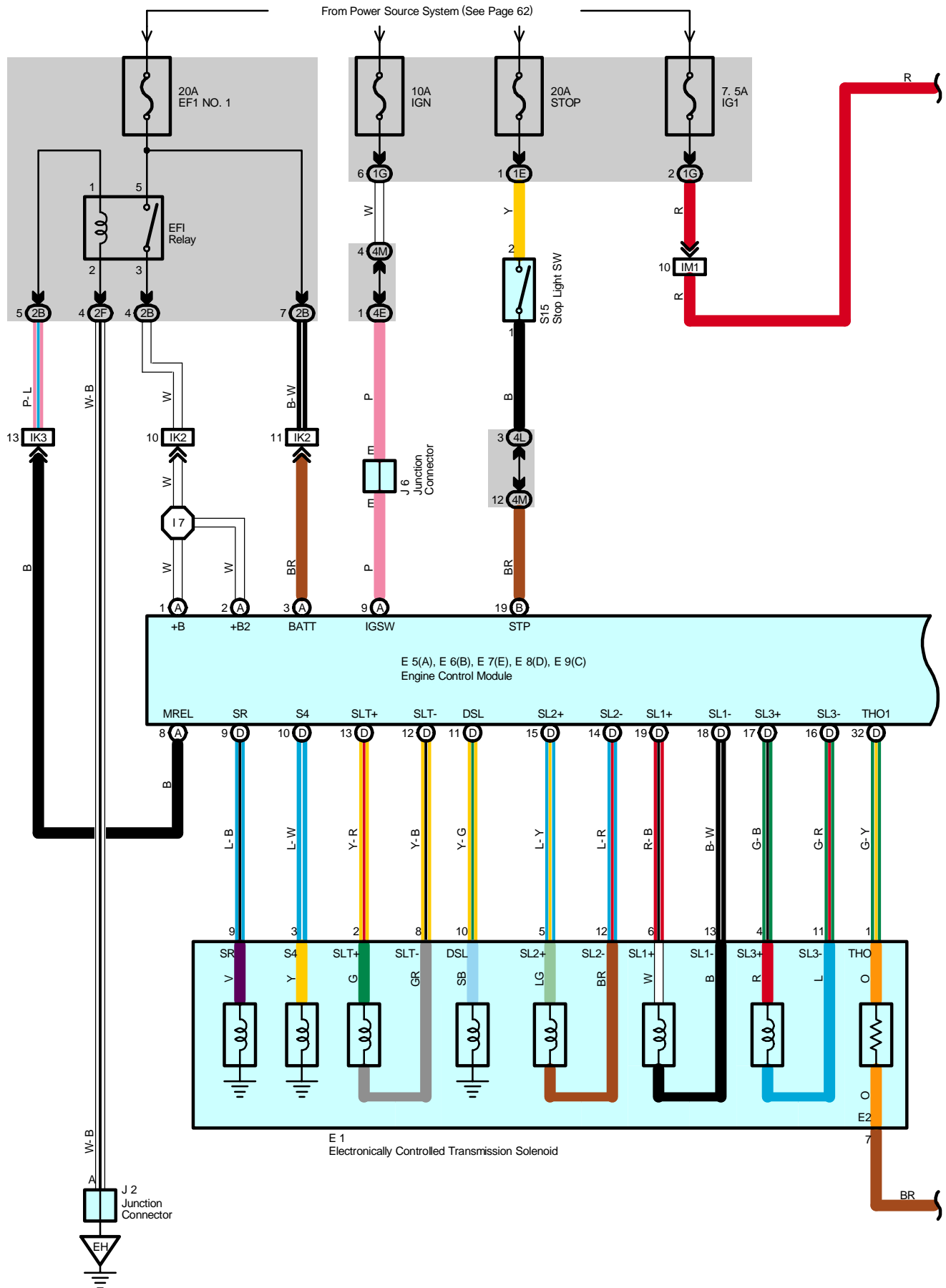
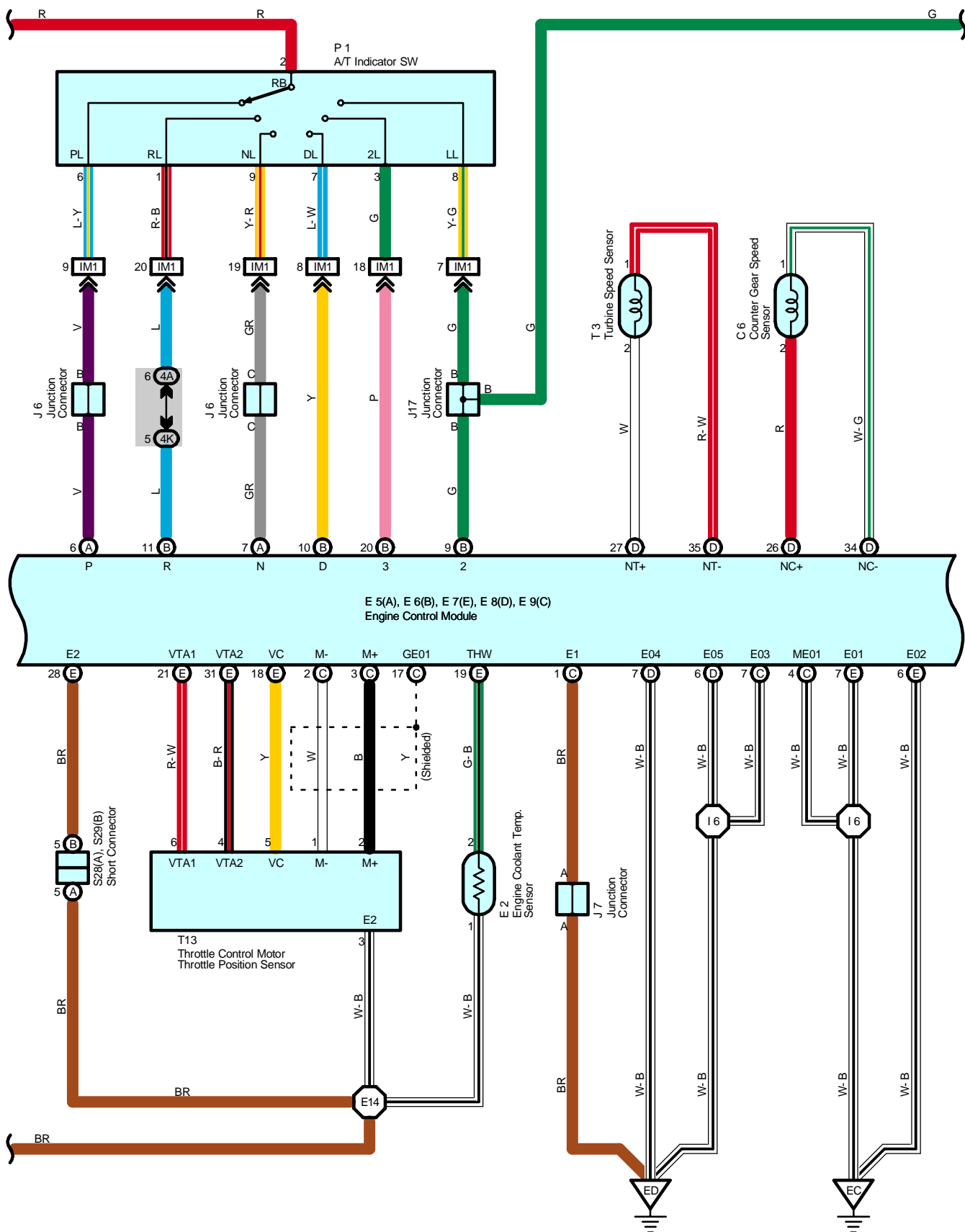
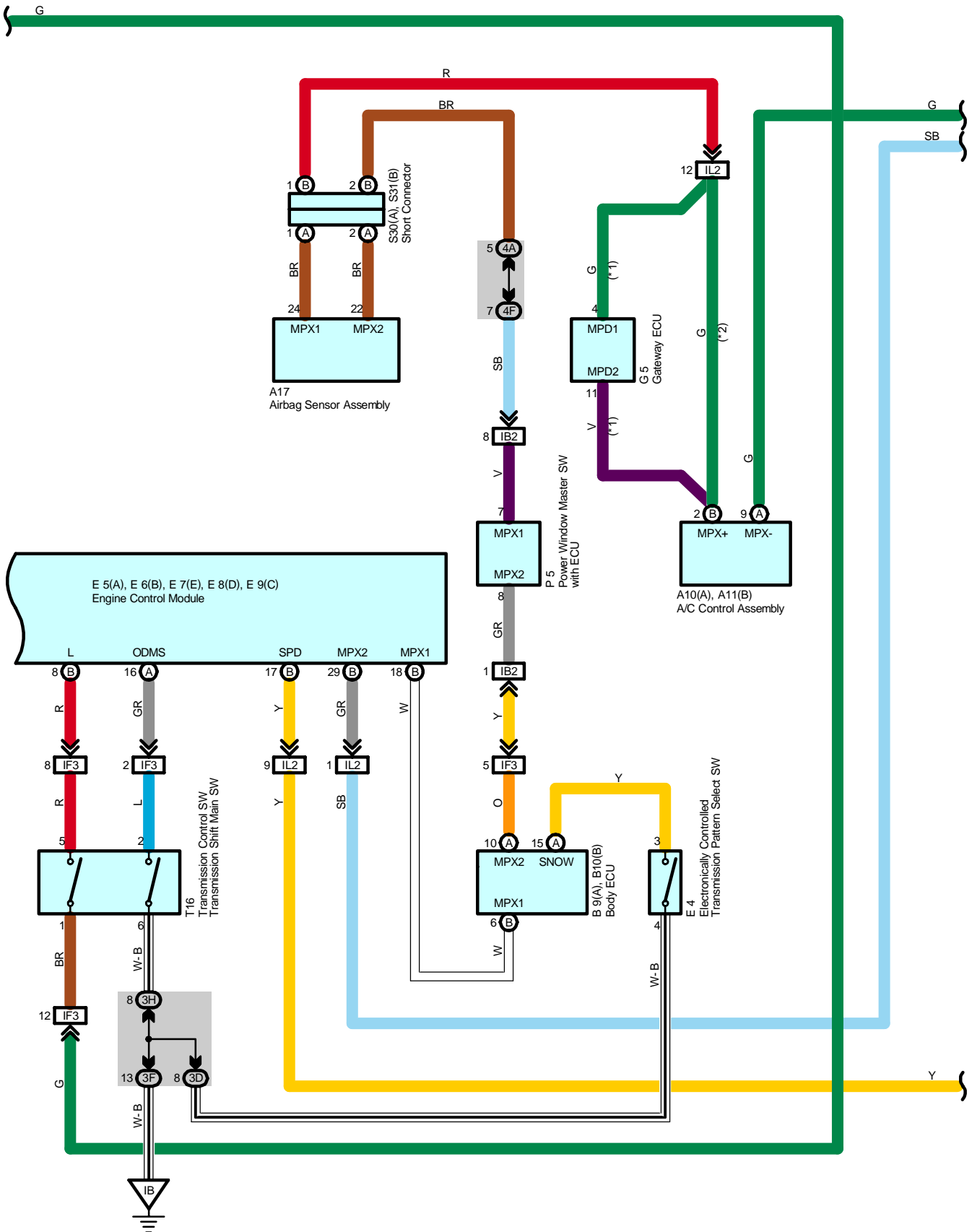


ECT and A/T Indicator for 3MZ-FE

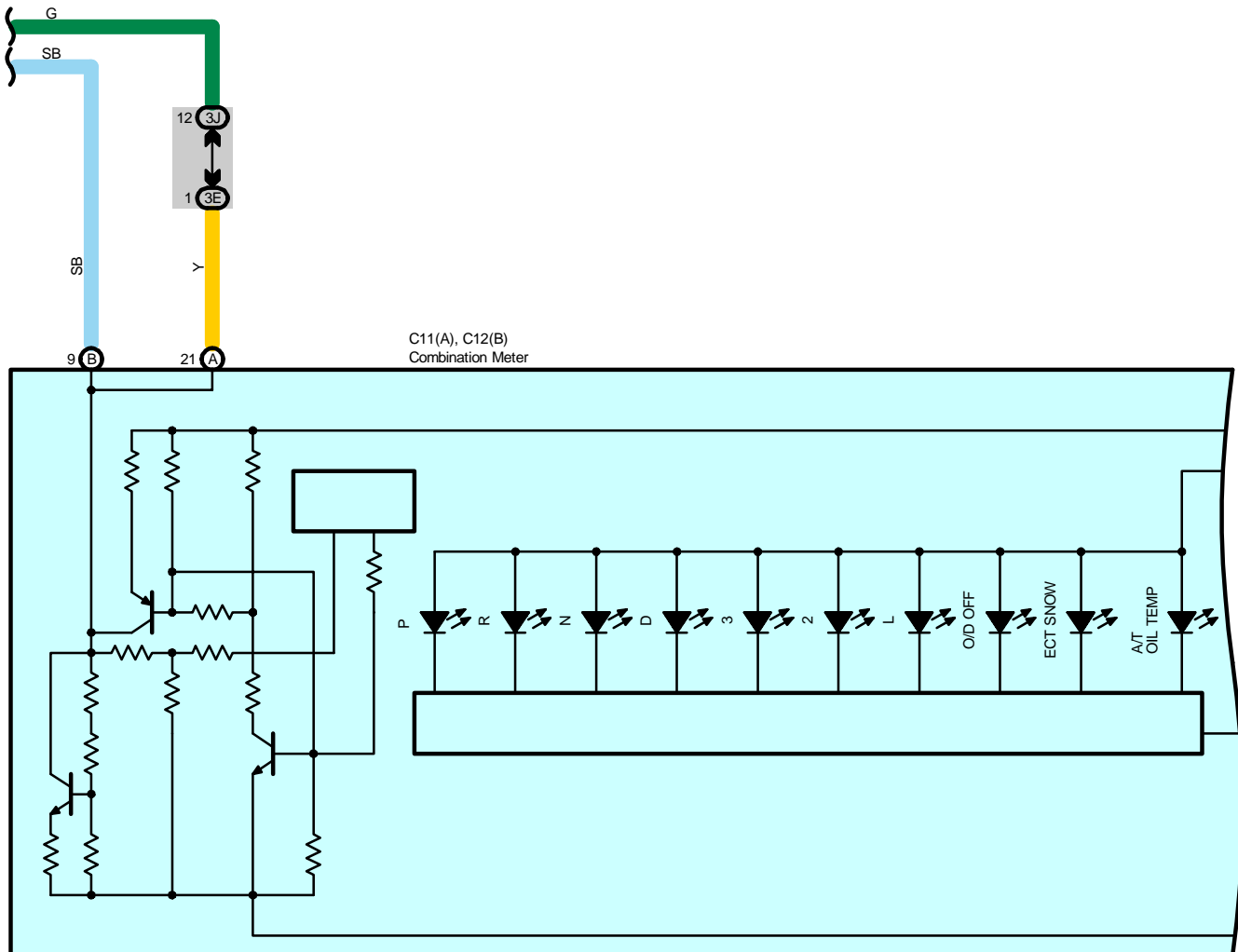




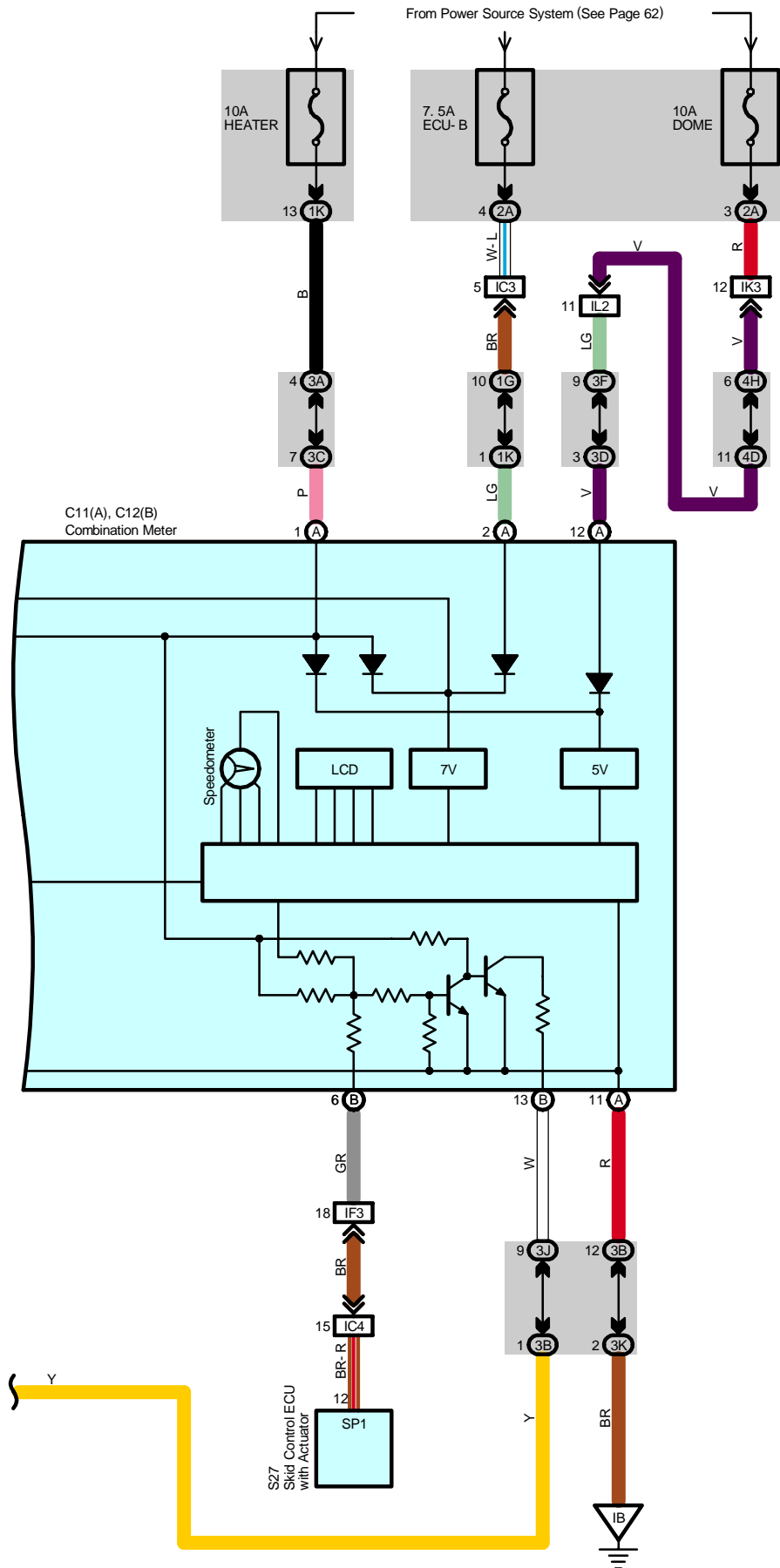
ECT and A/T Indicator for 3MZ-FE



- * 1 : w/ Navigation System
- * 2 : w/o Navigation System



ECT and A/T Indicator for 3MZ-FE



System Outline

Previous automatic transaxle have selected each gear shift using mechanically controlled throttle hydraulic pressure, governor hydraulic pressure and lock-up hydraulic pressure. The electronically controlled transmission, however, electrically controls the line pressure, throttle pressure, lock-up pressure and accumulator pressure etc. through the solenoid valve. The electronically controlled transmission is a system which precisely controls gear shift timing and lock-up timing in response to the vehicle's driving conditions and the engine condition detected by various sensors. It makes smooth driving possible by shift selection for each gear which is the most appropriate to the driving conditions at that time, and by preventing downing, squat and gear shift shock when starting off.

1. Gear Shift Operation

During driving the engine warm up condition signal is input from engine coolant temp. sensor to TERMINAL THW of the engine control module, and the vehicle speed signal is input from the ABS speed sensor to skid control ECU, and are sent to the engine control module through communication control. At the same time, the throttle valve opening signal is sent from the throttle position sensor to the TERMINALS VTA1 and VTA2 of the engine control module, as the throttle angle signal.

2. Lock-Up Operation

When the engine control module decides based on each signal that the lock-up condition has been met, the current flows through TERMINAL DSL of the engine control module to TERMINAL 10 of the electronically controlled transmission solenoid to GROUND.

3. Stop Light SW Circuit

If the brake pedal is depressed (Stop light SW on) when driving in lock-up condition, a signal is input to TERMINAL STP of the engine control module. The engine control module operates and cuts the current to the solenoid to release lock-up.

4. Overdrive Circuit

* O/D main SW on

When the O/D main SW is turned on, a signal is input to TERMINAL ODMS of the engine control module and engine control module operation causes gear shift when the conditions for overdrive are met.

* O/D main SW off

When the O/D main SW is turned off, a signal is input into TERMINAL ODMS of the engine control module, and turns on the O/D off indicator light. This activates the ECU, and the transmission system is controlled not to shift to overdrive.

Service Hints

E4 Electronically Controlled Transmission Pattern Select SW

3-4 : Closed with the select SW at SNOW position

E5 (A), E6 (B), E7 (E), E8 (D), E9 (C) Engine Control Module

BATT-E1 : Always approx. 12 volts

MREL-E1 : Approx. 12 volts with the ignition SW ON position

P1 A/T Indicator SW

2-6 : Closed with the shift lever in P position

2-1 : Closed with the shift lever in R position

2-9 : Closed with the shift lever in N position

2-7 : Closed with the shift lever in D position

2-3 : Closed with the shift lever in 2 position

2-8 : Closed with the shift lever in L position

○ : PARTS LOCATION

Code	See Page	Code	See Page	Code	See Page
A10 A	42	E5 A	42	P5	44
A11 B	42	E6 B	42	S15	43
A17	42	E7 E	42	S27	39 (3MZ-FE)
B9 A	42	E8 D	42	S28 A	43
B10 B	42	E9 C	42	S29 B	43
C6	38 (3MZ-FE)	G5	43	S30 A	43
C11 A	42	J2	39 (3MZ-FE)	S31 B	43
C12 B	42	J6	43	T3	39 (3MZ-FE)
E1	38 (3MZ-FE)	J7	43	T13	39 (3MZ-FE)
E2	38 (3MZ-FE)	J17	43	T16	43
E4	42	P1	39 (3MZ-FE)		

ECT and A/T Indicator for 3MZ-FE



: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

Code	See Page	Junction Block and Wire Harness (Connector Location)
1E	29	Cowl Wire and Instrument Panel J/B (Lower Finish Panel)
1G		
1K	28	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)
2A	27	Engine Room Main Wire and Engine Room J/B (Engine Compartment Left)
2B		
2F		
3A	30	Instrument Panel Wire and Center J/B (Behind the Instrument Panel Center)
3B		
3C		
3D		
3E		
3F		
3H	31	
3J		
3K		
4A	33	Cowl Wire and Passenger Side J/B (Right Side of Grove Box)
4D		
4E		
4F		
4H		
4K	32	
4L		
4M		



: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IB2	52	Front Door LH Wire and Cowl Wire (Left Kick Panel)
IC3	52	Engine Room Main Wire and Cowl Wire (Left Cowl Side Panel)
IC4		
IF3	52	Instrument Panel Wire and Cowl Wire (Right Side of Instrument Panel J/B)
IK2	54	Engine Room Main Wire and Cowl Wire (Right Cowl Side Panel)
IK3		
IL2	54	Instrument Panel Wire and Cowl Wire (Upper Side of Passenger Side J/B)
IM1	54	Engine Wire and Cowl Wire (Right Kick Panel)



: GROUND POINTS

Code	See Page	Ground Points Location
EC	48 (3MZ-FE)	Left Side of Cylinder Head
ED	48 (3MZ-FE)	Rear Side of Cylinder Head
EH	48 (3MZ-FE)	Under the Left Headlight
IB	52	Right Instrument Panel Brace



: SPLICE POINTS

Code	See Page	Wire Harness with Splice Points	Code	See Page	Wire Harness with Splice Points
E14	48 (3MZ-FE)	Engine Wire	I7	54	Cowl Wire
I6	54				

