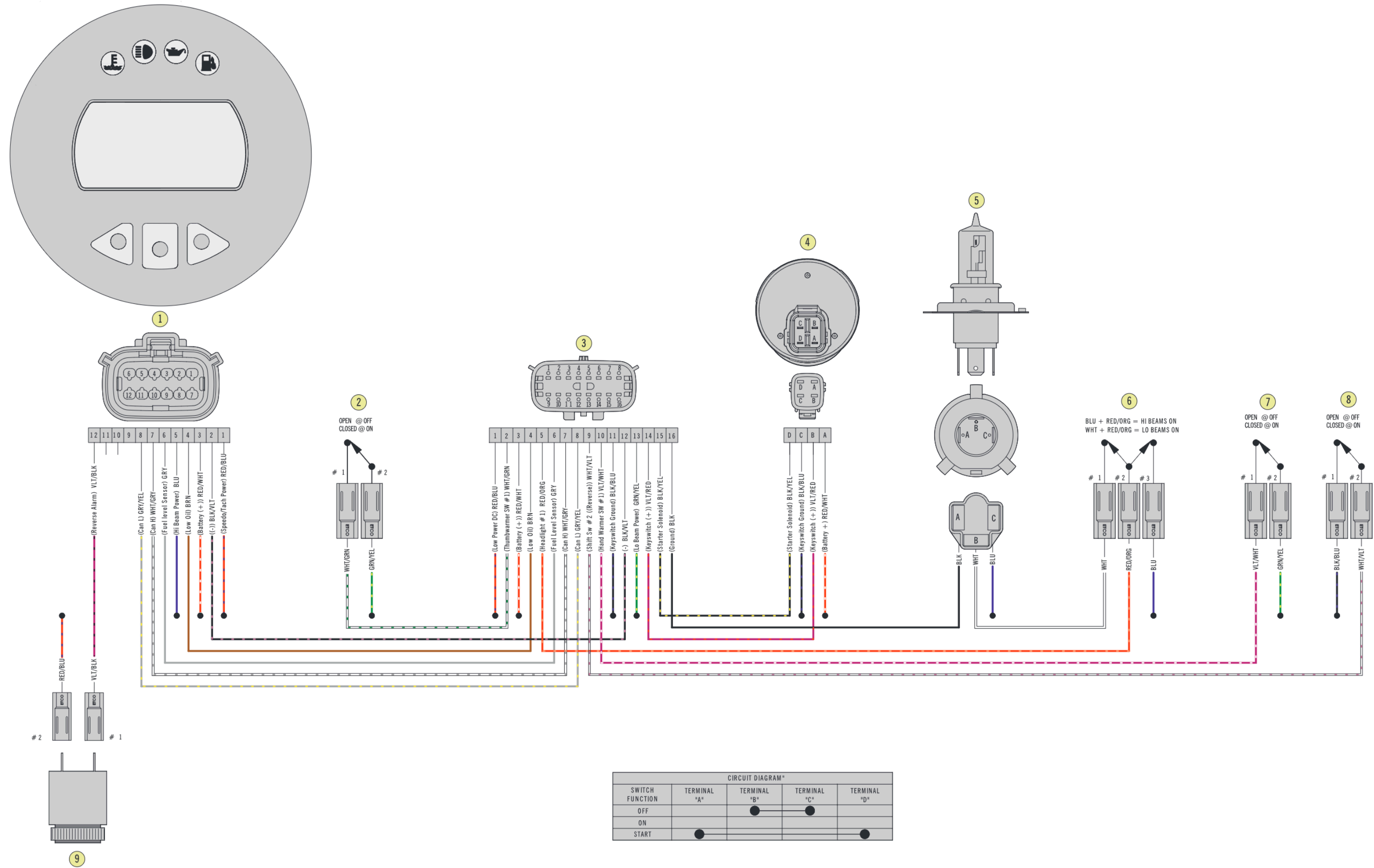
- 1 CONNECTOR, CRANKSHAFT POSITION SENSOR
- 2 CONNECTOR, TURBO MANIFOLD PRESSURE SENSOR
- 3 CONNECTOR, AMBIENT PRESSURE SENSOR
- 4 CONNECTOR, DIAGNOSTIC 1
- 5 CONNECTOR, ECU 1
- 6 CONNECTOR, INTAKE AIR TEMPERATURE SENSOR
- 7 CONNECTOR, SPEED SENSOR
- 8 CONNECTOR, KNOCK SENSOR
- 9 CONNECTOR, AIR BYPASS 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 ACTUATOR
- 16 CONNECTOR, REVERSE POWER STEERING
- 17 CONNECTOR, 12V ACC. #1
- 18 CONNECTOR, 12V ACC. #2
- 19 CONNECTOR, TETHER PLUG/ACC.
- 20 CONNECTOR, REVERSE GEAR SWITCH
- 21 ALARM, REVERSE
- 22 CONNECTOR, DIAGNOSTIC 2
- 23 CONNECTOR, FUEL PUMP
- 24 CONNECTOR, FUEL LEVEL
- 25 CONNECTOR, CONSOLE HARNESS
- 26 CONNECTOR, TETHER BASE
- 27 CONNECTOR, EMERGENCY STOP
- 28 CONNECTOR, HANDLEBAR HARNESS
- 29 CONNECTOR, TAILLIGHT HARNESS
- 30 CONNECTOR, ENGINE GROUND
- 31 CONNECTOR, CHASSIS GROUND
- 32 CONNECTOR, BATTERY NEGATIVE
- 33 CONNECTOR, BATTERY POSITIVE
- 34 POWER DISTRIBUTION MODULE
- 35 CONNECTOR, HEAT SHIELD
- 36 CONNECTOR, SEAT HEATER
- 37 SWITCH, SEAT HEATER
- 38 RELAY, STARTER
- 39 CONNECTOR, ENGINE HARNESS
- 40 CONNECTOR, OIL PRESSURE SENSOR
- 41 CONNECTOR, THROTTLE POSITION SENSOR
- 42 CONNECTOR, COOLANT TEMPERATURE SENSOR
- 43 CONNECTOR, ENGINE MANIFOLD ABSOLUTE PRESSURE
- 44 CONNECTOR, ISC MOTOR
- 45 CONNECTOR, MAG FUEL INJECTOR
- 46 CONNECTOR, CENTER FUEL INJECTOR
- 47 CONNECTOR, PTO FUEL INJECTOR
- 48 CONNECTOR, OIL PRESSURE SWITCH
- 49 CONNECTOR, RUNAWAY PREVENTION SWITCH
- 50 CONNECTOR, I-ACT SUSPENSION
- 51 CONNECTOR, EPS SIGNAL
- 52 CONNECTOR, CUT VALVE HEATER #2
- 53 CONNECTOR, CUT VALVE HEATER #1
- 54 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.

# Hood Harness (p/n 1686-900) 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

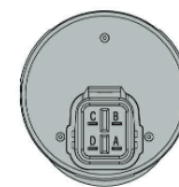
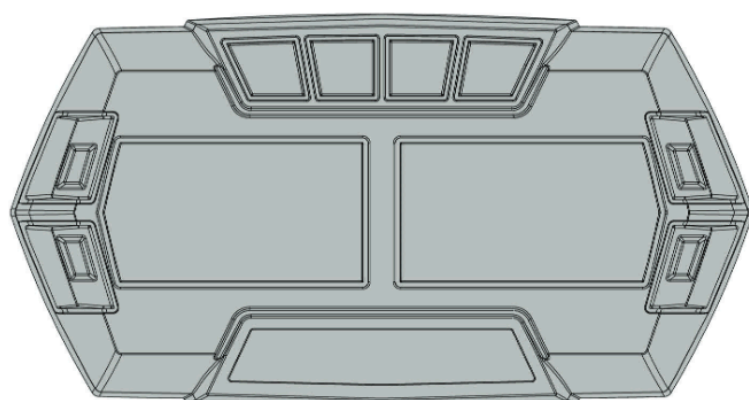
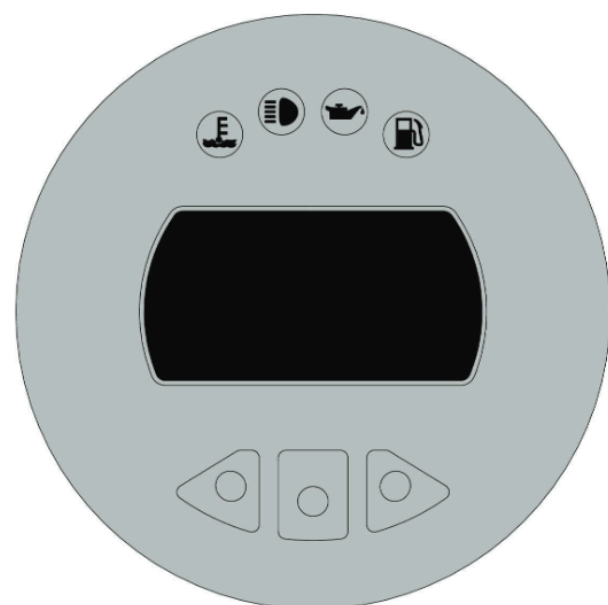


NOTES:  
1. CONNECTORS SHOWN FROM MATING SURFACE SIDE.  
2. BLK ● INDICATES WIRE SPLICE, THIS EXAMPLE INDICATES BLK SPLICE A.

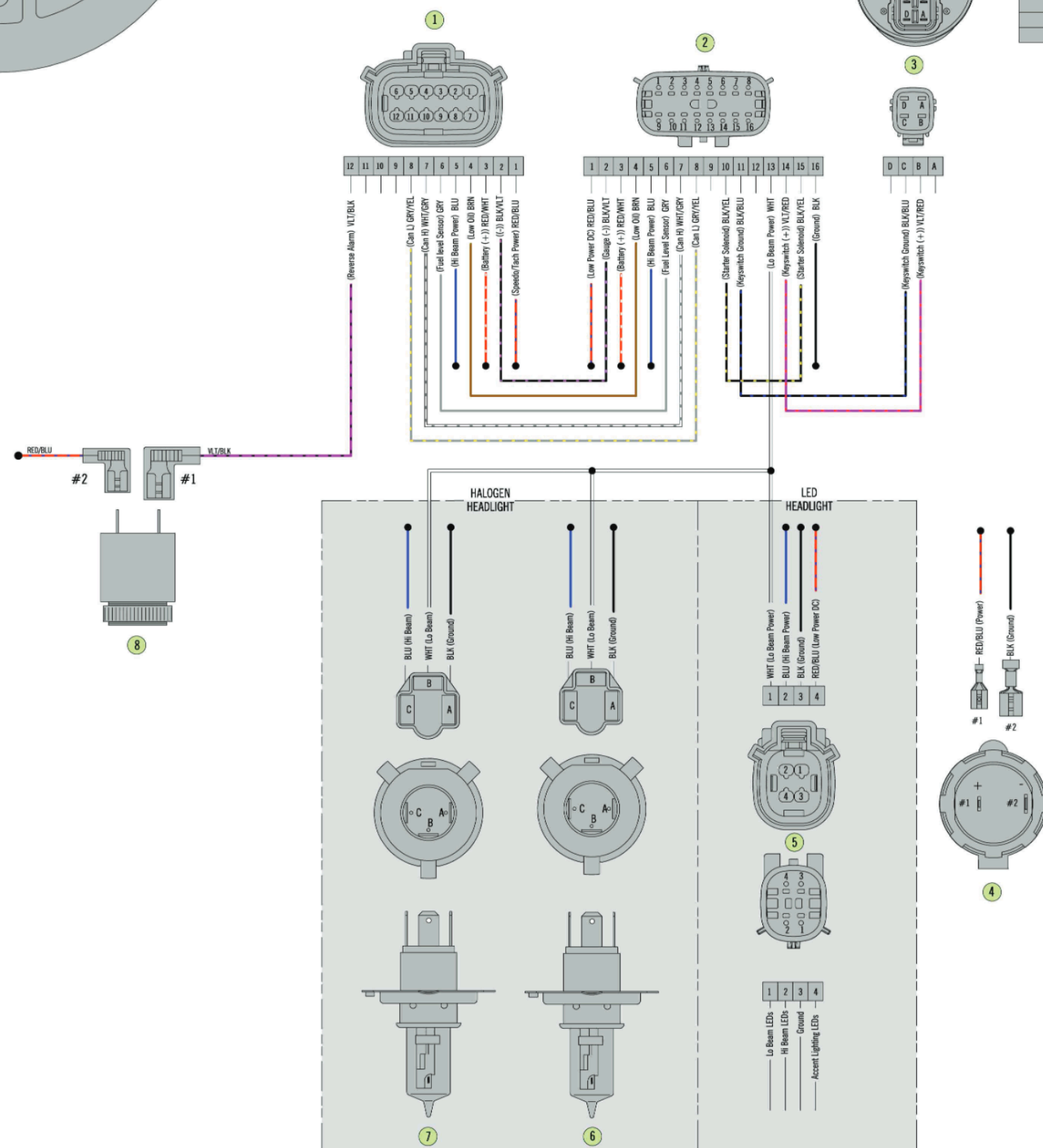
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# Hood Harness (p/n 1686-856/857) 6000/8000 Models

- 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 "S"	TERMINAL "C"	TERMINAL "P"
OFF		●	●	
ON				
START				

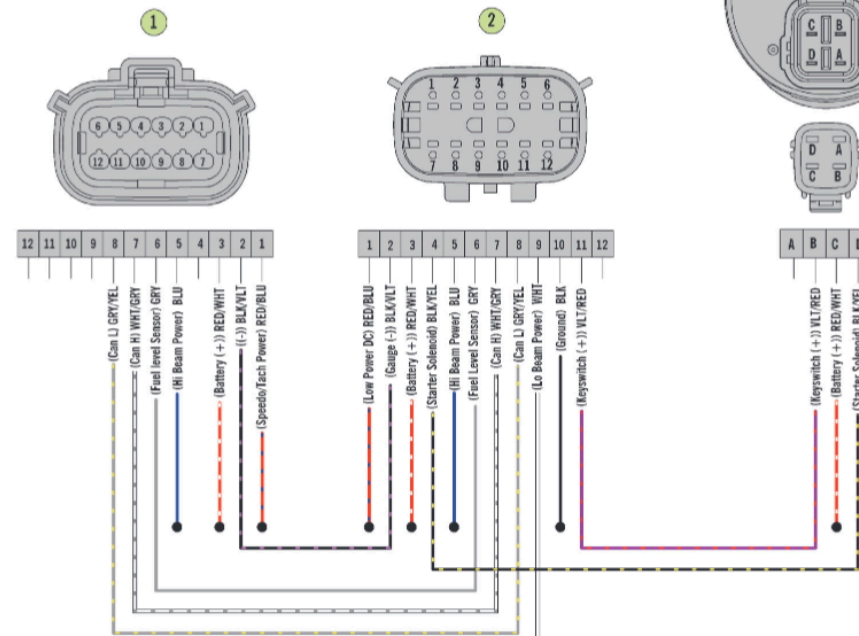
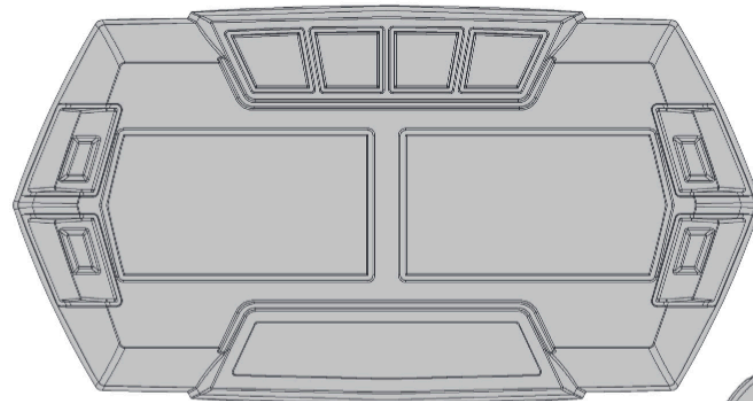
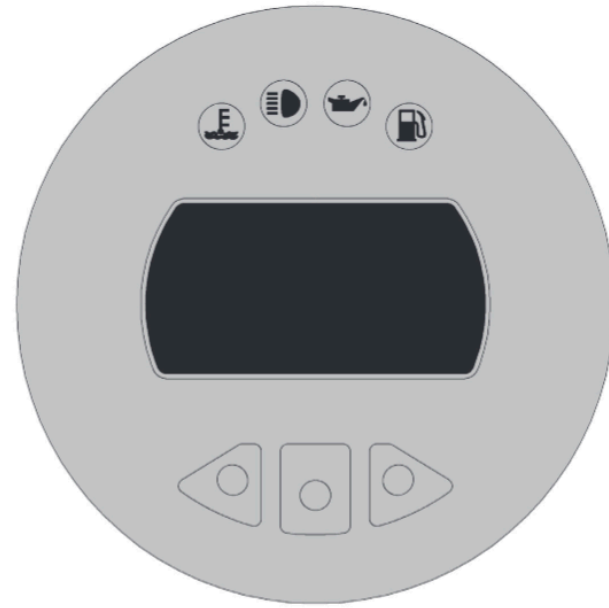


- NOTES:
- 1. CONNECTORS SHOWN FROM MATING SURFACE SIDE.
  - 2. **BLK** ● INDICATES WIRE SPLICE, THIS EXAMPLE INDICATES BLK SPLICE A.

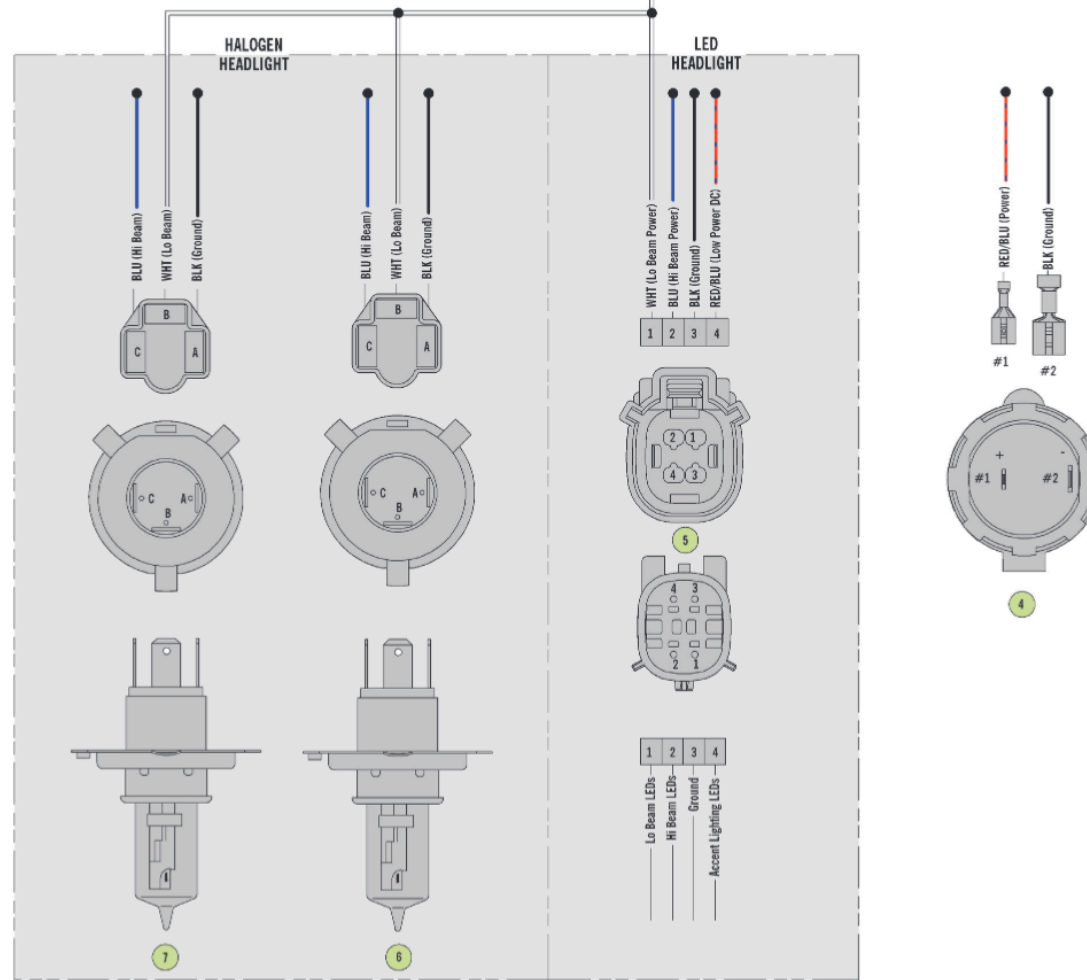


# Hood Harness (p/n 1686-771) 9000 Models

- 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

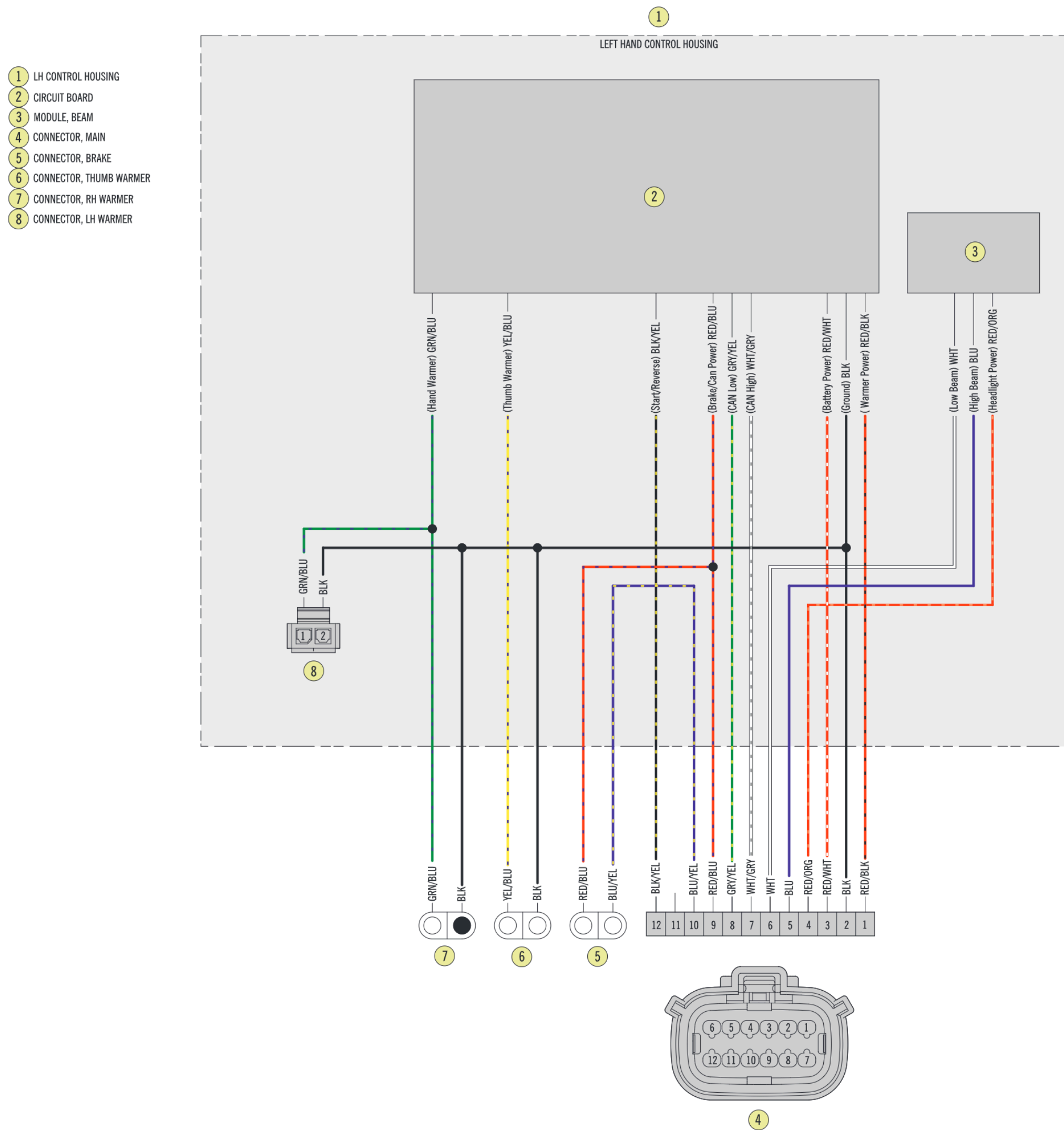


SWITCH FUNCTION	CIRCUIT DIAGRAM*			
	TERMINAL 'A'	TERMINAL 'B'	TERMINAL 'C'	TERMINAL 'D'
OFF	●	●	●	●
ON	●	●	●	●
START	●	●	●	●



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)



# 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

