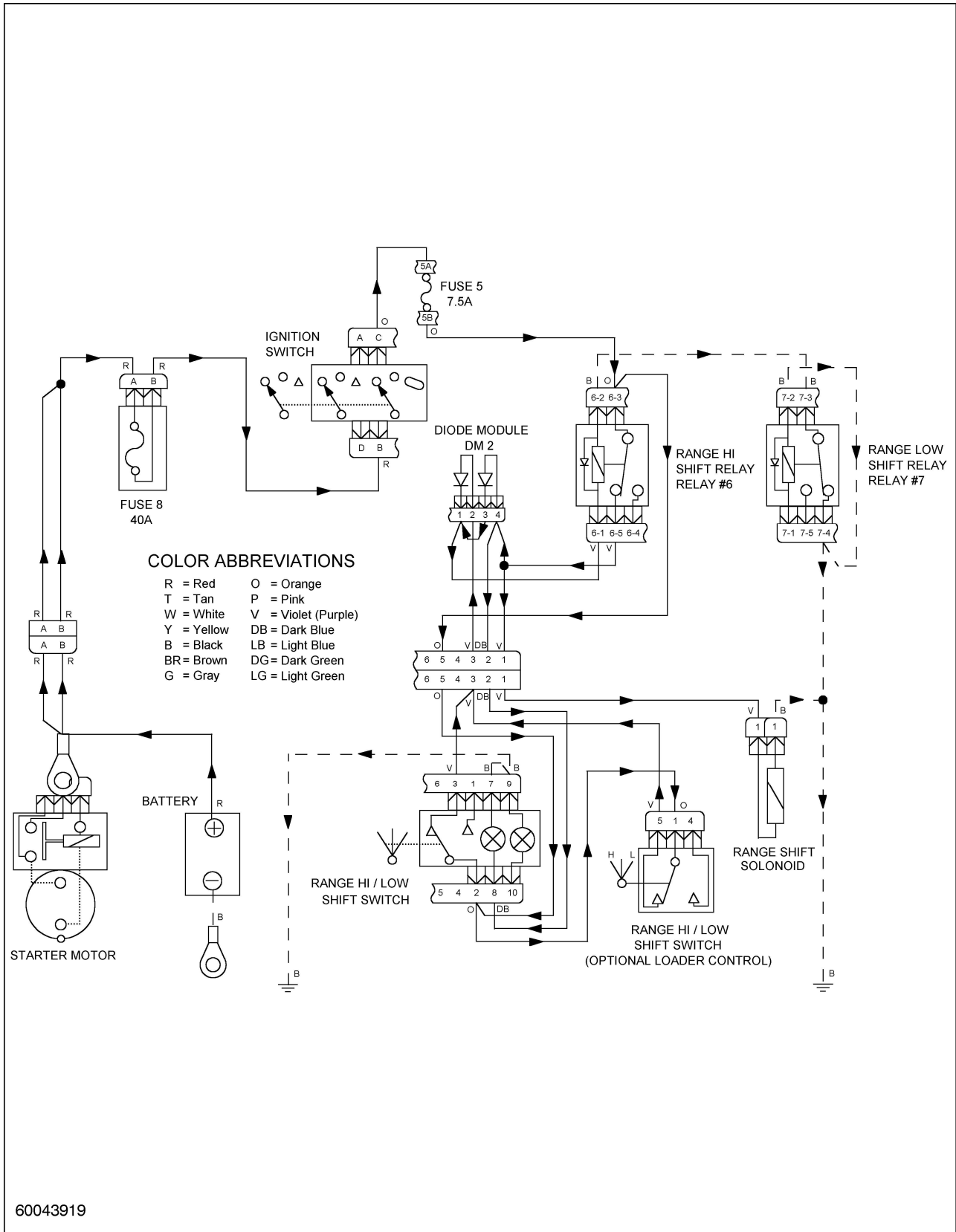


HST RANGE "HIGH" SHIFT CIRCUIT



60043919

HST RANGE “HIGH” 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 “HIGH” position, current flows out of terminal # 3 of the (standard) or terminal # 5 of the (optional) switch. This current from the switch flows to terminal #2 of diode module, through the diode module, to terminal #1 of module then to terminal # 6-1 of the high shift relay.

High Range Relay

1. When current is supplied to terminal #6-1 and a ground source to terminal # 6-2, the relay energizes, latching terminals #6-3 and 6-5 of the relay. (Ground source provided through terminal #7-3 and 7-4 of the low shift relay by main ground, located at engine starter mounting bolt.)
2. When the high shift relay is energized, terminals #6-3 and 6-5 latch.
3. Terminal # 6-5 supplies current into two different paths:
 - One path sends current to the range shift solenoid, the solenoid is grounded by the chassis ground, which is located on the left side of the HPL housing. This allows the solenoid to energize and shift the hydrostatic motor into “HIGH” range.
 - The other path flows to terminal #4 of the diode module through the diode module and exists out terminal #3. From terminal #3 current travels to terminal #1 of diode module, the diode blocks current to terminal #2 of module. This diode forces current to travel to terminal #6-1 of high shift relay, this current allows the relay to remain energized and keep the hydrostatic transmission in “HIGH” range.
 - Terminal #4 of the diode module also supplies current to terminal #8 of the High/Low switch. Terminal #7 of the switch is supplied with a ground source provide by the chassis ground located on the left side of the HPL housing. This allows the internal bulb in the switch to illuminate.

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

CONDITION	POSSIBLE CAUSE	REMEDY
Tractor will not switch into “HIGH” range	Blown #5, 7.5-amp shift control	Inspect and replace fuse as necessary
	Faulty range shift rocker switch	Test and replace switch as necessary
	Defective “HIGH” or “LO” shift relay	Test relays and replace as necessary
	Defective range shift solenoid	Test solenoid and replace as necessary
	Defective range shift diode(s)	Test diode(s) and replace as necessary
	Fault in wiring or ground terminal	Inspect wiring harness and ground terminal for damage, corrosion, and short circuits. Repair or replace as necessary
	Low charge pressure	Check HST charge pressure relief valve
Tractor will not switch out of “HIGH” range	Faulty range shift rocker switch	Test and replace switch as necessary
	Defective “HIGH” or “LO” shift relay	Test relays and replace as necessary
	Defective range shift solenoid	Test solenoid and replace as necessary
	Fault in wiring or ground terminal	Inspect wiring harness and ground terminal for damage, corrosion, and short circuits. Repair or replace as necessary
“HIGH” range bulb fails to illuminate, but tractor shifts into “HIGH” range	Defective “HIGH” range bulb	Replace range shift switch