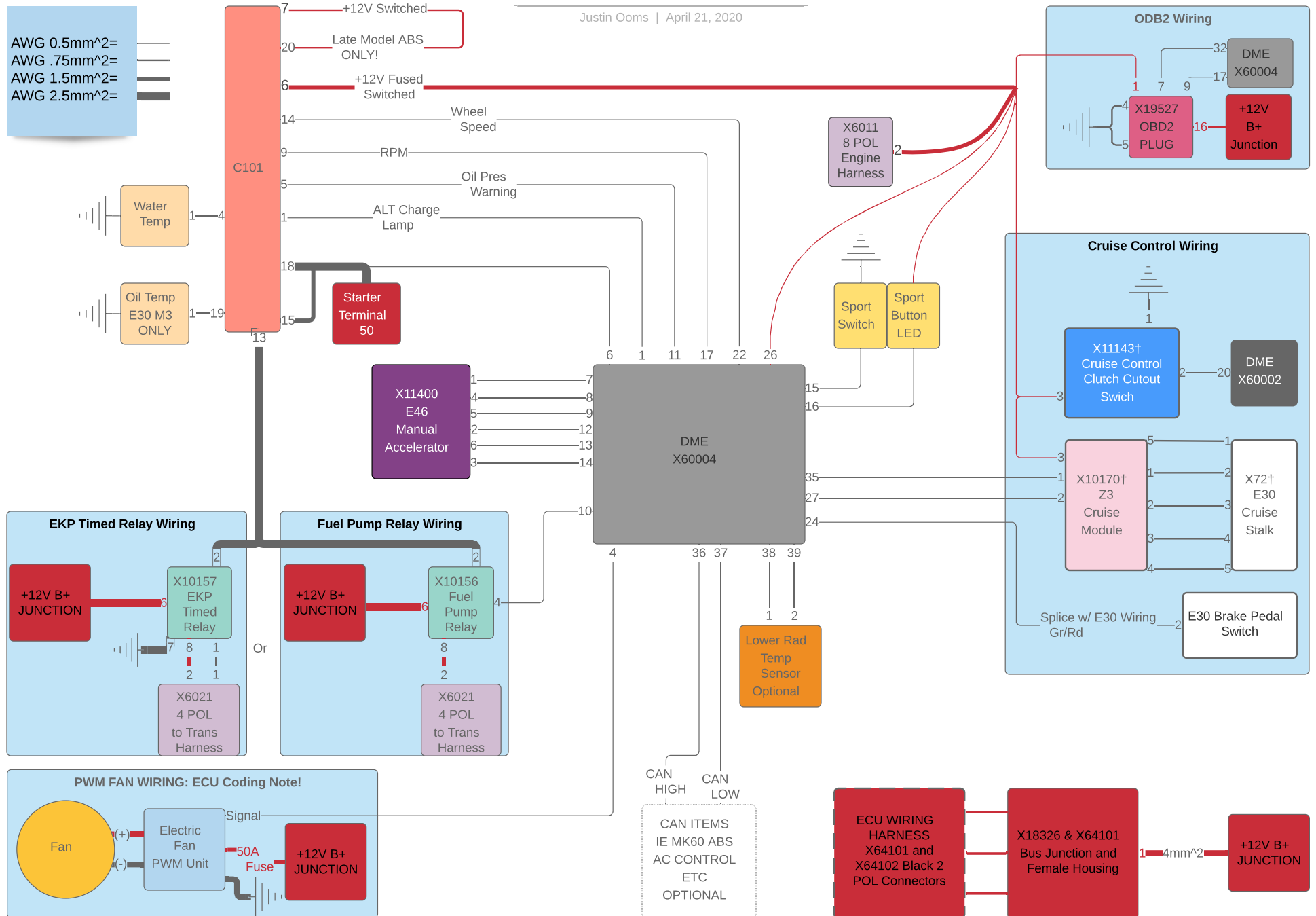


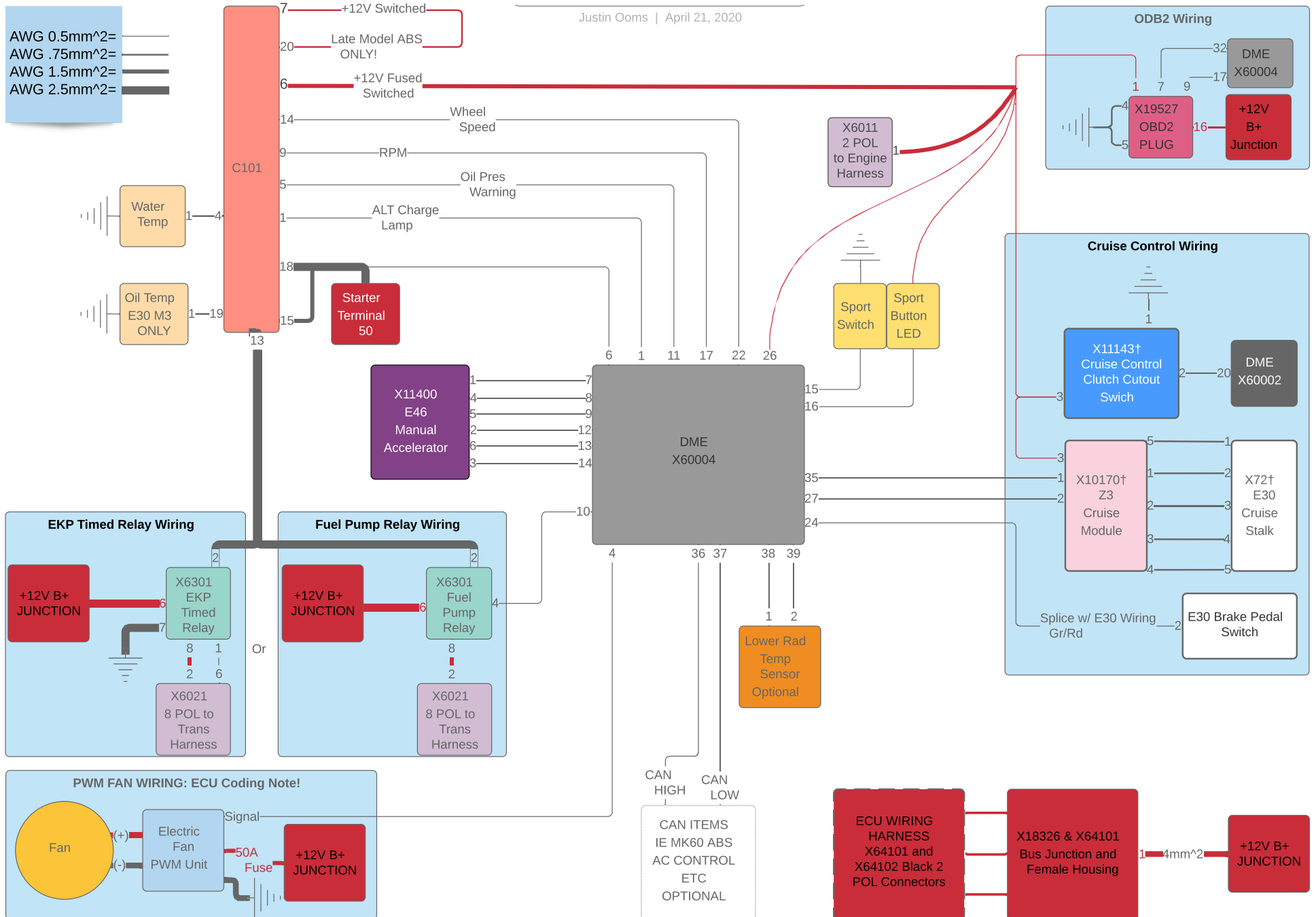
# E30 S54 Swap Wiring Harness DIY w/ E46 Main and E46 Manual Trans Harness

Justin Ooms | April 21, 2020



# E30 S54 Swap Wiring Harness DIY w/ Z3M Main and Z3M Manual Trans Harness

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**Grounds Best Practices:**  
 Seperate Grounds as much as possible, ESPECIALLY IGNITION GROUNDS FROM EVERYTHING ELSE!  
 Ideal Spots: Strut Tower, Battery Tray, Dashboard/Glovebox. Do not be afraid to create a ground point.

**E30 Fuse Box:** Change Fuse 11 to 15A for Fuel Pump

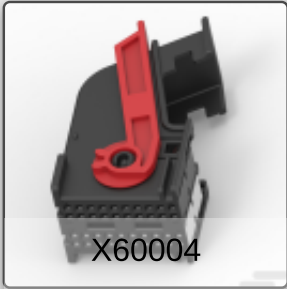
**ABS NOTE: C101**  
 Pin 20 ONLY is used for LATE MODEL ABS. Check C101 Chassis side for Red/Yellow wire, if so, connect as shown.

Flash Required ECU Partial depnding on AC Solution. Without AC Pressure sensor fan will run at 60% ALWAYS unless coded out. To have proper E46 AC, one will need a custom computer to create K-Line messages and let the ECU know how fast to run the fan based on engine temp, engine load and AC Pressure output. E30 stock AC can be used but the PWM fan will not compensate for AC load.

Connector	BMW Designation	Part #	Pin Quantity & #	NOTE
Engine to Chassis Housing	C101	12521707283	20x 61131376191 2x 61131376193 2x 61131376195	Pin Removal Tool 83300495385 Crimper: <a href="http://www.vintageconnections.com/Products/Tools">www.vintageconnections.com/Products/Tools</a>
ECU X60004	X60004	12521744629 or TE 284229-1	40 x TE 61-13-0005-197	Internal Housings: 284150-2 & 284150-1
Accelerator	X11400	61138383300	6x 61130005197	Pedal 35426786282 Mount 35426772703
OBD2	X19527	61138380698	6x 61138366598	Frame 61138373323
Fuel Relay	X10157 X10156 X6301	61131389113 61368373700	2x 1131378906 2x 61131370692	EKP module if used: 61357892976. Pins: 1x 61138377730, 4x 61138377731,
E46 Blue 4 POL or Z3M 8 POL	X6021	61132360044 Kit w Pins	2x 61138373293	Female Housing if Needed: 61132359996 . For Z3M harness recommend converting ECU side to E46 X6011 until Z3M Male housing and pins are documented.
E46 Blue 8 Pin or Z3M 2 POL	X6011	61136905999	2x 61138373293	Female Housing if Needed: 12527505477, Pins: 12527502933. For Z3M, convert to E46 X6021
Clutch Switch & Female Housing	X11143†	61318381612 TE 3-1718346-1	3x TE 5-963715-1	
Cruise Control Module & Female Housing	X10170† & X72†	65718380054 TE 2-1718346-1	TE 5-963715-1	Recommend adding 4 POL connector in glove box for easy servicing of wiring/ECU/Engine Removal
B+ Junction Joiner Bus and Housing	X18326	61138373609 61138377082	1x 61138377732	
Rad Inlet Temp Sensor & E30 M3 Oil Guage		Sensor 12621710512 Housing 12521427615 or Housing Kit 1287013003	2x 12521427608	Bosch Jetronic Protective Boot :1280703031 Technica Motorsports S54 Coolant Adaptor Recommended. Use a safety wire drill guide and connect the body of upper rad temp sensor to any ground point.
Rad Outlet Temp Sensor		13621433076 12521427787	2x 12521427608	Bosch Jetronic Protective Boot :1280703031
PWM Fan Module		645469889		Optional but recommended. PWM module not sold seperatly via BMW. Wire up your your desired 3 pin weather protected housings that are 30A rated. Recommended 16 SPAL Pusher Fan 30102048 16:"
Sport Switch				Momentary Push Button Normally Open IE: <a href="http://www.aliexpress.com/item/32811686847.html">www.aliexpress.com/item/32811686847.html</a>



C101



X60004



X11400



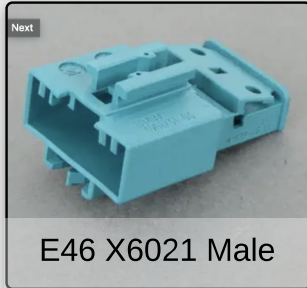
X19527



X19527 Frame



X10157 X10156  
X6301



E46 X6021 Male



E46 X6021 Female



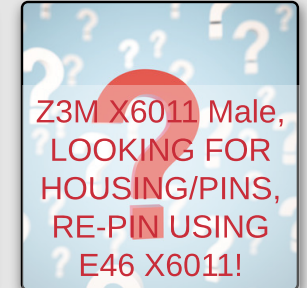
E46 X6011 Male



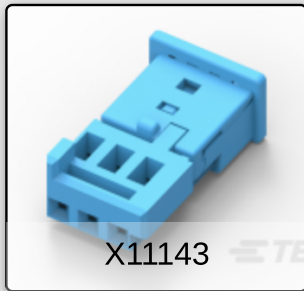
E46 X6011 Female



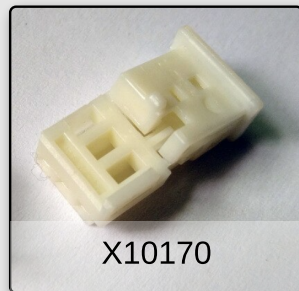
Z3M X6021 Male,  
LOOKING FOR  
PINS. RE-PIN  
USING E46  
X6021!



Z3M X6011 Male,  
LOOKING FOR  
HOUSING/PINS,  
RE-PIN USING  
E46 X6011!



X11143



X10170



X18326 Joiner  
Bus



X18326



E30 Rad Inlet/ E30  
M3 Oil Temp



Rad Outtet



PWM Fan Module



Sport Switch