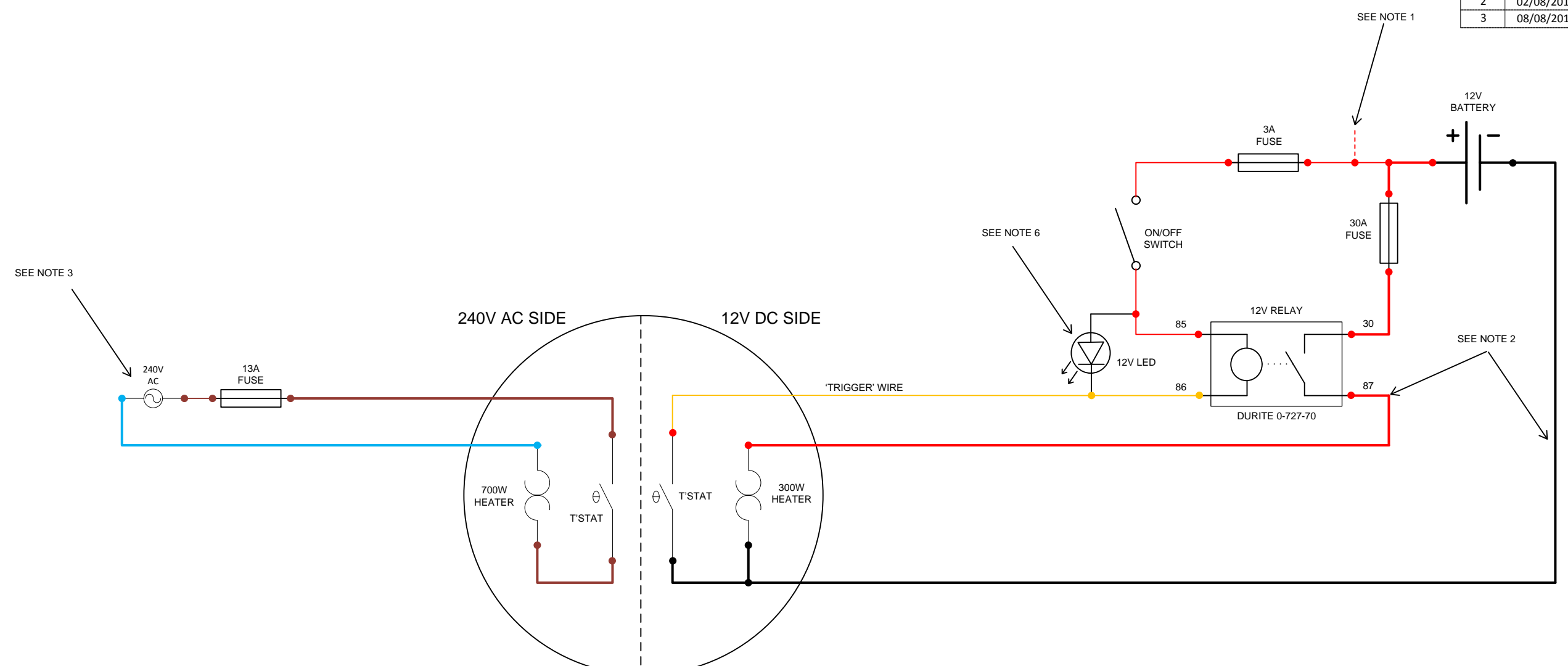


ISSUE	DATE	CHANGE FORM No.
1	30/07/2018	
2	02/08/2018	
3	08/08/2018	



- NOTES:**
1. THIS 12V FEED CAN EITHER BE TAKEN DIRECTLY TO THE BATTERY '+' (AS SHOWN HERE) OR CAN BE TAKEN TO THE VEHICLES ALTERNATOR 'TRIGGER WIRE'. IF POWERED FROM THE ALTERNATOR TRIGGER WIRE, THE HEATER WILL ONLY OPERATE WHEN THE ENGINE IS RUNNING. IF TAKEN DIRECTLY TO THE BATTERY THEN THE HEATER CAN BE OPERATED WITH THE ENGINE OFF.
 2. ENSURE THE CORRECT GAUGE WIRE IS USED AND DE-RATED ACCORDINGLY. A 300W HEATER AT 12V WILL DRAW ~25A; THEREFORE A 30A FUSE IS REQUIRED. THE WIRING NEEDS TO BE RATED HIGHER THAN THE FUSE RATING ONCE DE-RATED. 11 AWG (4 mm²) WIRE IS RECOMMENDED.
 3. THIS END WOULD BE IN THE FORM OF A NORMAL 3-PIN MAINS PLUG FITTED WITH A 13A FUSE.
 4. THE 240V AC THERMOSTAT IS WIRED DIFFERENTLY TO THE 12V THERMOSTAT. THIS IS BECAUSE BOTH THERMOSTATS ARE RATED FOR 20A MAX.
 - AT 240V THE CURRENT REQUIRED FOR THE 700W HEATER IS ~3A; THEREFORE THE THERMOSTAT CAN SAFELY BE WIRED IN SERIES WITH THE HEATER AS SHOWN.
 - AT 12V THE CURRENT REQUIRED FOR THE 300W HEATER IS ~25A; THEREFORE THE THERMOSTAT CANNOT BE WIRED IN SERIES AND A RELAY IS NEEDED AS SHOWN.
 5. THE THERMOSTAT **MUST BE USED FOR SAFETY**.
 6. MAKE SURE A 12V LED/INDICATOR IS USED. THESE HAVE RESISTORS BUILT IN AND DO NOT REQUIRE AN EXTERNAL RESISTOR.
 7. WHEN SELECTING THE CORRECT RELAY, A 12V COIL IS NEEDED AND THE CONTACTS MUST HAVE A HIGHER RATING THAN THE FUSE THAT IS PROTECTING IT (GREATER THAN 30A). THE EXAMPLE SHOWN ON THIS DRAWING IS A DURITE '0-727-70' AND THE PIN NUMBERS ARE WITH REFERENCE TO THIS PARTICULAR RELAY.

3RD ANGLE PROJECTION DO NOT SCALE PRINT	DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED	NOTES THIS CIRCUIT DIAGRAM IS A GUIDE AND SUREJUST TAKE NO RESPONSIBLTY FOR ANY DAMAGE RESULTING FROM THE WIRING OF THIS UNIT. A COMPETANT/QUALIFIED TECHNICIAN SHOULD BE USED/CONSULTED.	ANY SPECIFICATION QUOTED ON THIS DRAWING REFERS TO LATEST ISSUE UNLESS OTHERWISE STATED.	U2290	SECURITY CLASS.
	DRAWN M. BATTLE		TITLE CIRCUIT DIAGRAM 240V AC / 12V DC WATER HEATER	PART/DRAWING No. N/A	SHEET 01 OF 01