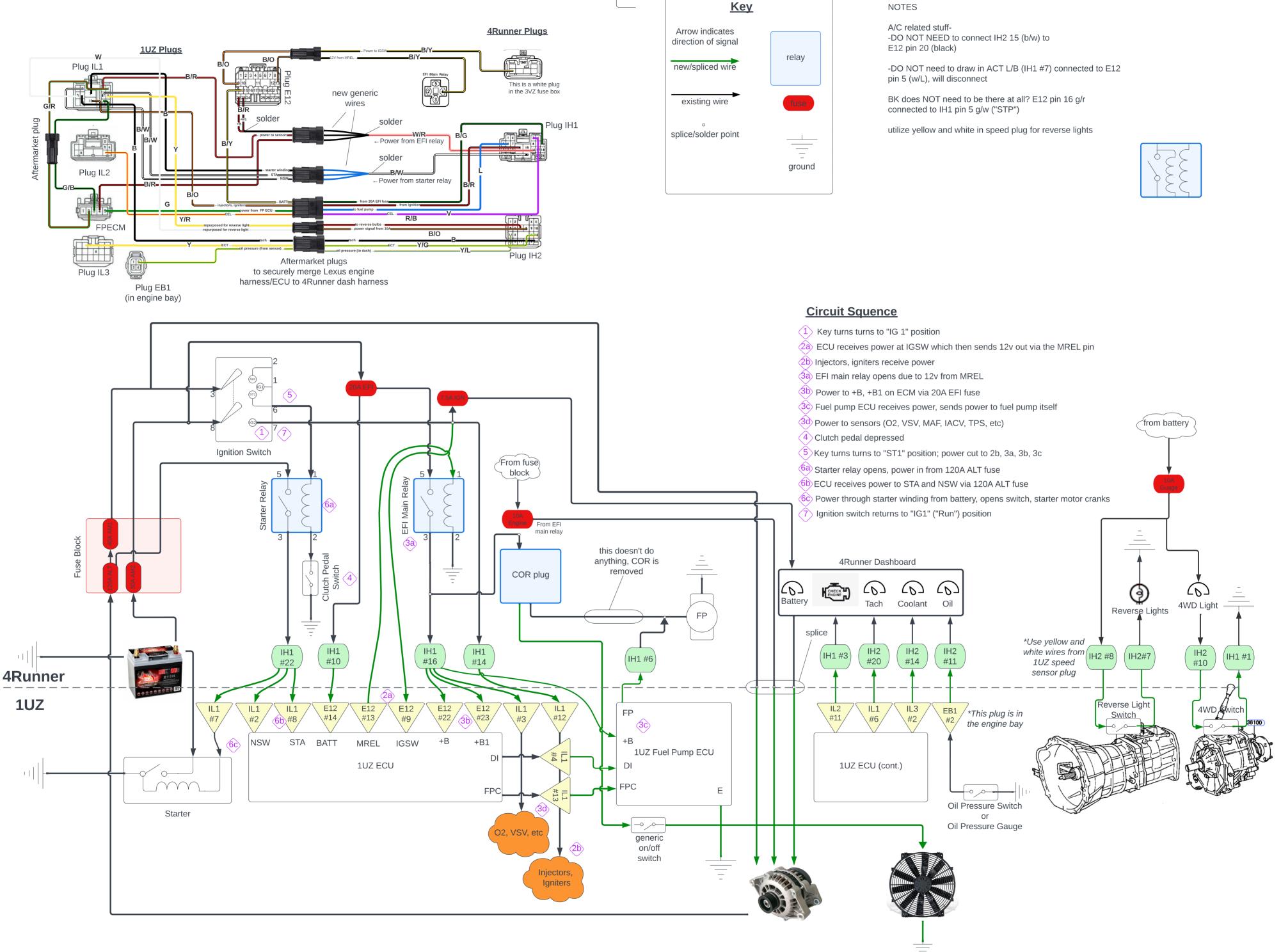# Custom Adapter Harness Layout

Key

Arrow indicates direction of signal

→ new/spliced wire

→ existing wire

○ splice/solder point

relay

fuse

⏚ ground

NOTES

A/C related stuff-
-DO NOT NEED to connect IH2 15 (b/w) to E12 pin 20 (black)

-DO NOT need to draw in ACT L/B (IH1 #7) connected to E12 pin 5 (w/L), will disconnect

BK does NOT need to be there at all? E12 pin 16 g/r connected to IH1 pin 5 g/w ("STP")

utilize yellow and white in speed plug for reverse lights

1UZ Plugs

Plug IL1
W

Aftermarket plug

G/R
B/W
B/W
B
G/B

Plug IL2

FPECM

Plug IL3

Plug EB1 (in engine bay)

B/R
B
Y
G
Y/R

4Runner Plugs

B/O — Power to IGSW — B/Y
12v from MREL
B/Y
EFI Main Relay
B/Y

This is a white plug in the 3VZ fuse box

Plug E12

B/R
B/R
B/Y

new generic wires

solder

solder
power to sensor
← Power from EFI relay — W/R
solder
starter winding
STA
NSW
B/W
← Power from starter relay — B/W

BATT
from 20A EFI fuse
from ignition
power from FP ECU — to fuel pump
CEL
repurposed for reverse light
repurposed for reverse light
dash
ECT
oil pressure (from sensor)
ECT
oil pressure (to dash)

B/G
Plug IH1
L
B/R
V
R/B
B/O
Y/G
Y/L
Plug IH2

Aftermarket plugs to securely merge Lexus engine harness/ECU to 4Runner dash harness

Circuit Squence

① Key turns turns to "IG 1" position

②a ECU receives power at IGSW which then sends 12v out via the MREL pin

②b Injectors, igniters receive power

③a EFI main relay opens due to 12v from MREL

③b Power to +B, +B1 on ECM via 20A EFI fuse

③c Fuel pump ECU receives power, sends power to fuel pump itself

③d Power to sensors (O2, VSV, MAF, IACV, TPS, etc)

④ Clutch pedal depressed

⑤ Key turns turns to "ST1" position; power cut to 2b, 3a, 3b, 3c

⑥a Starter relay opens, power in from 120A ALT fuse

⑥b ECU receives power to STA and NSW via 120A ALT fuse

⑥c Power through starter winding from battery, opens switch, starter motor cranks

⑦ Ignition switch returns to "IG1" ("Run") position

Ignition Switch

Starter Relay

EFI Main Relay

From fuse block

20A EFI

7.5A IGN

10A Engine
From EFI main relay

COR plug

this doesn't do anything, COR is removed

FP

4Runner Dashboard

Battery   CHECK ENGINE   Tach   Coolant   Oil

splice

Clutch Pedal Switch

Fuse Block

120A ALT
120A ALT

4Runner

1UZ

Starter

from battery

10A (fuse)

Reverse Lights   4WD Light

*Use yellow and white wires from 1UZ speed sensor plug

Reverse Light Switch

4WD Switch

IH1 #22   IH1 #10   IH1 #16   IH1 #14   IH1 #6   IH1 #3   IH2 #20   IH2 #14   IH2 #11   IH2 #8   IH2#7   IH2 #10   IH1 #1

IL1 #7   IL1 #2   IL1 #8   E12 #14   E12 #13   E12 #9   E12 #22   E12 #23   IL1 #3   IL1 #12   IL2 #11   IL1 #6   IL3 #2   EB1 #2

*This plug is in the engine bay

NSW   STA   BATT   MREL   IGSW   +B   +B1   DI

1UZ ECU

FP
+B
DI
FPC
E

1UZ Fuel Pump ECU

1UZ ECU (cont.)

IL1 #4   IL1 #13

O2, VSV, etc

Injectors, Igniters

generic on/off switch

Oil Pressure Switch or Oil Pressure Gauge