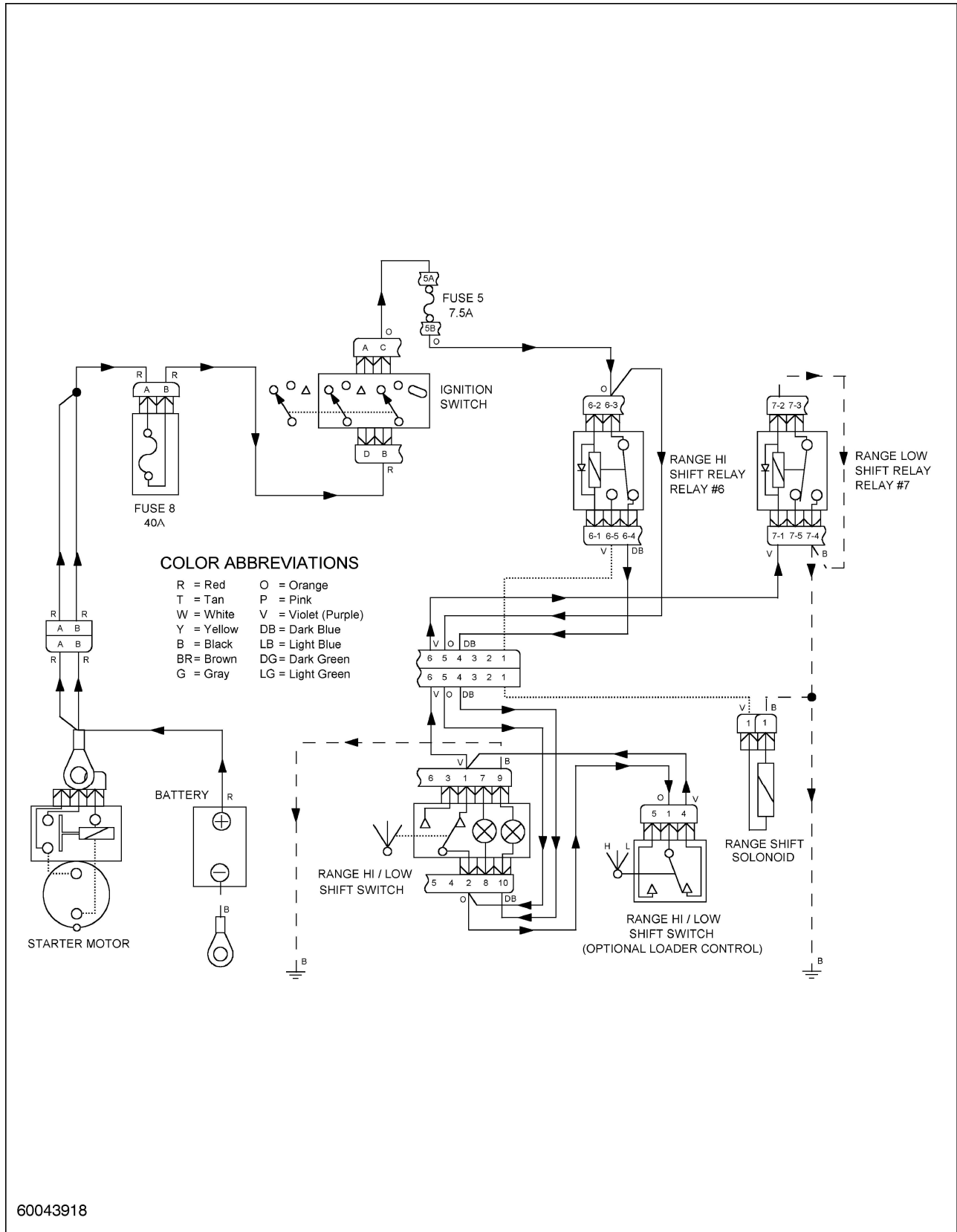


# HST RANGE "LOW" SHIFT CIRCUIT



60043918

### HST RANGE “LOW” SHIFT CIRCUIT

1. Current starts at the battery, and flows through the positive (+) battery cable to the engine starter motor.
2. From the starter motor, current flows through the 40-amp fuse to a wire splice. The wire splice sends current into two directions:
  - To the “B” terminal of the ignition switch
3. When the ignition switch is placed in the “ACC/RUN” position current is transferred across the following ignition switch terminals:
  - “B” to “C” terminals

### Terminal “C” of Ignition Switch

1. Current flows from the “C” terminal of the ignition switch to the fuse panel bussbar, from the bussbar current travels through the #5, 7.5-amp fuse.
2. The #5, 7.5-amp fuse supplies current to:
  - Terminal # 6-3 High Range Shift Relay
  - Terminal #2 of High /Low Range Shift Switch (Standard)
  - Terminal #1 of High/Low Range shift Switch (Optional Switch loader control valve handle)

### High/Low Switch (s)

1. When the range shift switch is placed in the “LOW” position, current flows out of terminal # 1 of the (standard) or terminal # 4 of the (optional) switch. This current from the switch flows to terminal # 7-1 of the “LOW” shift relay.

### Low Shift Relay

1. When current is supplied to terminal #7-1 and a ground source to terminal # 7-2 (ground source provided by main ground, located at engine starter mounting bolt.) The relay energizes, latching terminals #7-3 and 7-5 of the relay. This cuts off the ground circuit to the High shift relay.
2. When the Low shift relay is energized, the range shift solenoid does not receive current and is not activated. This allows the hydrostatic motor to stay in “LOW” range.
3. When the High shift relay is not energized, terminals #6-3 and 6-4 are latched. Terminal #6-4 provides current to terminal # 10 of the High/low Switch, terminal #9 of the switch is provided with a ground source and the internal light bulb of the switch illuminates.

**NOTE:** “LOW” range is the default setting for the tractor hydrostatic system. When the tractor electrical system is shutdown and reactivated the hydrostatic system will default to the “LOW” range.

**HST RANGE “LOW” SHIFT CIRCUIT  
TROUBLESHOOTING**

<b>CONDITION</b>	<b>POSSIBLE CAUSE</b>	<b>REMEDY</b>
Tractor will not switch into “LOW” range	Faulty range shift rocker switch  Defective “HIGH” or “LO” shift relay  Defective range shift solenoid  Fault in wiring or ground terminal	Test and replace switch as necessary  Test relays and replace as necessary  Test solenoid and replace as necessary  Inspect wiring harness and ground terminal for damage, corrosion, and short circuits. Repair or replace as necessary.
Tractor will not switch out of “LOW” range	Blown #5, 7.5-amp shift control  Faulty range shift rocker switch  Defective “HIGH” or “LO” shift relay  Defective range shift solenoid  Fault in wiring or ground terminal	Inspect and replace the 7.5-amp fuse as necessary  Test and replace switch as necessary  Test relays and replace as necessary  Test solenoid and replace as necessary  Inspect wiring harness and ground terminal for damage, corrosion, and short circuits. Repair or replace as necessary
“LOW” range bulb fails to illuminate, but tractor shifts into “LOW” range	Defective “LOW” range bulb	Replace range shift switch