2023 Alto F1743 Factory AC wiring

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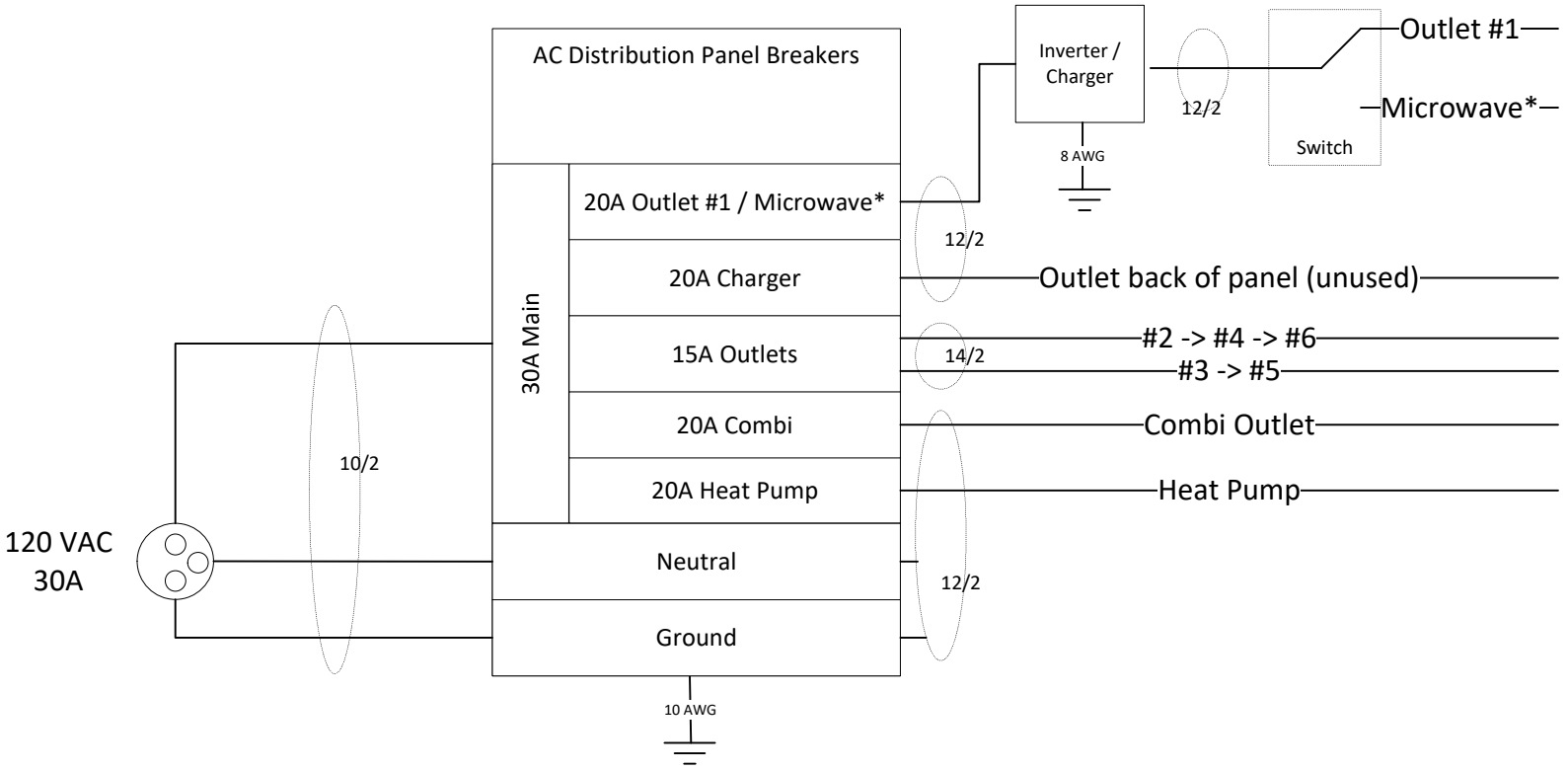

Factory Options*

- Xantrex inverter/charger
- Driver-side outdoor AC outlet
- Rear bed AC outlet

* Trailer is wired for microwave even if not ordered with the microwave option

AC Outlets (all but Charger are GFCI-protected from first outlet in chain)

- #1 – Kitchen (NEMA 5-15R, GFCI)
- #2 – Passenger-side outside (NEMA 5-15R, GFCI)
- #3 – Under front table (NEMA 5-15R, GFCI)
- #4 – Under rear kitchen countertop (NEMA 5-15R)
- #5 – Driver-side outside (NEMA 5-15R)
- #6 – Under rear bed shelf (NEMA 5-15R)
- Combi – Under rear kitchen cabinet (NEMA 5-20R, GFCI)
- Microwave* – Upper front cabinet (NEMA 5-15R, GFCI?)
- Charger – Back of AC Distribution panel (unused)

2023 Alto F1743 Factory DC wiring

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Excluding appliances and trailer lights

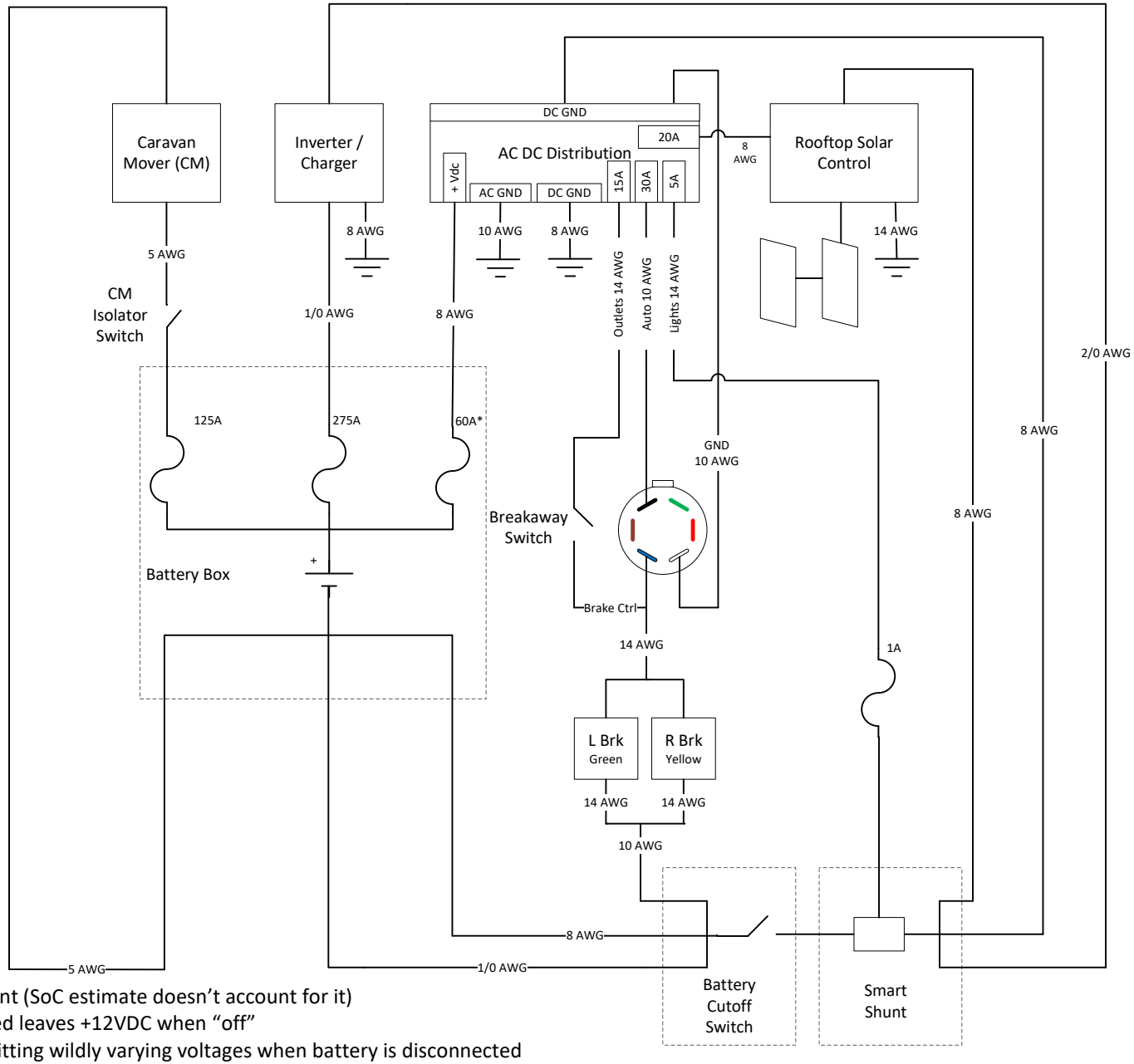
Factory Options

- Xantrex inverter/charger
- 220W rooftop solar
- 200Ah battery (100Ah x 2)
- Epever solar controller
- Truma CM
- Victron battery monitor / smart shunt
- MaxxFan
- Television / antenna / wifi booster
- Rear bed 12V cigarette jack

* The 60A fuse going to the AC DC Distribution Panel is a fusible link. It's the light blue wire that connects directly to the battery, not obvious.

Fuses

- Lights (5A) – All except bathroom
- Fridge (15A) – DC-only 'fridge
- Fan (10A) – MaxxFan
- Furnace (10A) – Heat Pump control
- Pump (10A)
  - – SeeLevel (including pump)
  - – Kitchen USB outlets
- 12V Outlet (15A) (cigarette)
  - – Under front table
  - – Under rear bed shelf
- CO LPG Detector (3A)
- Combi (10A) – Control and fan
- Toilet light (5A)
- TV (10A) (more 12V cigarette outlets)
  - – Near television mount
  - – Under rear kitchen countertop
- Car (30A) – 12VDC from tow vehicle
- Solar Panels (20A)



Issues

- Caravan mover current is not seen by shunt (SoC estimate doesn't account for it)
- Battery disconnect switch on negative feed leaves +12VDC when "off"
- No solar cutoff leaves solar controller emitting wildly varying voltages when battery is disconnected
- The installed DC Distribution panel isn't rated for 30A fuses (car 12VDC from 7-pin connector)
- AWG of bond from DC GND to chassis ground is inadequate at DC Distribution panel
- Three connections to battery when one is sufficient
- Breakaway wire is connected to the 12Vdc Outlet circuit
- The 275A fuse on the inverter circuit does not adequately protect the 1/0 AWG wire