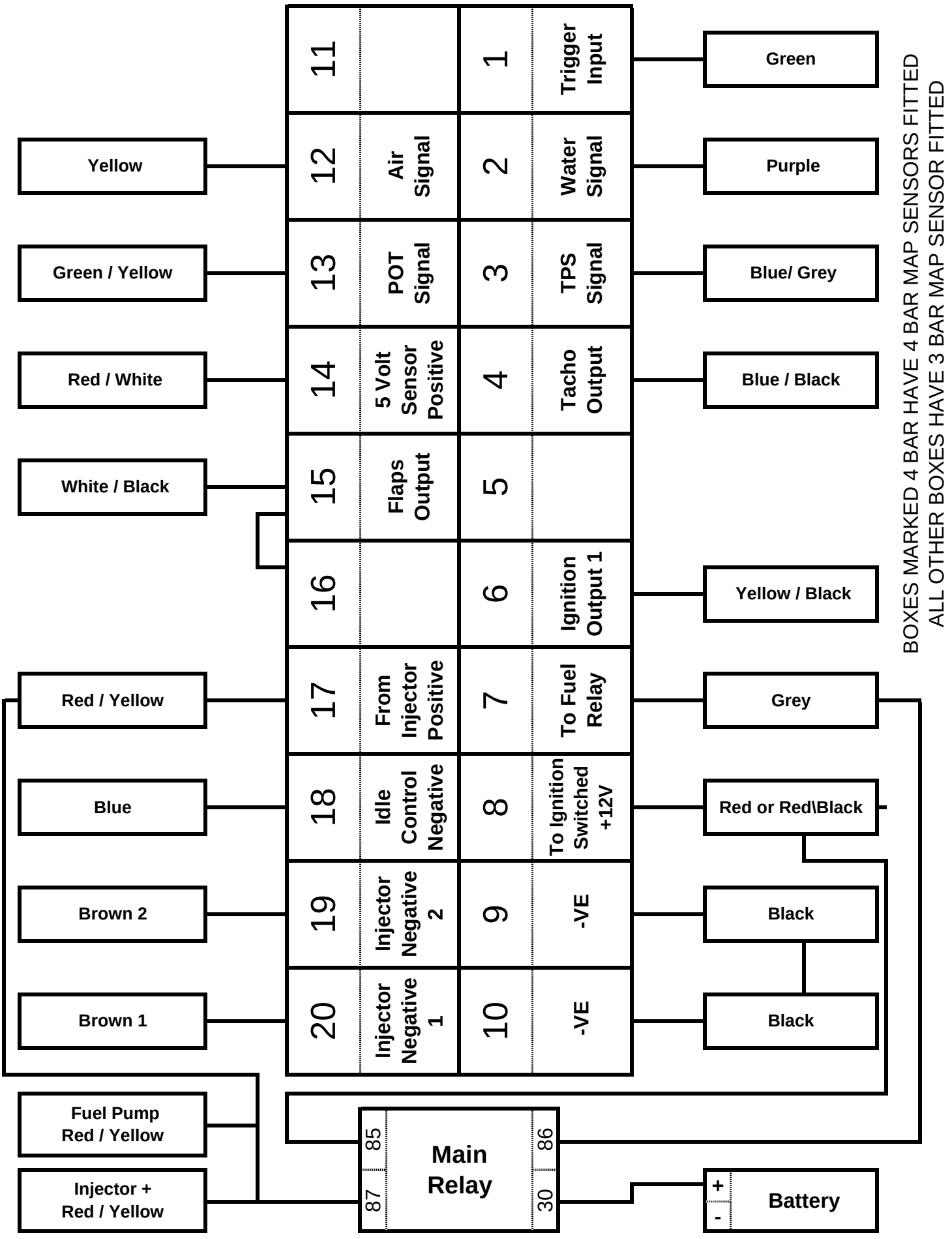
DICKTATOR ENGINE MANAGEMENT SYSTEM

20 PIN PLUG LAYOUT AS SEEN FROM HARNESS SIDE
All Multi Colored Wires are always stated as : Main Color / Stripe Color



Sep-16

DICKTATOR ENGINE MANAGEMENT SYSTEM

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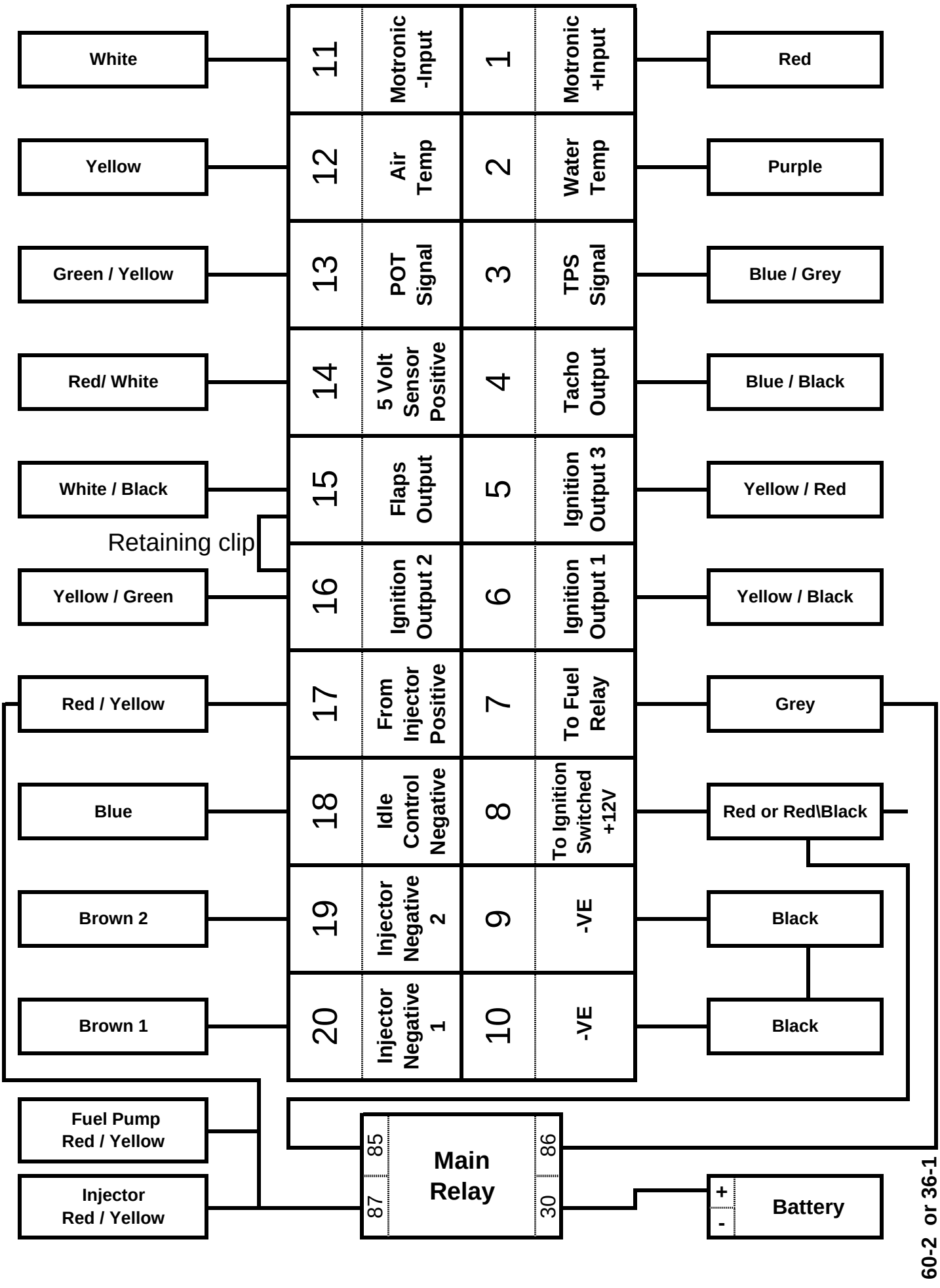

DICKTATOR ENGINE MANAGEMENT SYSTEM

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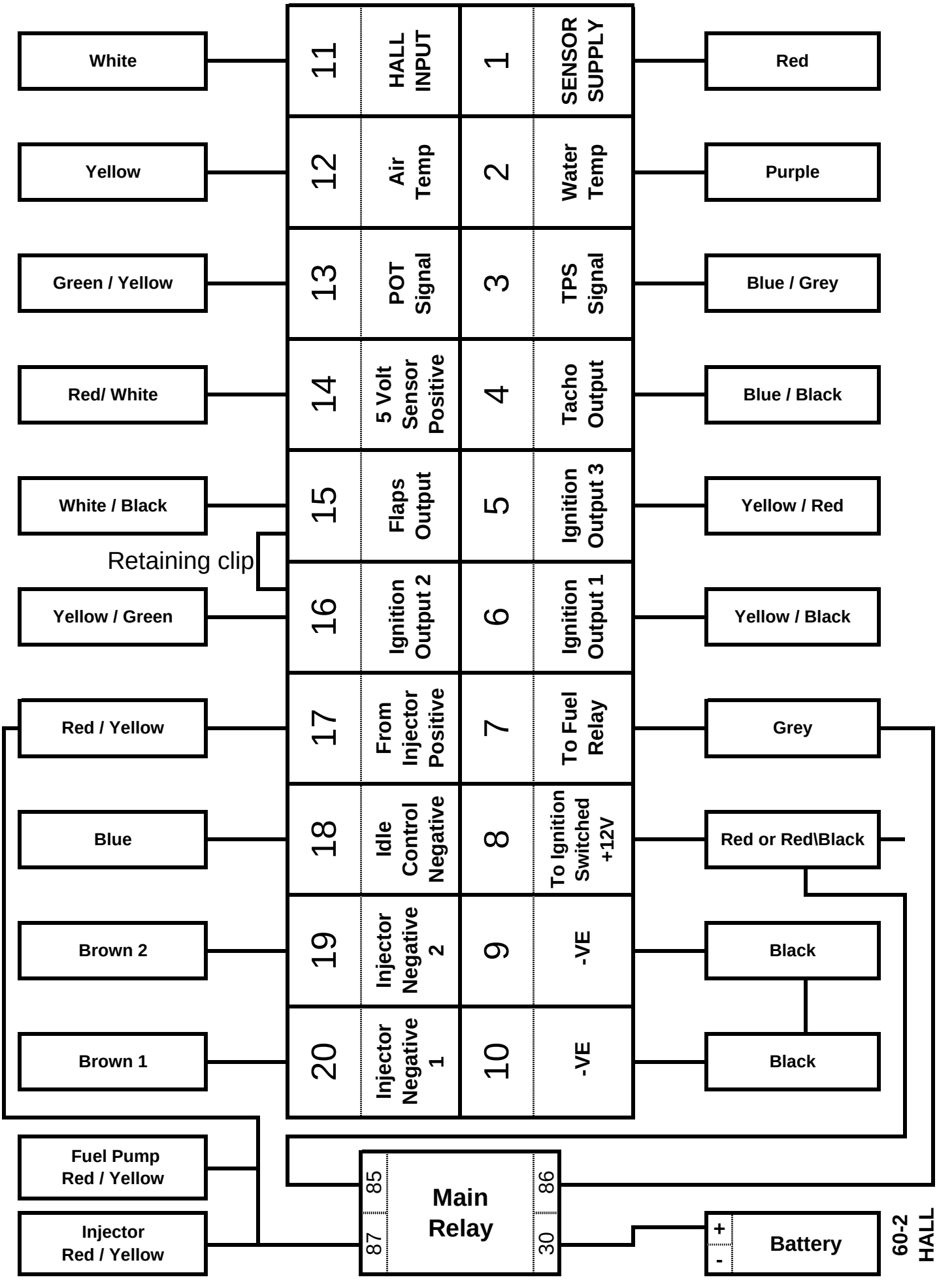

DICKTATOR ENGINE MANAGEMENT SYSTEM

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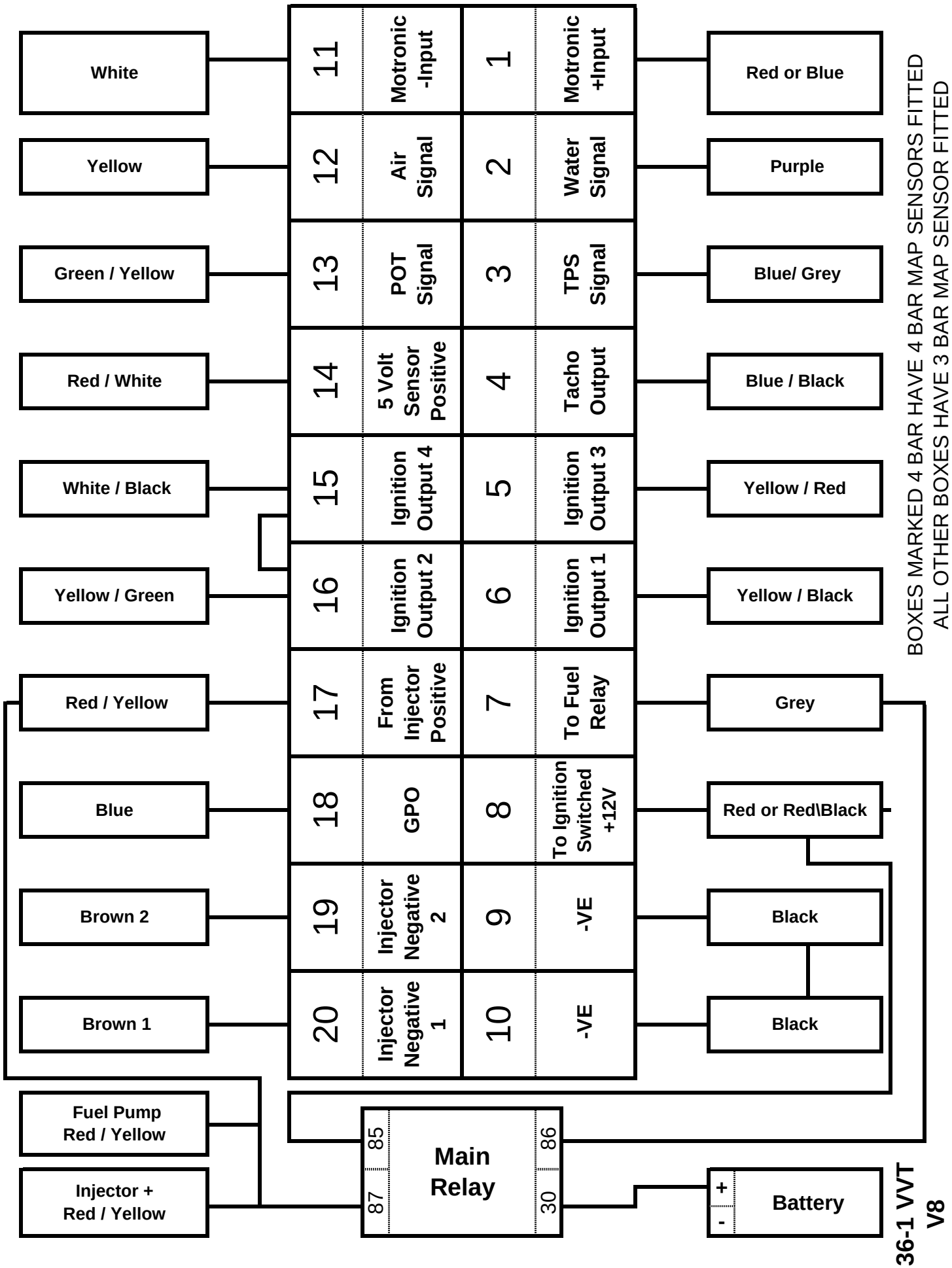

DICKTATOR ENGINE MANAGEMENT SYSTEM

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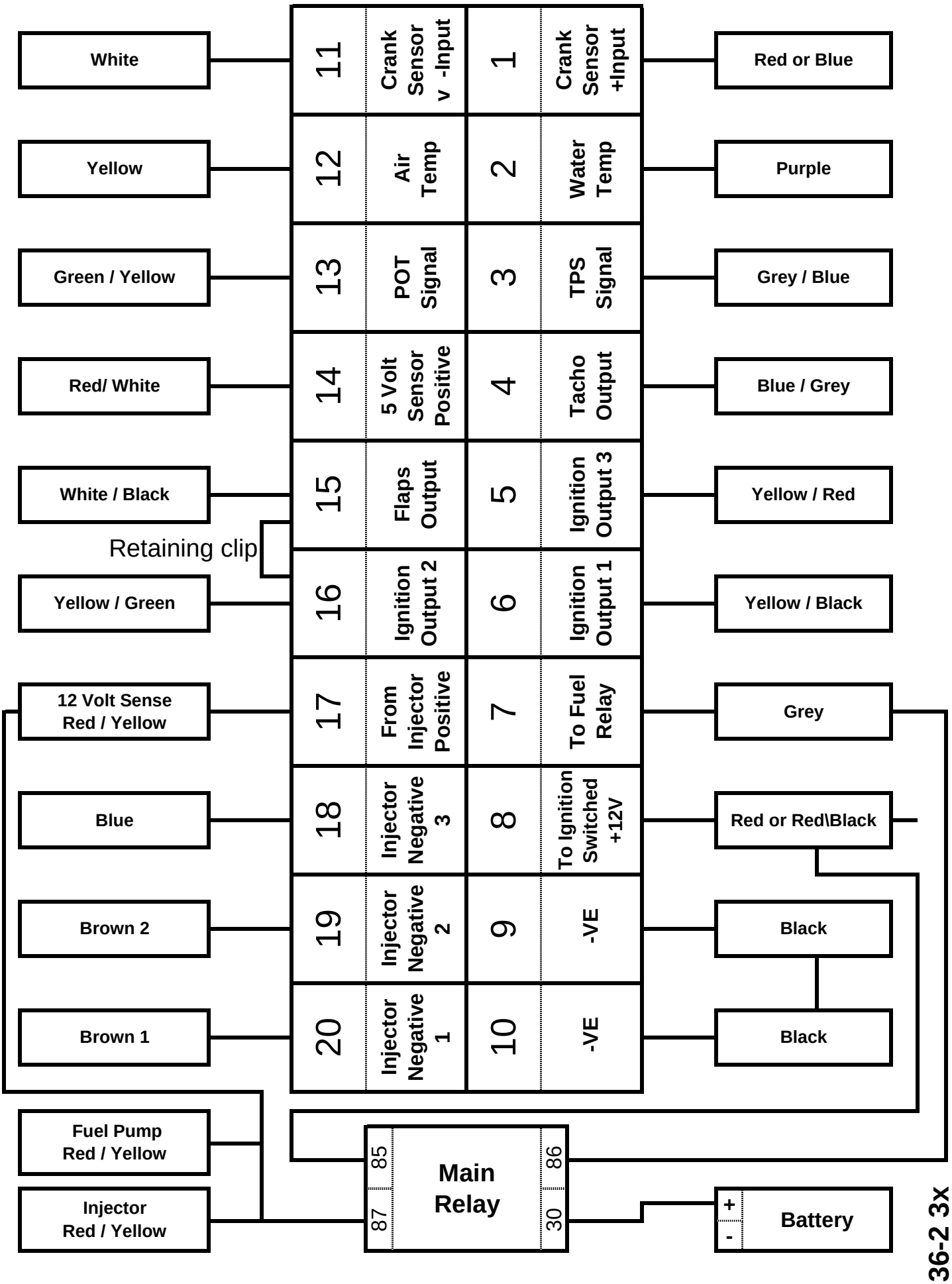
All Multi Coloured Wires are always stated as : Main Colour / Stripe Colour



36-1 or 60-2 V8, 2X or 3X ecu's

36-1 or 60-2 v8 ecu's 8 cylinder
cylinders must be set to 4 cylinder ignition divide 2
Setting the ecu to wasted spark there will be 4 ignition outputs active White\Black is no 4. There is no GPO

36-1 or 60-2 2X ecu's 4 cylinder
Cylinders must be set to 2 cylinder ignition divide 1
The ecu must be set to single coil with dissy.This will make 2 ignition outputs active.
Pin 20 to cylinder 1 and 4
Pin 19 to cylinder 2 and 3

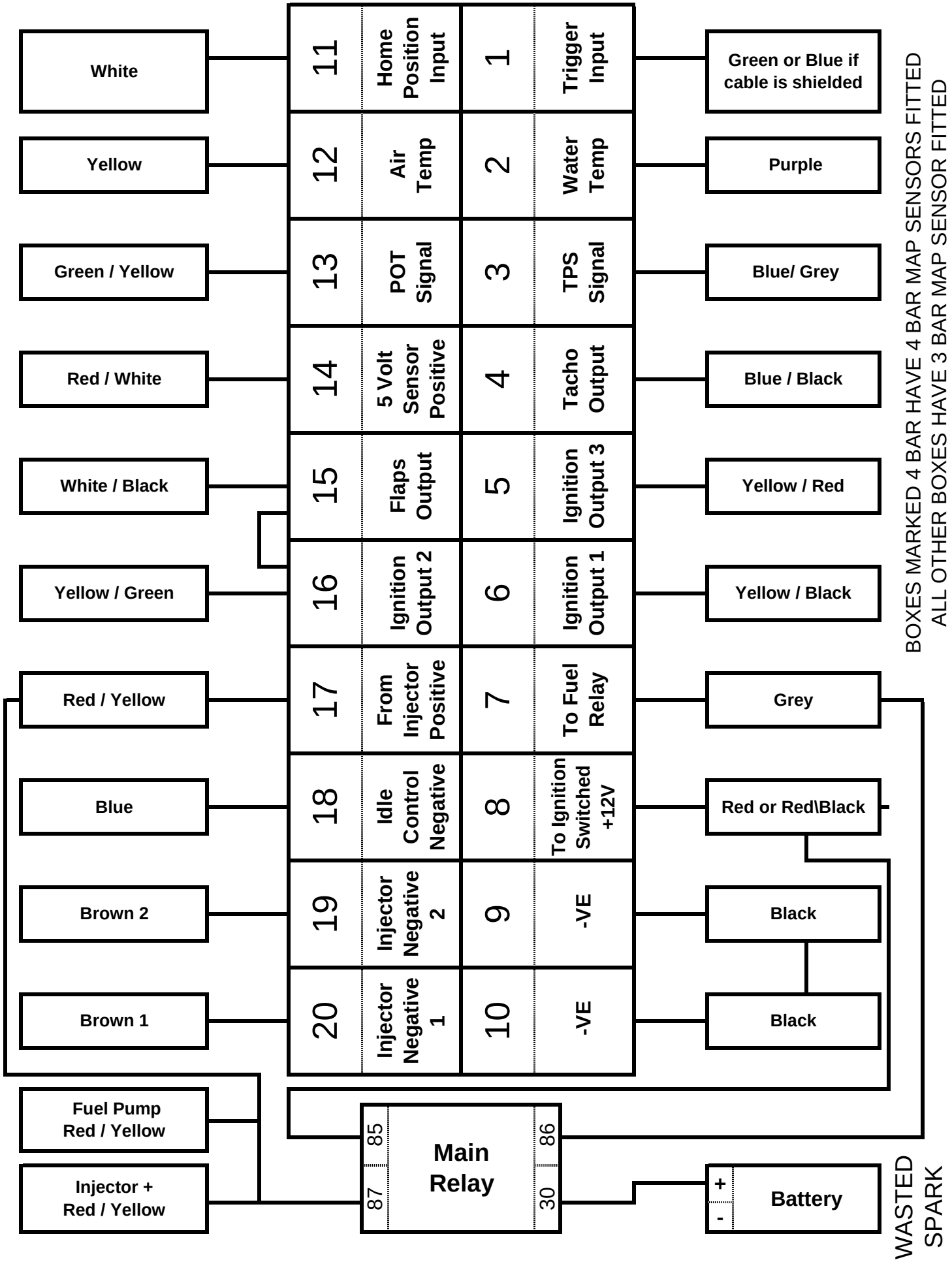
36-1 or 60-2 3X ecu's 6 cylinder
Cylinders must be set to 2 cylinder ignition divide1
The ecu must be set to single coil with dissy.This will make 3 ignition outputs active.
The idle stabiliser wire Blue is used as a 3rd injector output.
Pin 20 to cyl 1 and 6
Pin 19 to cyl 2 and 5
Pin 18 to cyl 3 and 4

36-1 or 60-2 2X ecu's 4 cylinder
Cylinders must be set to 2 cylinder ignition divide 1
The ecu must be set to single coil with dissy.This will make 2 ignition outputs active.
Pin 20 to cylinder 1 and 4
Pin 19 to cylinder 2 and 3

Ign 1 will fire cylinder 2 and 3
Ign 2 will fire cylinder 1 and 4

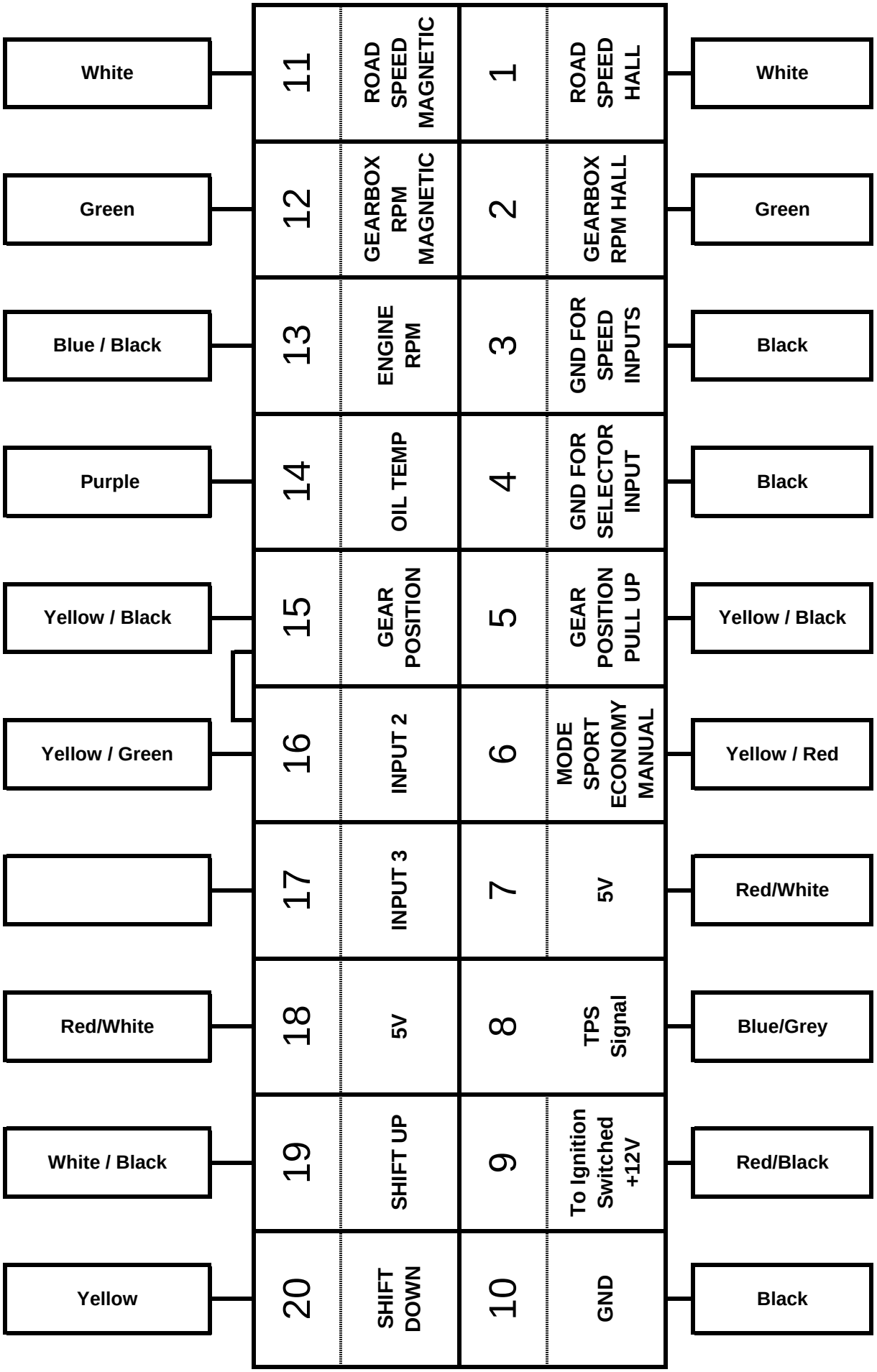
DICKTATOR ENGINE MANAGEMENT SYSTEM

20 PIN PLUG LAYOUT AS SEEN FROM HARNESS SIDE
All Multi Colored Wires are always stated as : Main Color / Stripe Color

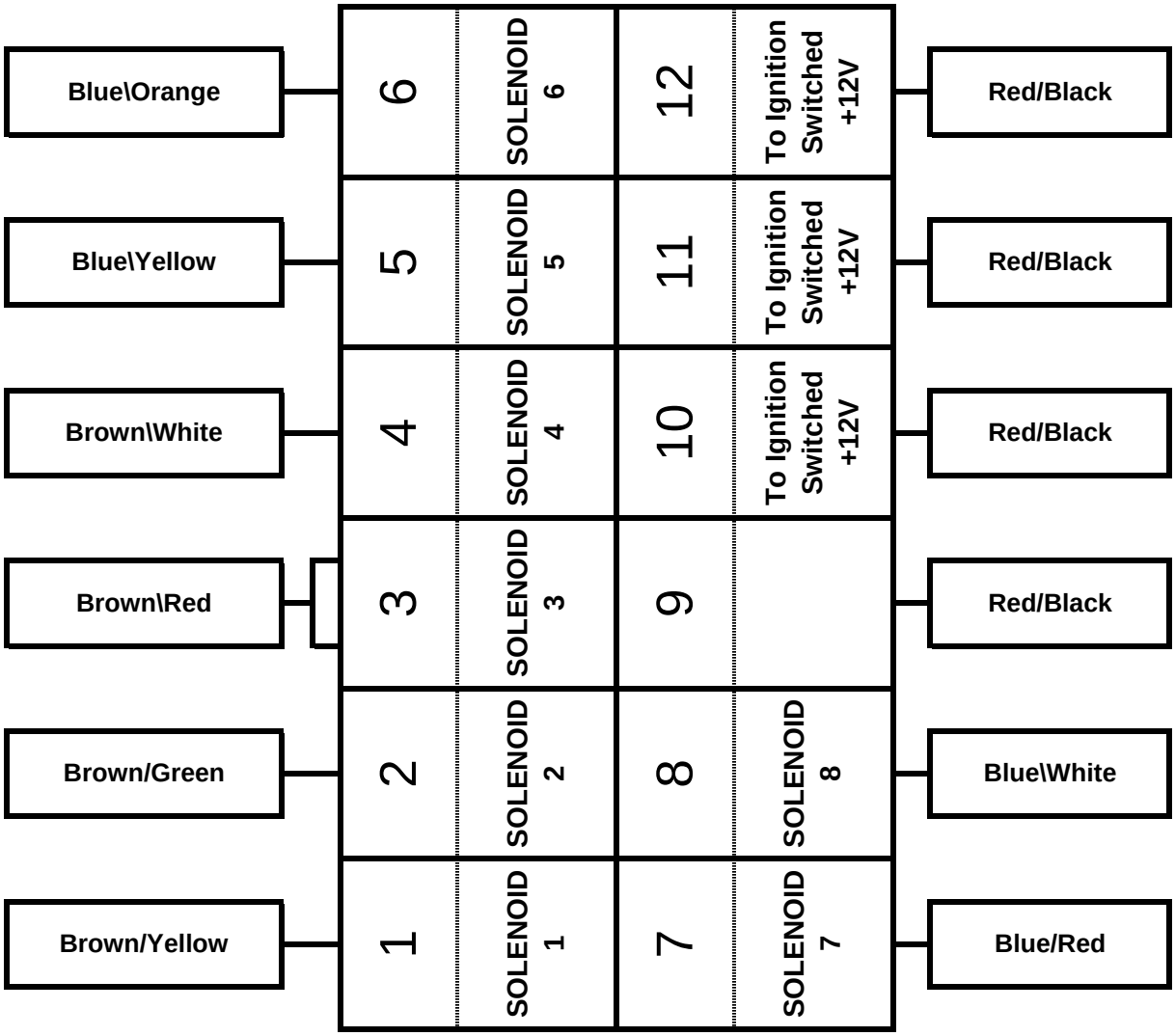


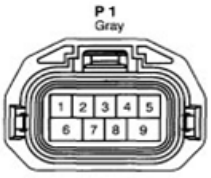
DICKTATOR GEARBOX V2

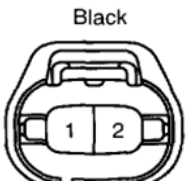
20 PIN PLUG LAYOUT AS SEEN FROM HARNESS SIDE
All Multi Colored Wires are always stated as : Main Color / Stripe Color

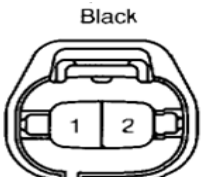


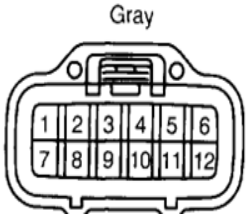
GEARBOX V2











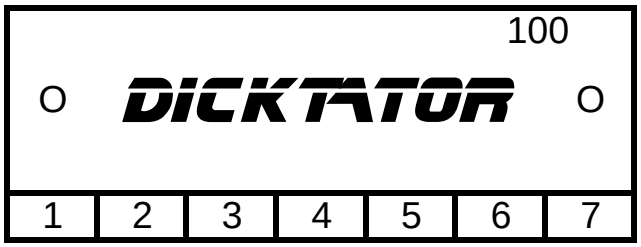
Selector Switch	Gearbox Speed	Road Speed
Park	Gnd	1 Gnd
Reverse	Signal	2 Signal
5v		
2L		
Neutral		
starter		
Drive		
LL		Ground all 4 grounds on the gearbox
starter		

Solenoid Connector		Gearbox ecu connection
1	Oil Temp Signal	14 of 20 Pin
2	Line pressure	8 of 12 pin
3	SLN	6 of 12 Pin
4	SLU	7 of 12 Pin
5	Shift Sol 3	3 of 12 Pin
6	Shift Sol 1	1 of 12 Pin
7	Oil Temp Gnd	
8	Ground	
9	Ground	
#	Ground	
#	Shift Sol 4	4 of 12 Pin
#	Shift Sol 2	2 of 12 pin

GEARBOX V2

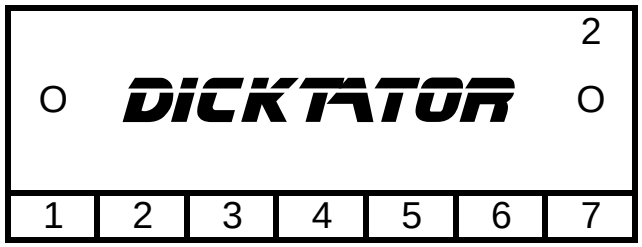
DICKTATOR IGNITION MODULE'S

TP100



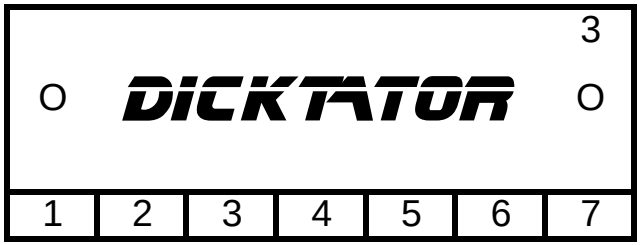
7	COIL NEGATIVE
6	ENGINE GROUND ONLY
5	-SUPPLY FOR VW DISSY
4	+12V IGNITION
3	+SUPPLY TO VW DISSY
2	INPUT SIGNAL FROM ECU Yellow/Black
1	TO REV COUNTER

DUAL MODULE



7	INPUT SIGNAL 2 FROM ECU Yellow/Green
6	COIL -VE 2
5	NOT USED
4	ENGINE GROUND ONLY
3	NOT USED
2	COIL -VE 1
1	INPUT SIGNAL 1 FROM ECU Yellow/Black

TRIPLE MODULE



7	INPUT SIGNAL 2 FROM ECU Yellow/Green
6	COIL -VE 2
5	COIL -VE 3
4	ENGINE GROUND ONLY
3	INPUT SIGNAL 3 FROM ECU Yellow/Red
2	COIL -VE 1
1	INPUT SIGNAL 1 FROM ECU Yellow/Black

QUAD MODULE

7	INPUT SIGNAL 2 FROM ECU Yellow/Green
6	COIL -VE 2
5	COIL -VE 3
4	ENGINE GROUND ONLY
3	COIL -VE 4
2	COIL -VE 1
1	INPUT SIGNAL 1 FROM ECU Yellow/Black

DICKTATOR MODULE'S MUST BE SET TO CONSTANT CHARGE TIME.
FAILURE TO DO THIS WILL RESULT IN DAMAGE TO THE MODULE AND COIL.

DICKTATOR INJECTOR TESTER

The injector harness comes with 4 loose EV1 style connectors.
Grind the outer of this will allow you to test most types of injectors with one connector.

The fuel pump is connected to the Red/Yellow and the black wires.

The toggle switch above the plug switches the fuel pump on and off.

Pushing the 2ms button up will test 2ms for 30 seconds.
Pushing the 5ms button up will test 5ms for 30 seconds.
Pushing the variable button up will test for a adjustable no of ms for 30 seconds.
Pushing the 100%button up will test 100%for 30 seconds double this gives cc/min.

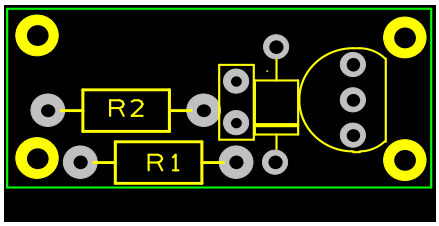
Pushing the variable button up while you are busy testing will cancel the current option.

Some of the newer injectors don’t like being tested at 100%.
Use the variable function set to 85ms.
Big injectors are normally tested one at a time.

DICKTATOR MAG ADAPTER

MAGNETIC - VE

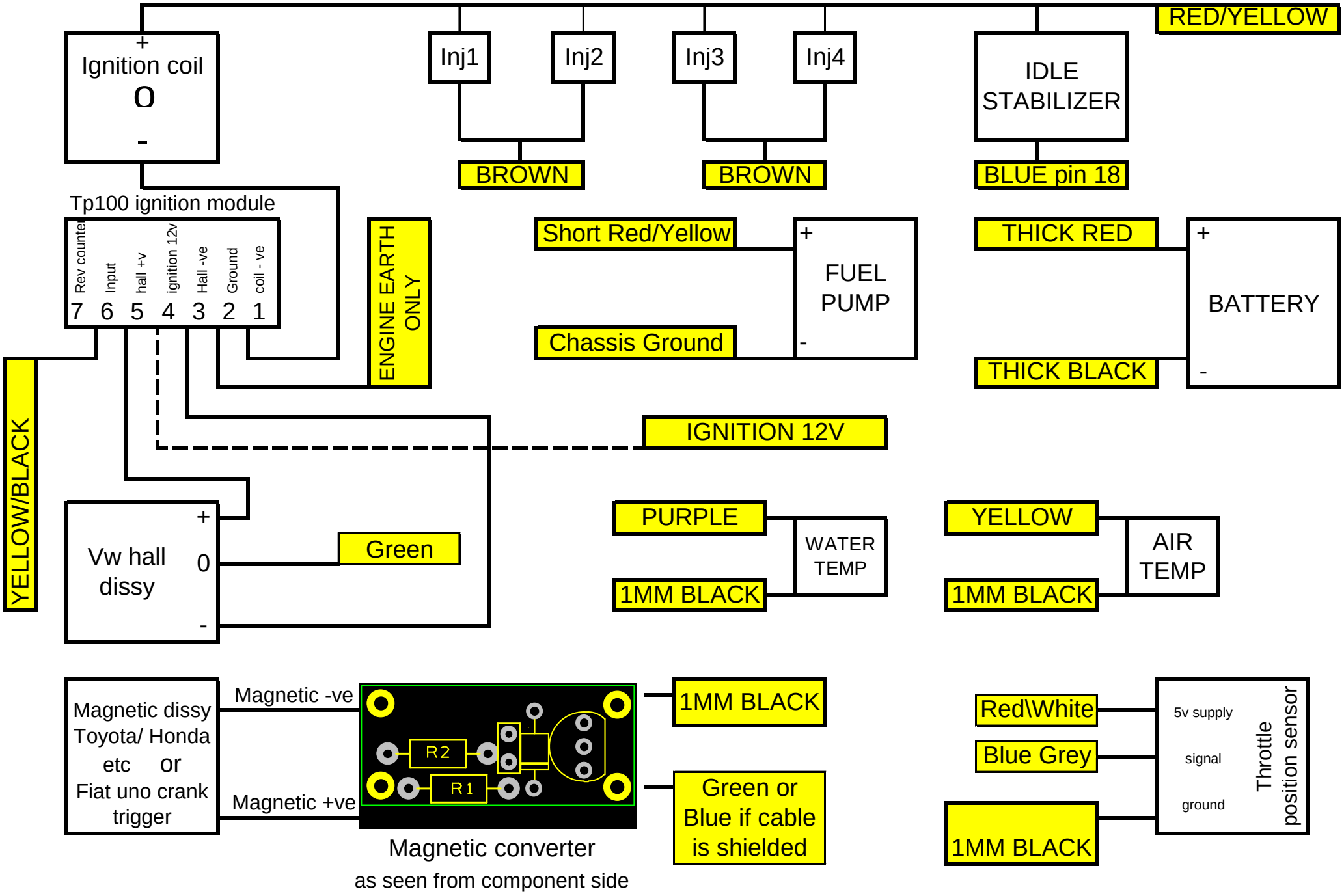
MAGNETIC + VE



SINGLE MAG ADAPTER

GROUND FROM ECU
BLACK

TRIGGER OUT TO
ECU GREEN


+
Ignition coil
O
-
Inj1
Inj2
Inj3
Inj4
BROWN
BROWN
IDLE
STABILIZER
RED/YELLOW
BLUE pin 18
Tp100 ignition module
Rev counter
Input
hall +v
ignition 12v
Hall -ve
Ground
coil - ve
7 6 5 4 3 2 1
ENGINE EARTH
ONLY
Short Red/Yellow
Chassis Ground
+
FUEL
PUMP
-
THICK RED
THICK BLACK
+
BATTERY
-
YELLOW/BLACK
IGNITION 12V
Vw hall
dissy
+
0
-
Green
PURPLE
1MM BLACK
WATER
TEMP
YELLOW
1MM BLACK
AIR
TEMP
Magnetic dissy
Toyota/ Honda
etc or
Fiat uno crank
trigger
Magnetic -ve
Magnetic +ve
R2
R1
1MM BLACK
Green or
Blue if cable
is shielded
Magnetic converter
as seen from component side
Red\White
Blue Grey
1MM BLACK
5v supply
signal
ground
Throttle
position sensor
STD 4 Cylinder

INJECTORS INJECTORS

RED/YELLOW

coil 1 coil 4 coil 3 coil 2

1 2 3 4

Brown Brown

Thin red — Ignition +12v
This must provide at least 12 v during cranking

Ignition 1 | Coil - 1 | Coil - 4 | Ground | Coil - 3 | Coil - 2 | Ignition 2
7 6 5 4 3 2 1

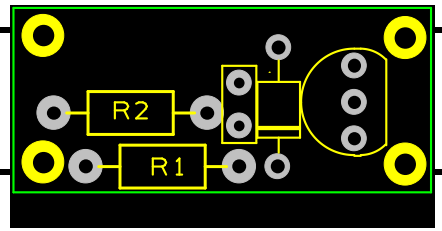
Short Red/Yellow — + FUEL PUMP -
Chassis Ground

THICK RED — + BATTERY -
THICK BLACK

YELLOW/BLACK YELLOY/GREEN

ENGINE EARTH ONLY

Pickup that looks at Cam — - / +

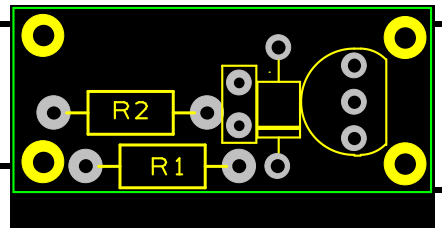


1mm Black
White

PURPLE — WATER TEMP — 1MM BLACK

YELLOW — AIR TEMP — 1MM BLACK

Pickup that looks at 2 tooth gear On crankshaft — - / +



1mm Black

Green or Blue if cable is shielded

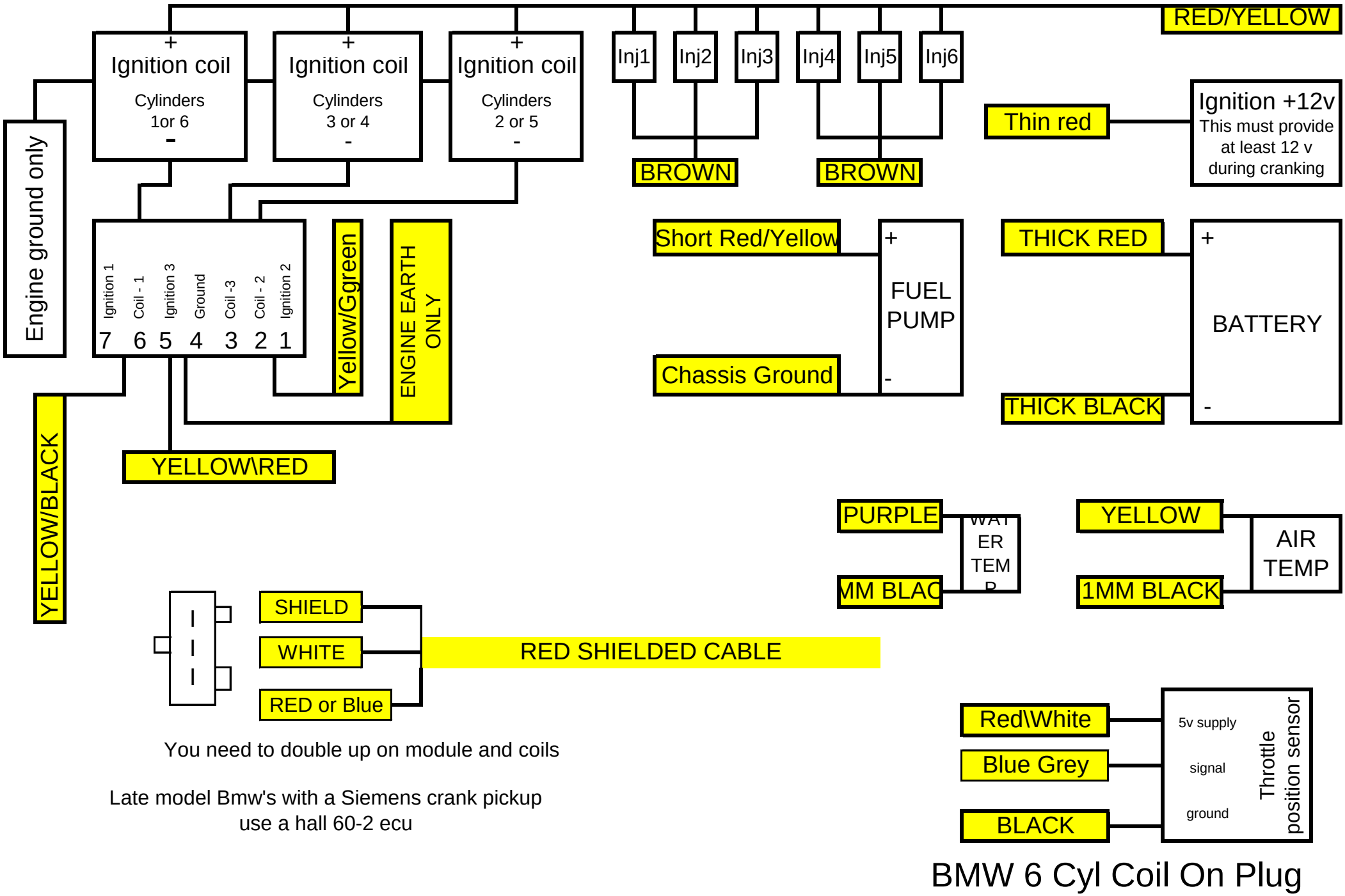
Red\White — 5v supply
Blue Grey — signal
BLACK — ground
Throttle position sensor

TURN ENGINE TO TDC. TURN BACK 60 DEG KEEP THIS TOOTH AND THE ONE 180 DEG OPPOSITE. REMOVE ALL OTHER TEETH.

Magnetic converter
as seen from component side

4 CYLINDER BIKE

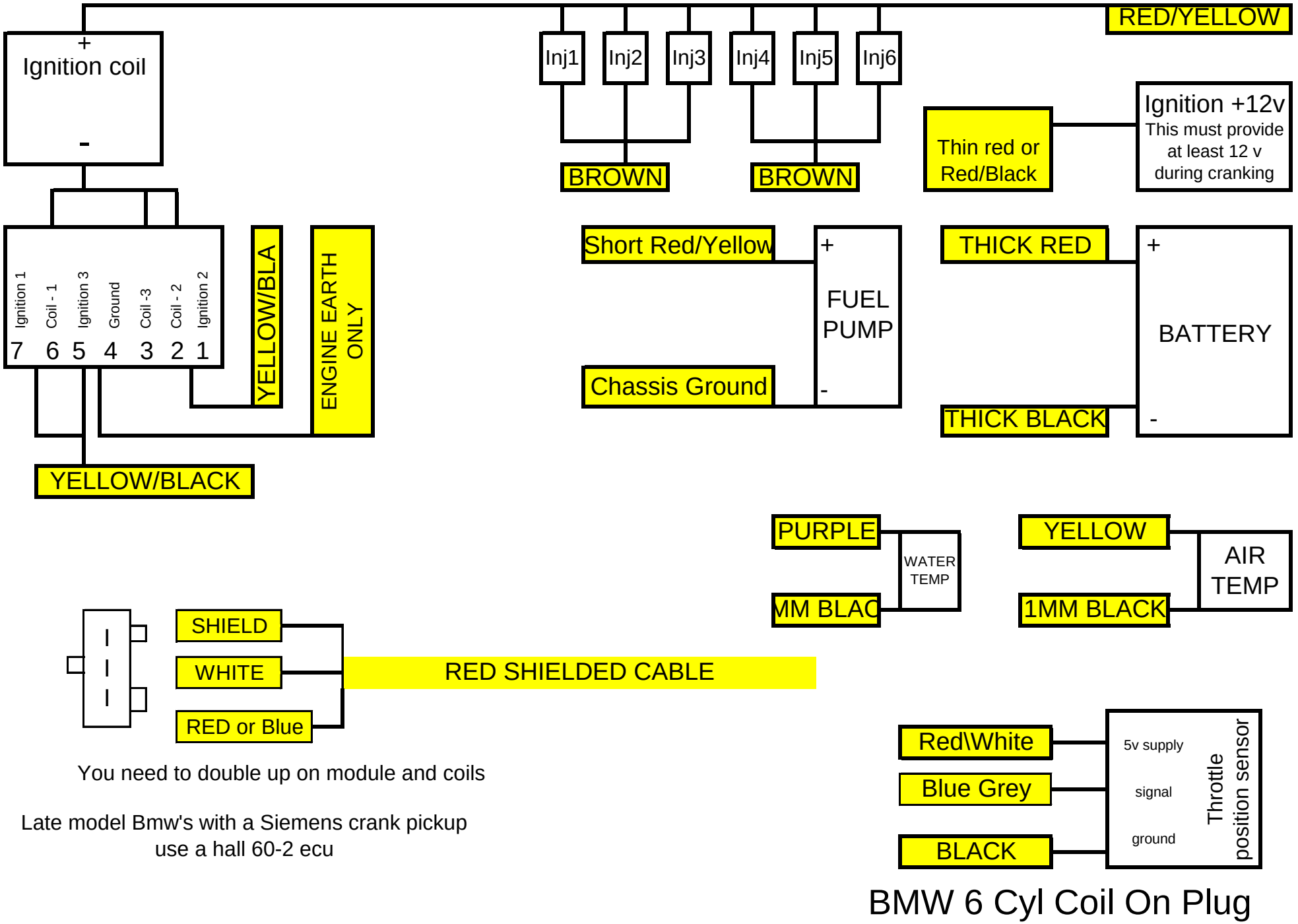
Cylinders 1 2 and 3 are shown 4 5 and 6 will be a copy of this



You need to double up on module and coils

Late model Bmw's with a Siemens crank pickup
use a hall 60-2 ecu

BMW 6 Cyl Coil On Plug



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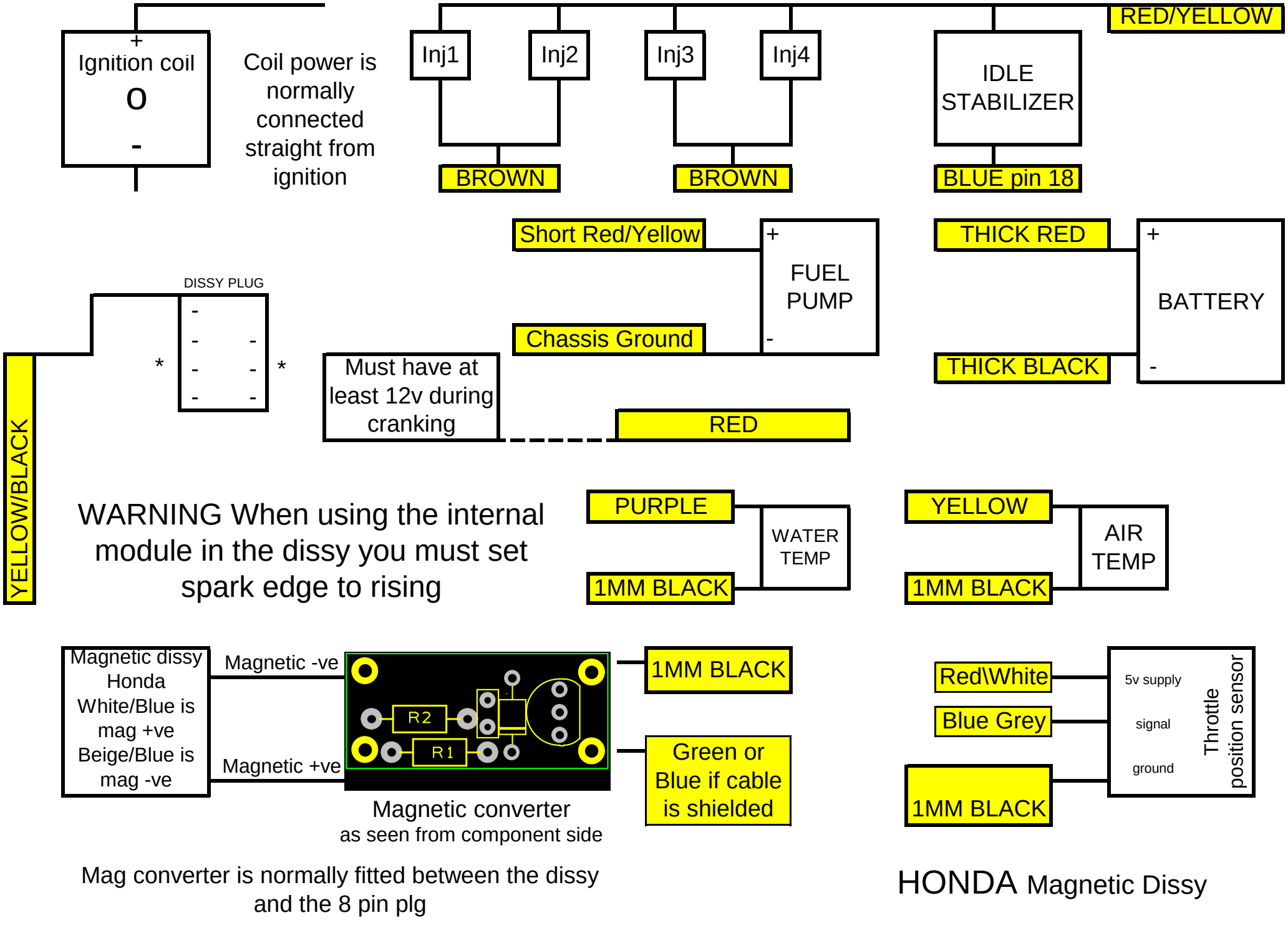
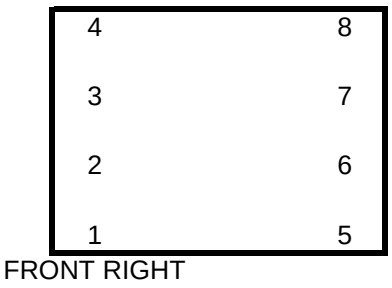
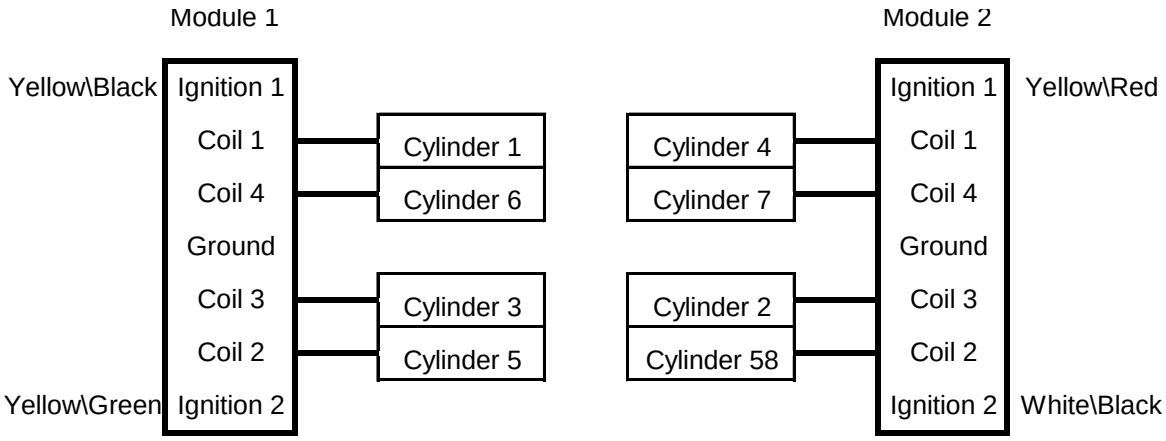
BMW 6 Cyl Coil On Plug


+
Ignition coil
O
-
Coil power is normally connected straight from ignition
Inj1
Inj2
Inj3
Inj4
RED/YELLOW
IDLE STABILIZER
BROWN
BROWN
BLUE pin 18
Short Red/Yellow
+
FUEL PUMP
Chassis Ground
-
THICK RED
+
BATTERY
THICK BLACK
-
DISSY PLUG
YELLOW/BLACK
Must have at least 12v during cranking
RED
WARNING When using the internal module in the dissy you must set spark edge to rising
PURPLE
WATER TEMP
1MM BLACK
YELLOW
AIR TEMP
1MM BLACK
Magnetic dissy
Honda
White/Blue is mag +ve
Beige/Blue is mag -ve
Magnetic -ve
Magnetic +ve
R2
R1
1MM BLACK
Green or Blue if cable is shielded
Magnetic converter
as seen from component side
Red\White
Blue Grey
1MM BLACK
5v supply
signal
ground
Throttle position sensor
Mag converter is normally fitted between the dissy and the 8 pin plg
HONDA Magnetic Dissy

BMW 540 V8

Firing Order 1 5 4 8 6 3 7 2



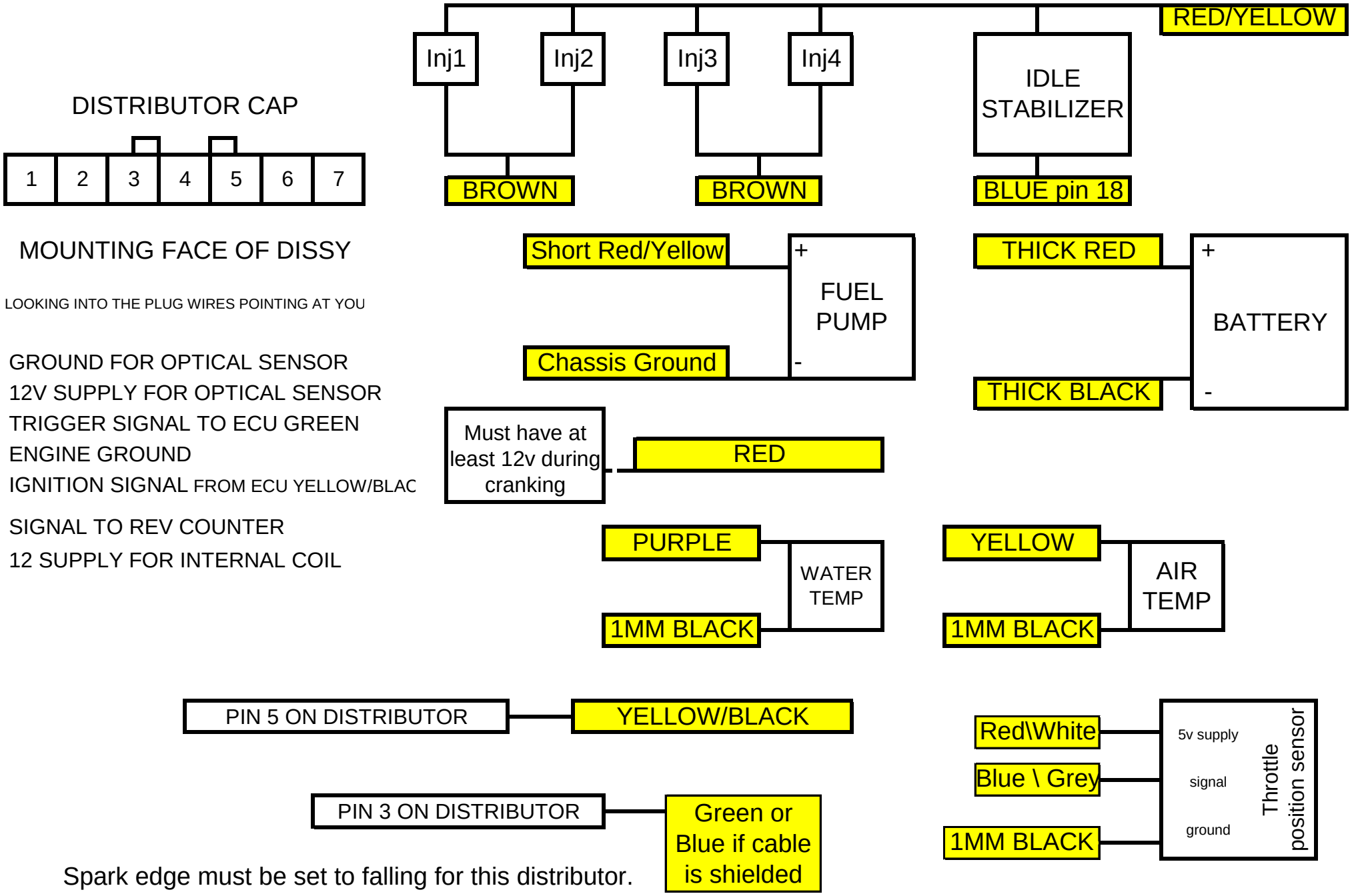


ECU Setip

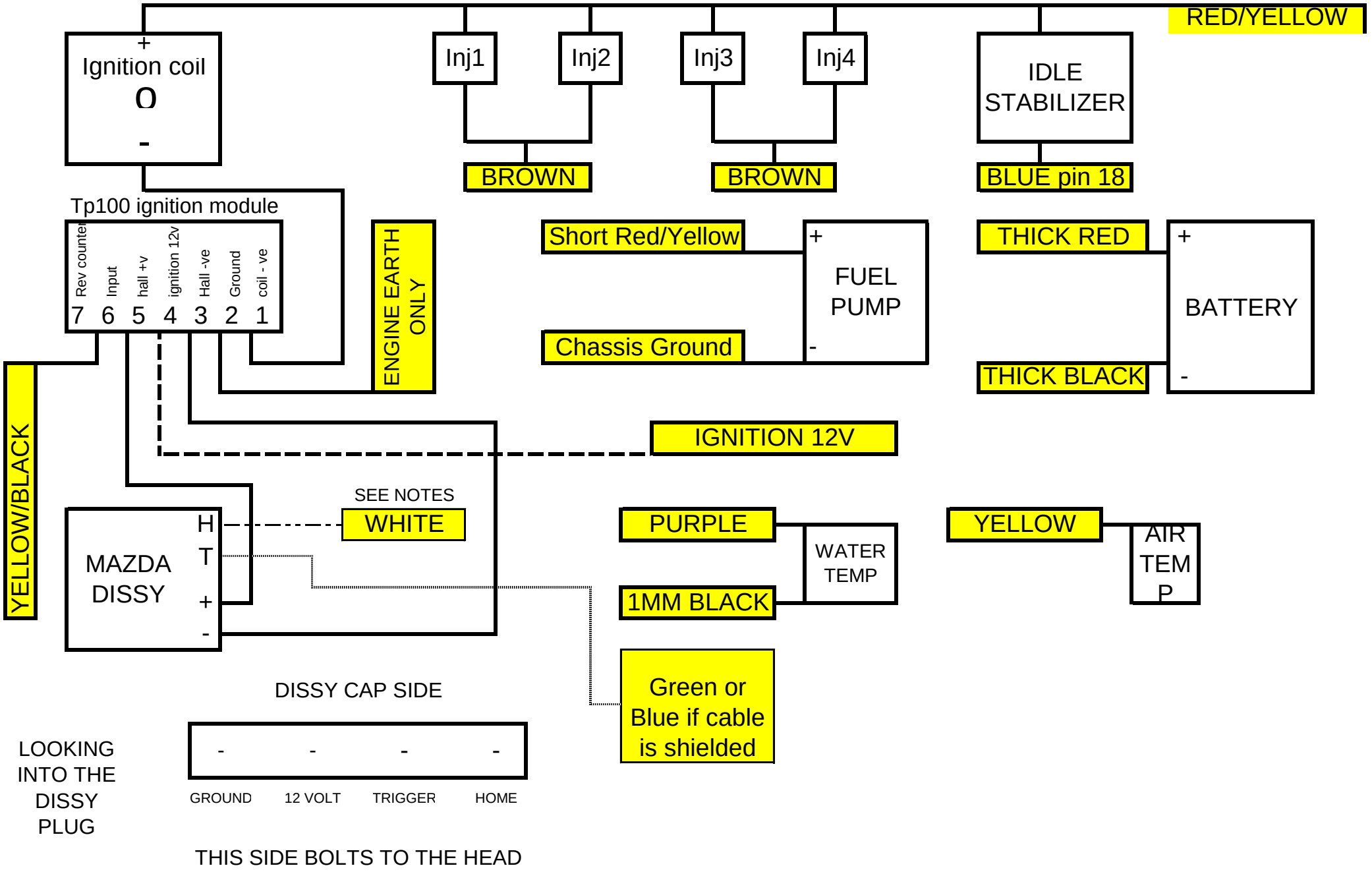
Cylinders must be set to 4 cyl ign divide to 2

Wasted Spark

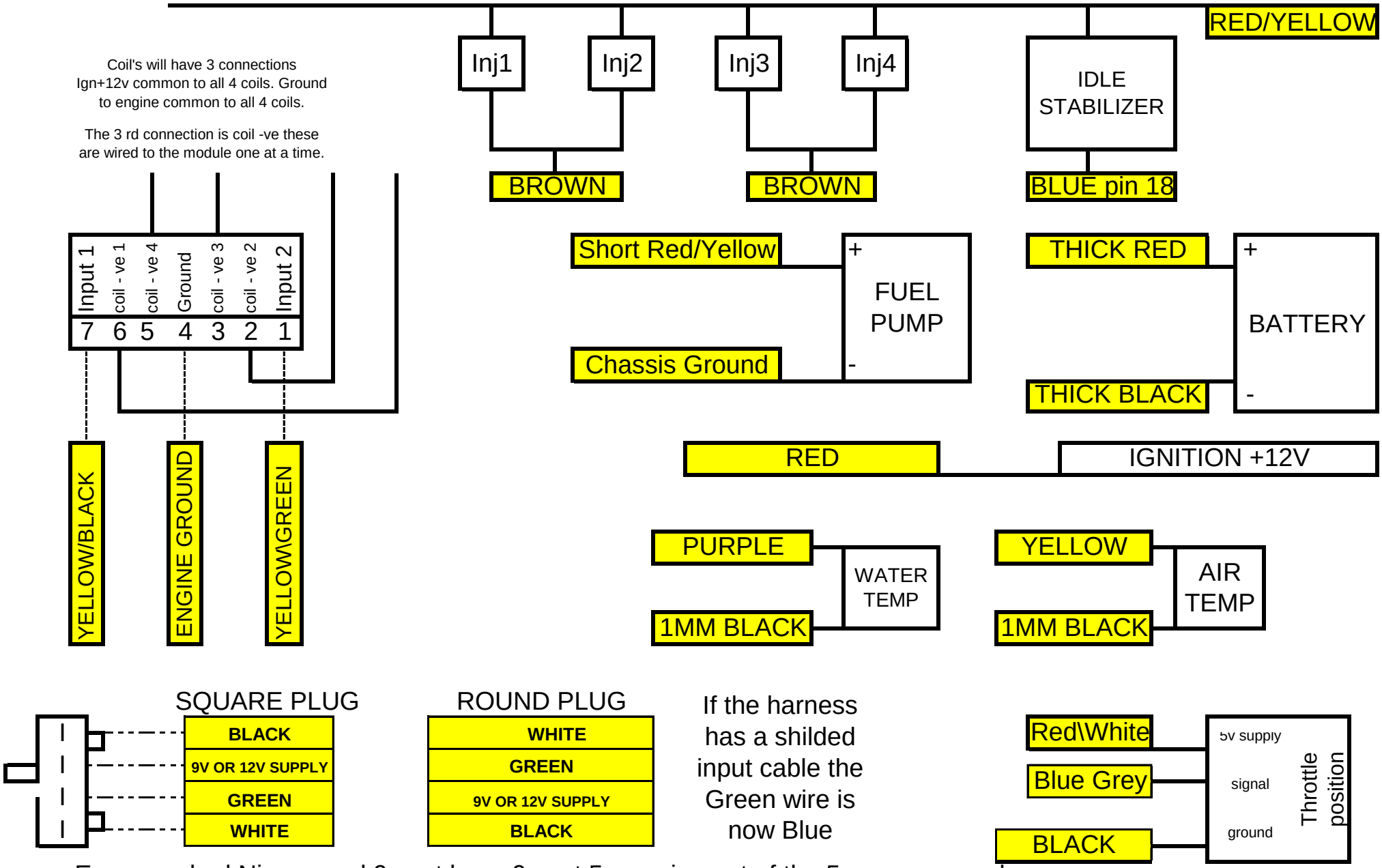
Cylinders are paired 1 and 6	Yellow\Black	Ignition 1
Cylinders are paired 3 and 5	Yellow\Green	Ignition 2
Cylinders are paired 4 and 7	Yellow\Red	Ignition 3
Cylinders are paired 12 and8	White\Black	Ignition 4



HONDA D SERIES OPTICAL DISSY

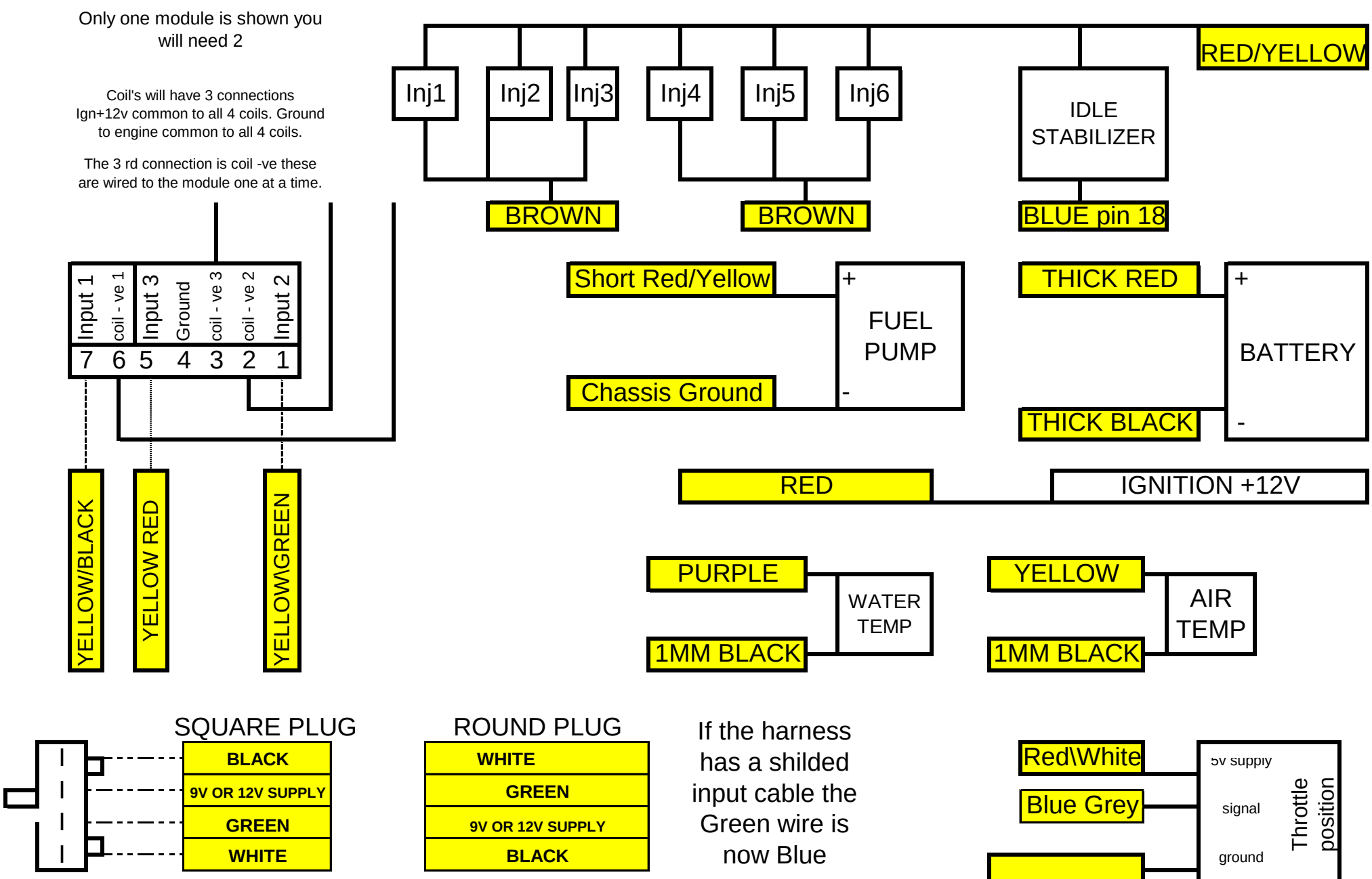

RED/YELLOW
+
Ignition coil
-
Inj1
Inj2
Inj3
Inj4
IDLE STABILIZER
BROWN
BROWN
BLUE pin 18
Tp100 ignition module
Rev counter
Input
hall +v
ignition 12v
Hall -ve
Ground
coil - ve
7 6 5 4 3 2 1
ENGINE EARTH ONLY
Short Red/Yellow
Chassis Ground
+
FUEL PUMP
-
THICK RED
THICK BLACK
+
BATTERY
-
YELLOW/BLACK
IGNITION 12V
SEE NOTES
WHITE
MAZDA DISSY
H T
+
-
PURPLE
1MM BLACK
WATER TEMP
YELLOW
AIR TEMP
Green or Blue if cable is shielded
DISSY CAP SIDE
LOOKING INTO THE DISSY PLUG
- - - -
GROUND
12 VOLT
TRIGGER
HOME
THIS SIDE BOLTS TO THE HEAD

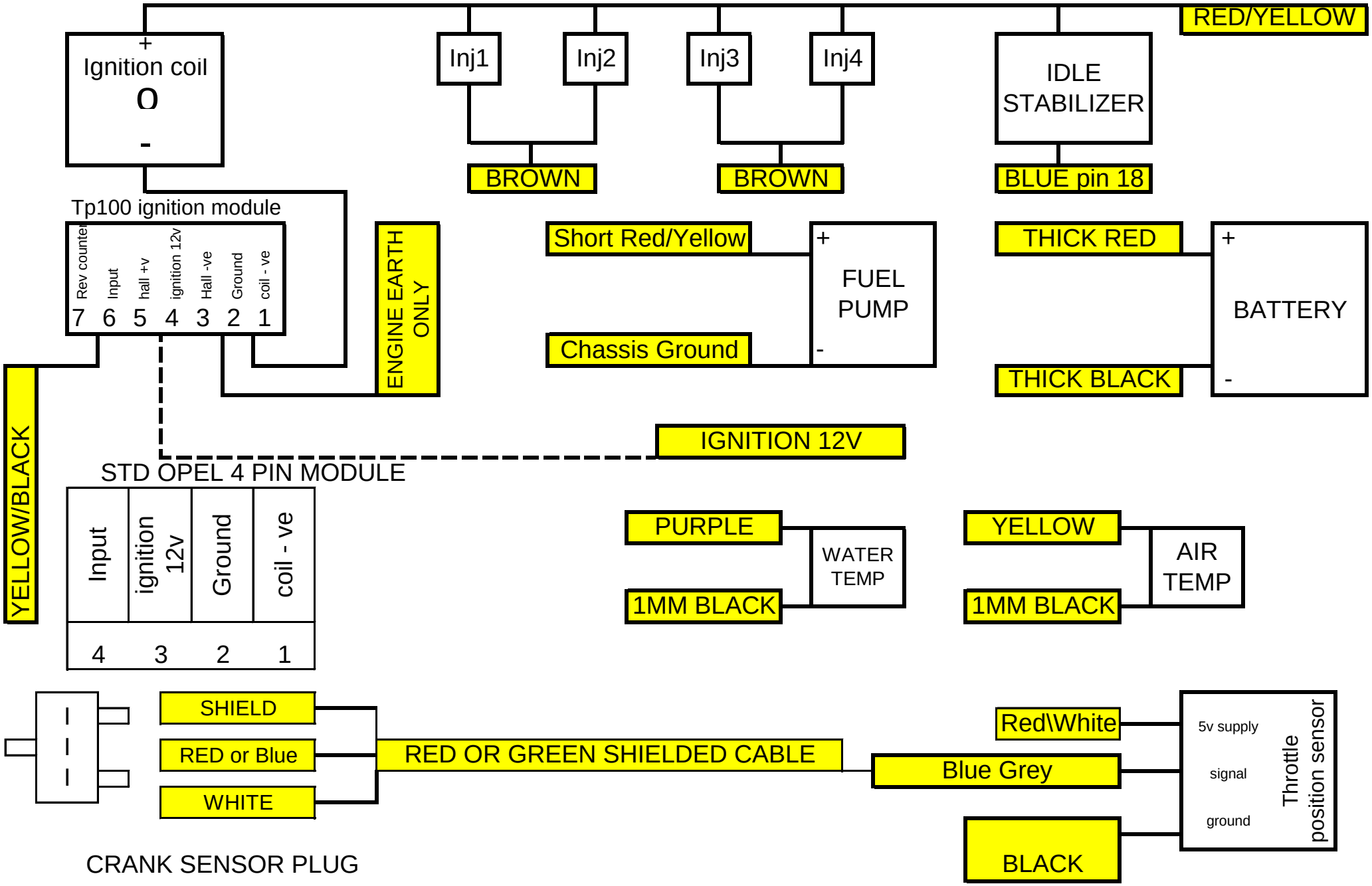
MAZDA 2L FE



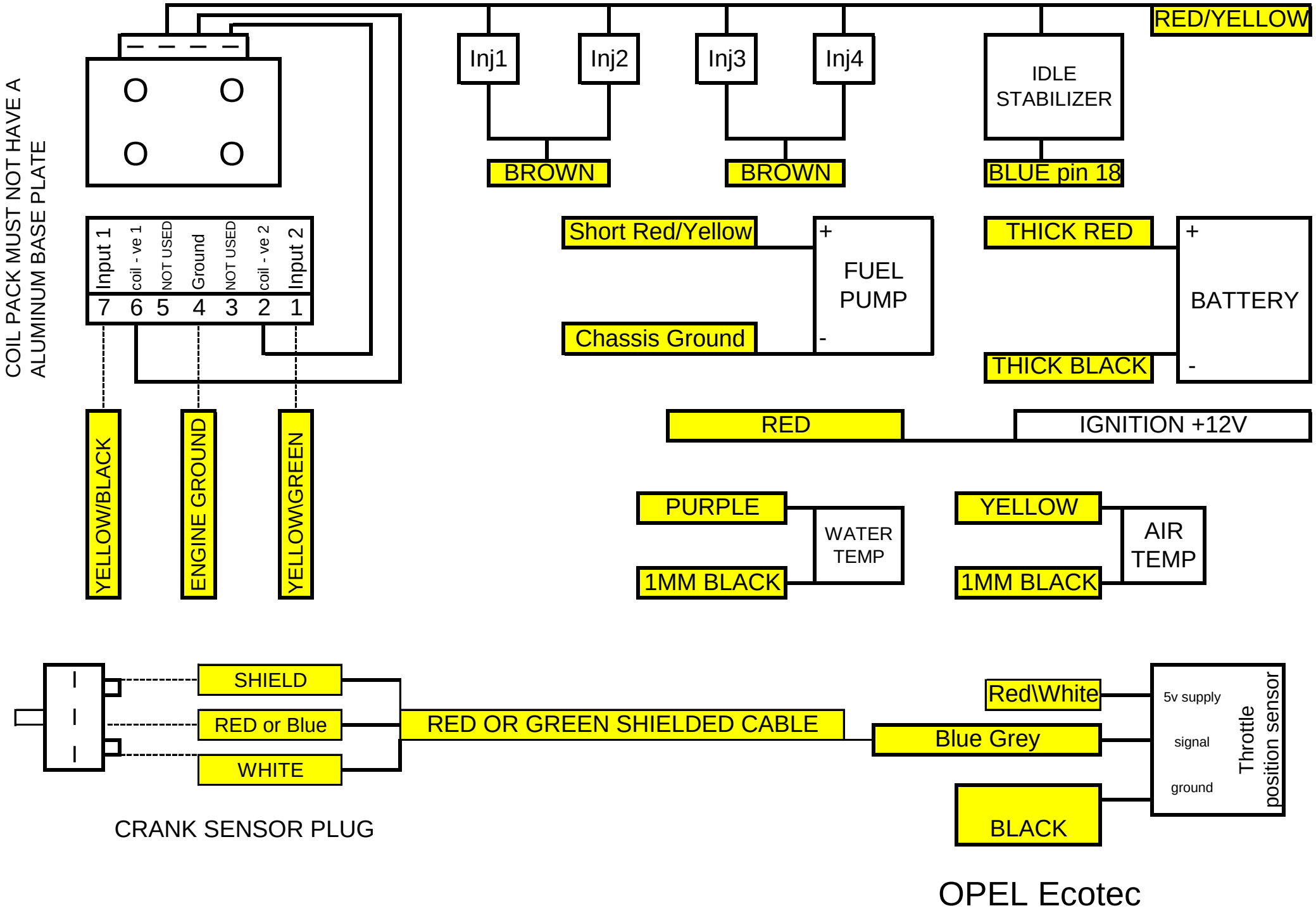
Ecu,s marked Nissan and 9v out have 9v not 5v coming out of the 5v sensor supply
This can be used to power the cam angle sensor
Cam pickups with round corner's are wired opposite to square plug

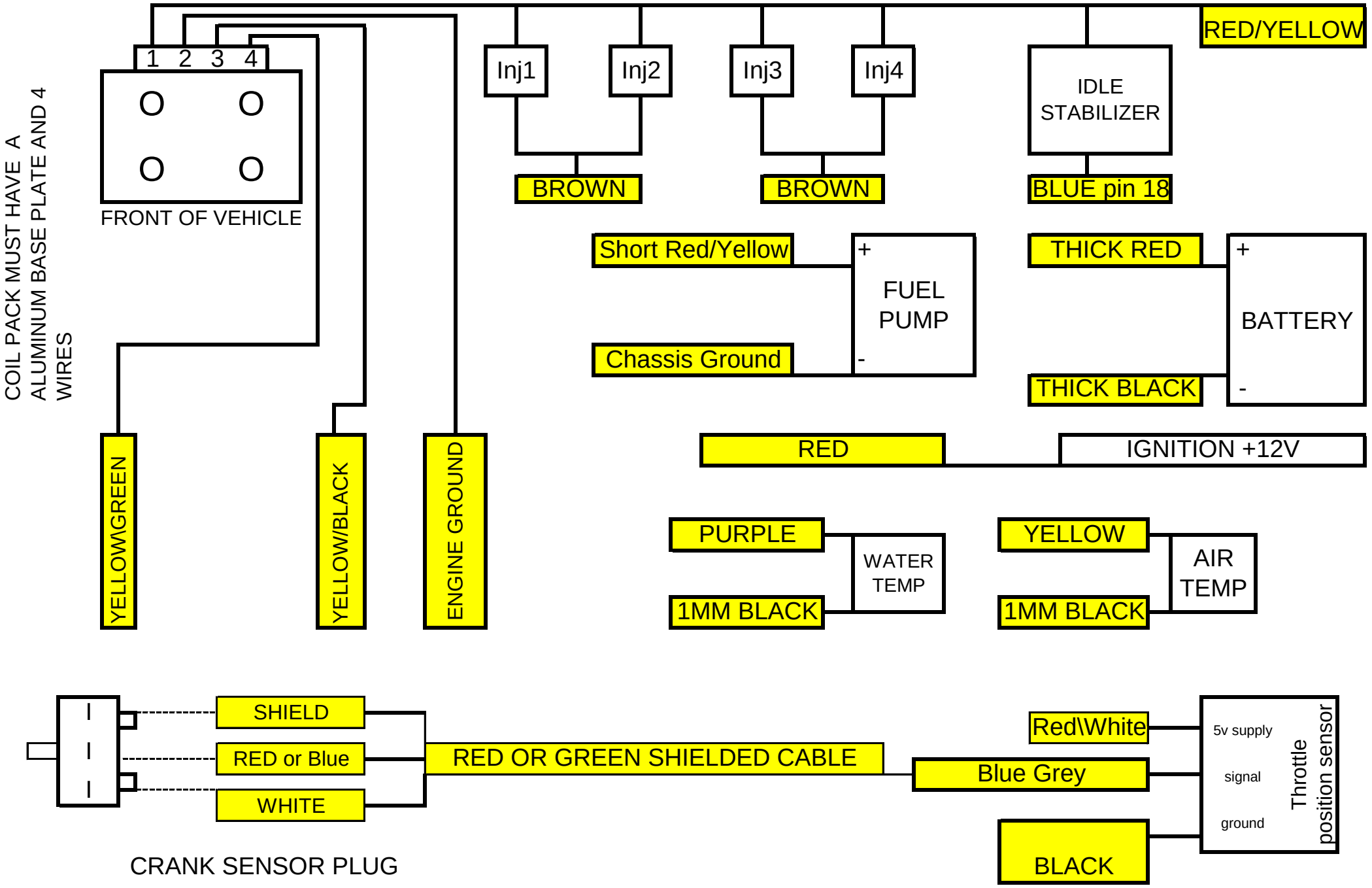
NISSAN CA18 SR20

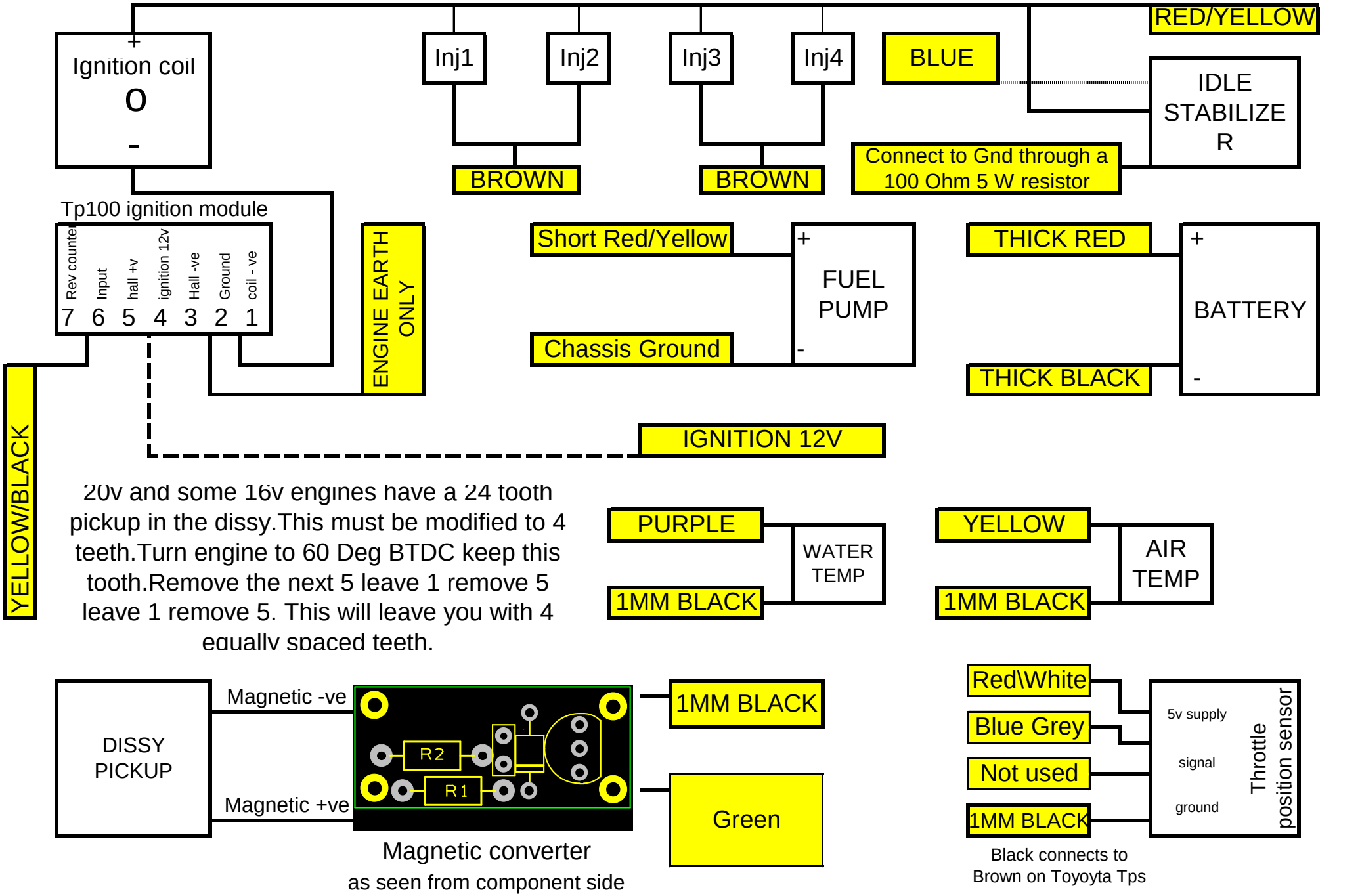

Only one module is shown you will need 2
Coil's will have 3 connections Ign+12v common to all 4 coils. Ground to engine common to all 4 coils.
The 3 rd connection is coil -ve these are wired to the module one at a time.
Inj1
Inj2
Inj3
Inj4
Inj5
Inj6
RED/YELLOW
IDLE STABILIZER
BROWN
BROWN
BLUE pin 18
Input 1
coil - ve 1
Input 3
Ground
coil - ve 3
coil - ve 2
Input 2
7 6 5 4 3 2 1
Short Red/Yellow
Chassis Ground
+
FUEL PUMP
-
THICK RED
THICK BLACK
+
BATTERY
-
YELLOW/BLACK
YELLOW RED
YELLOW\GREEN
RED
IGNITION +12V
PURPLE
1MM BLACK
WATER TEMP
YELLOW
1MM BLACK
AIR TEMP
SQUARE PLUG
BLACK
9V OR 12V SUPPLY
GREEN
WHITE
ROUND PLUG
WHITE
GREEN
9V OR 12V SUPPLY
BLACK
If the harness has a shilded input cable the Green wire is now Blue
Red\White
Blue Grey
BLACK
5v supply
signal
ground
Throttle position
Ecu,s marked Nissan and 9v out have 9v not 5v coming out of the 5v sensor supp
This can be used to power the cam angle sensor
Cam pickups with round corner's are wired opposite to square plug
NISSAN RB Engines



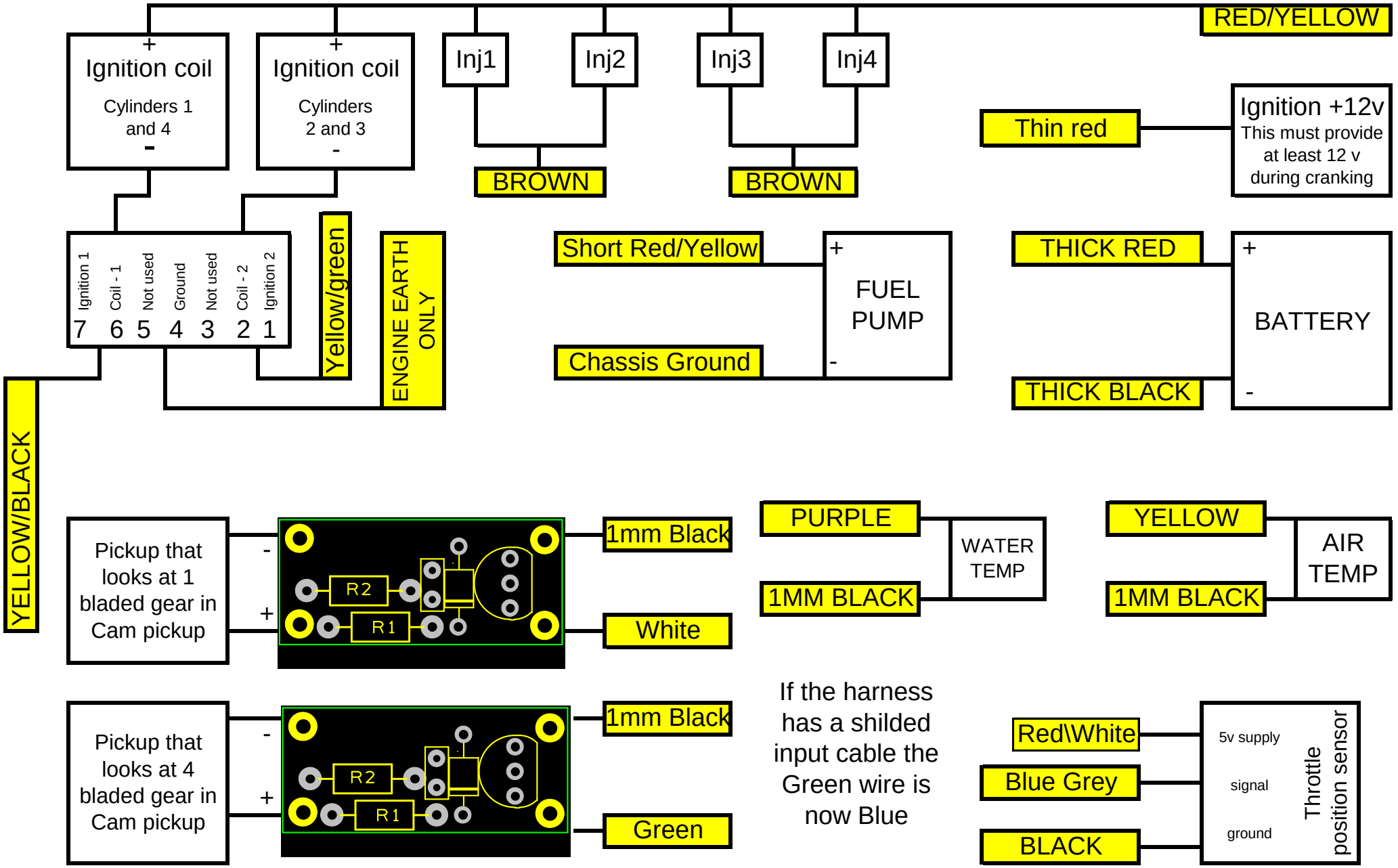
OPEL Single Coil


COIL PACK MUST NOT HAVE A ALUMINUM BASE PLATE
Input 1
coil - ve 1
NOT USED
Ground
NOT USED
coil - ve 2
Input 2
7 6 5 4 3 2 1
YELLOW/BLACK
ENGINE GROUND
YELLOW\GREEN
Inj1
Inj2
Inj3
Inj4
BROWN
BROWN
IDLE STABILIZER
BLUE pin 18
RED/YELLOW
Short Red/Yellow
Chassis Ground
+
FUEL PUMP
-
THICK RED
THICK BLACK
+
BATTERY
-
RED
IGNITION +12V
PURPLE
1MM BLACK
WATER TEMP
YELLOW
1MM BLACK
AIR TEMP
SHIELD
RED or Blue
WHITE
RED OR GREEN SHIELDED CABLE
Red\White
Blue Grey
BLACK
5v supply
signal
ground
Throttle position sensor
CRANK SENSOR PLUG
OPEL Ecotec


COIL PACK MUST HAVE A ALUMINUM BASE PLATE AND 4 WIRES
1 2 3 4
FRONT OF VEHICLE
YELLOW\GREEN
YELLOW/BLACK
ENGINE GROUND
Inj1
Inj2
Inj3
Inj4
BROWN
BROWN
IDLE STABILIZER
BLUE pin 18
RED/YELLOW
Short Red/Yellow
Chassis Ground
+
FUEL PUMP
-
THICK RED
THICK BLACK
+
BATTERY
-
RED
IGNITION +12V
PURPLE
1MM BLACK
WATER TEMP
YELLOW
1MM BLACK
AIR TEMP
SHIELD
RED or Blue
WHITE
RED OR GREEN SHIELDED CABLE
Red\White
Blue Grey
BLACK
5v supply
signal
ground
Throttle position sensor
CRANK SENSOR PLUG
OPEL CORSA



TOYOTA 16V AND 20V



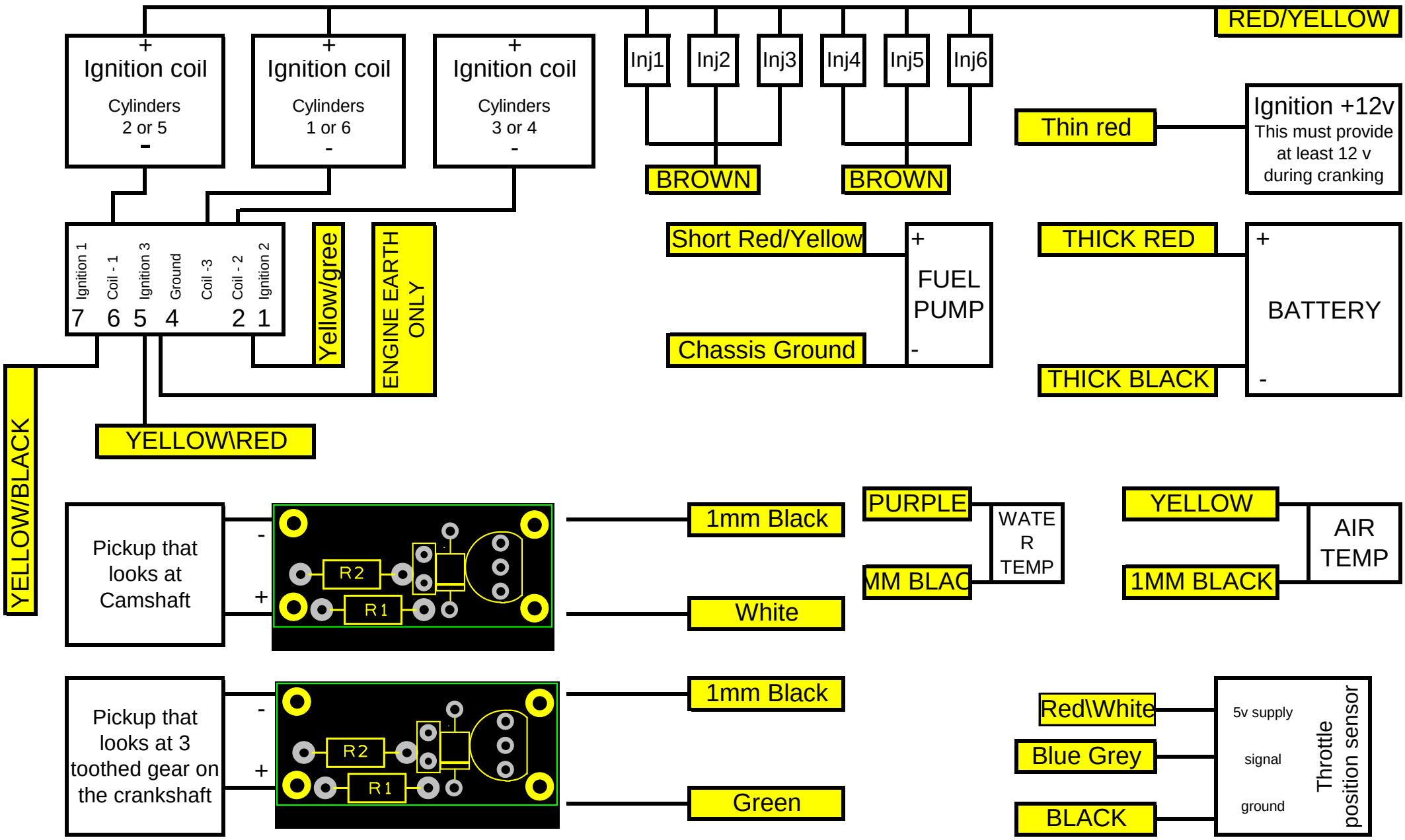
Magnetic converter

as seen from component side

Most Toyota's have a 24 tooth gear
You must grind 20 of the teeth of or we can supply a 4 bladed gear

Must be mounted close to cam pickup

TOYOTA 4AGZE



Toyota's have a 12 tooth gear You must grind 9 of the teeth off
Trigger must happen 60 to 75 deg BTDC

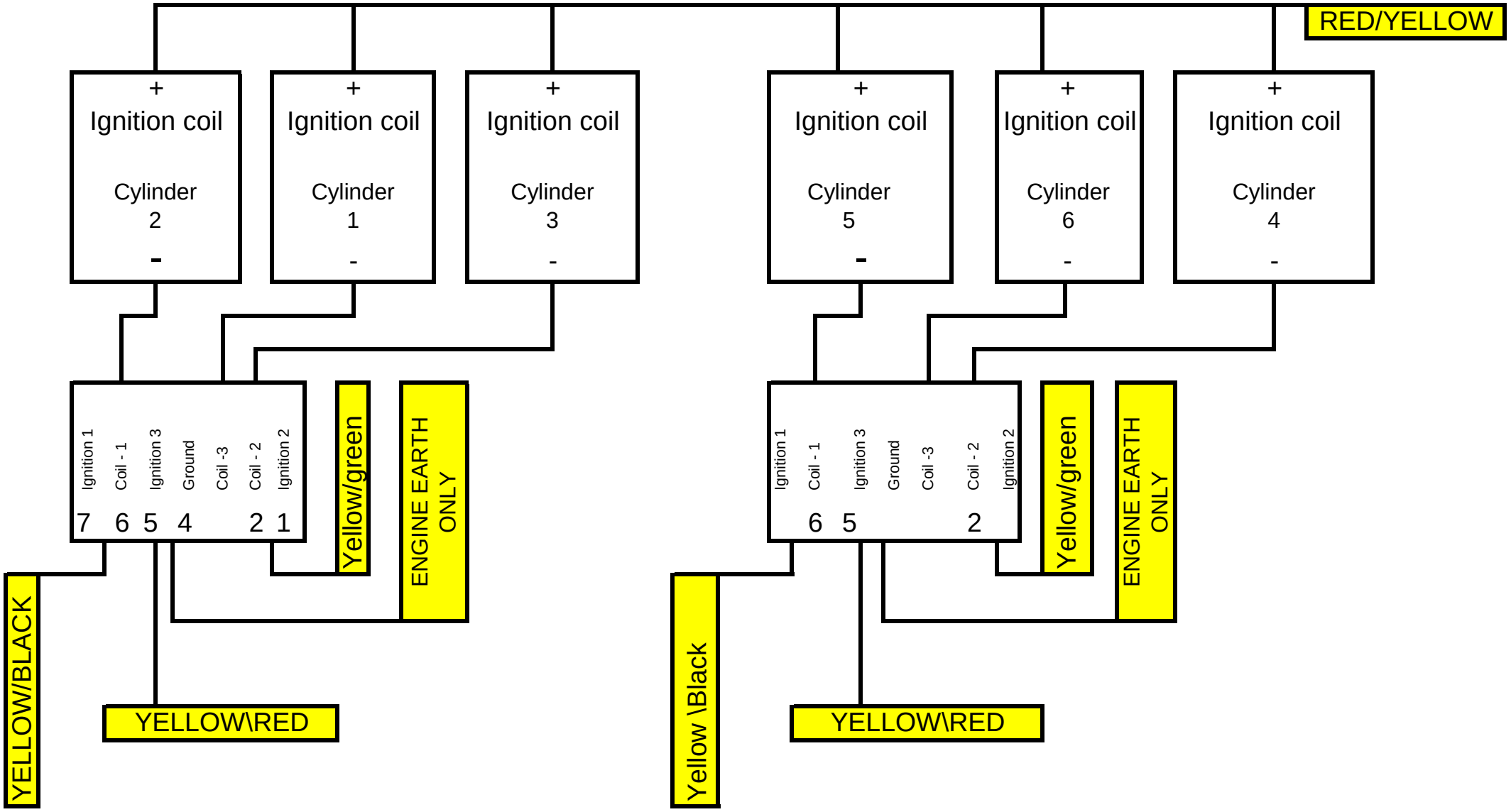
Magnetic converter
as seen from component side

Must be mounted close to pickup's

TOYOTA 1J and 2J non vvt

Only one module is shown you will need 2

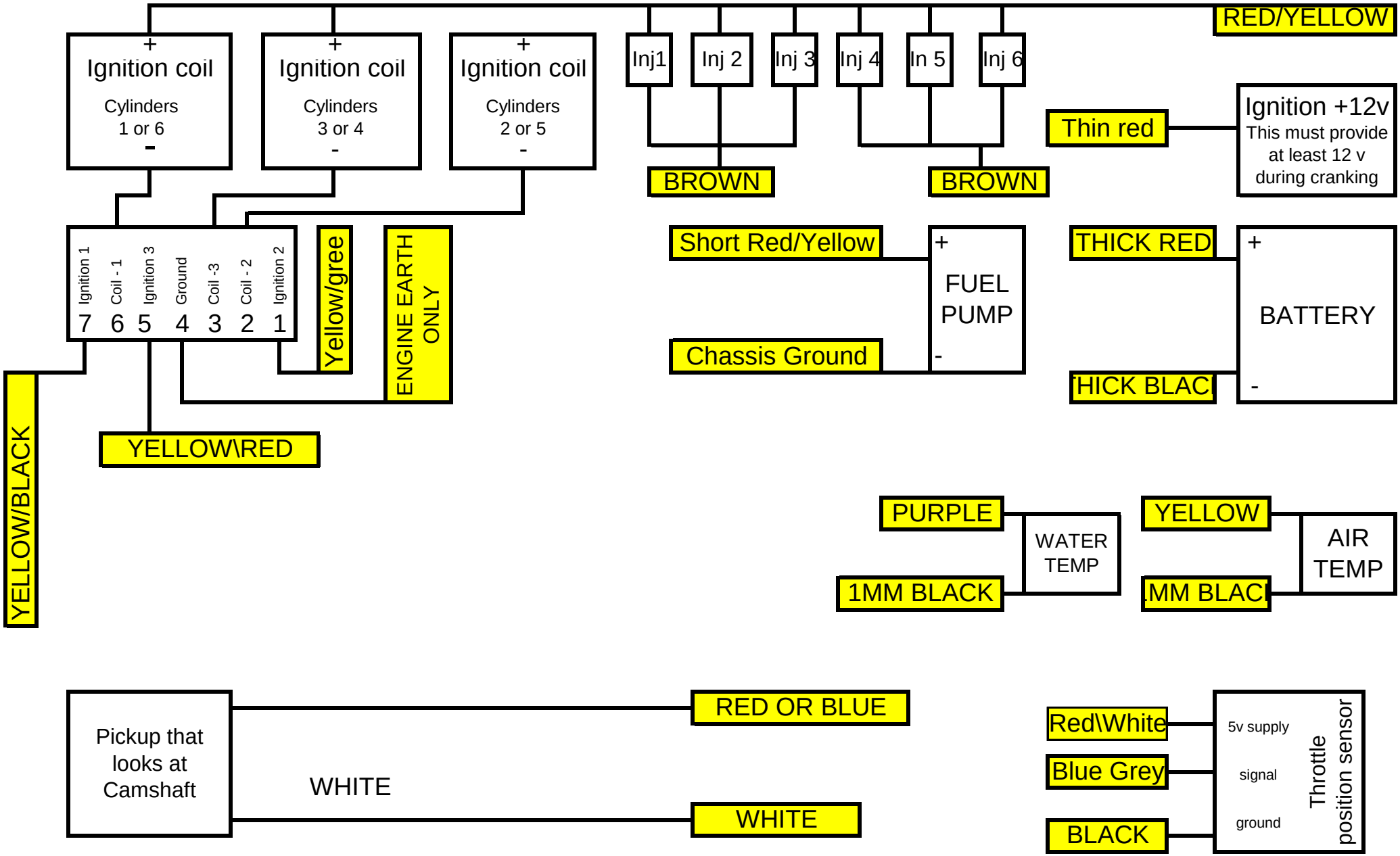
using a Wasted Spark ECU



Module 1

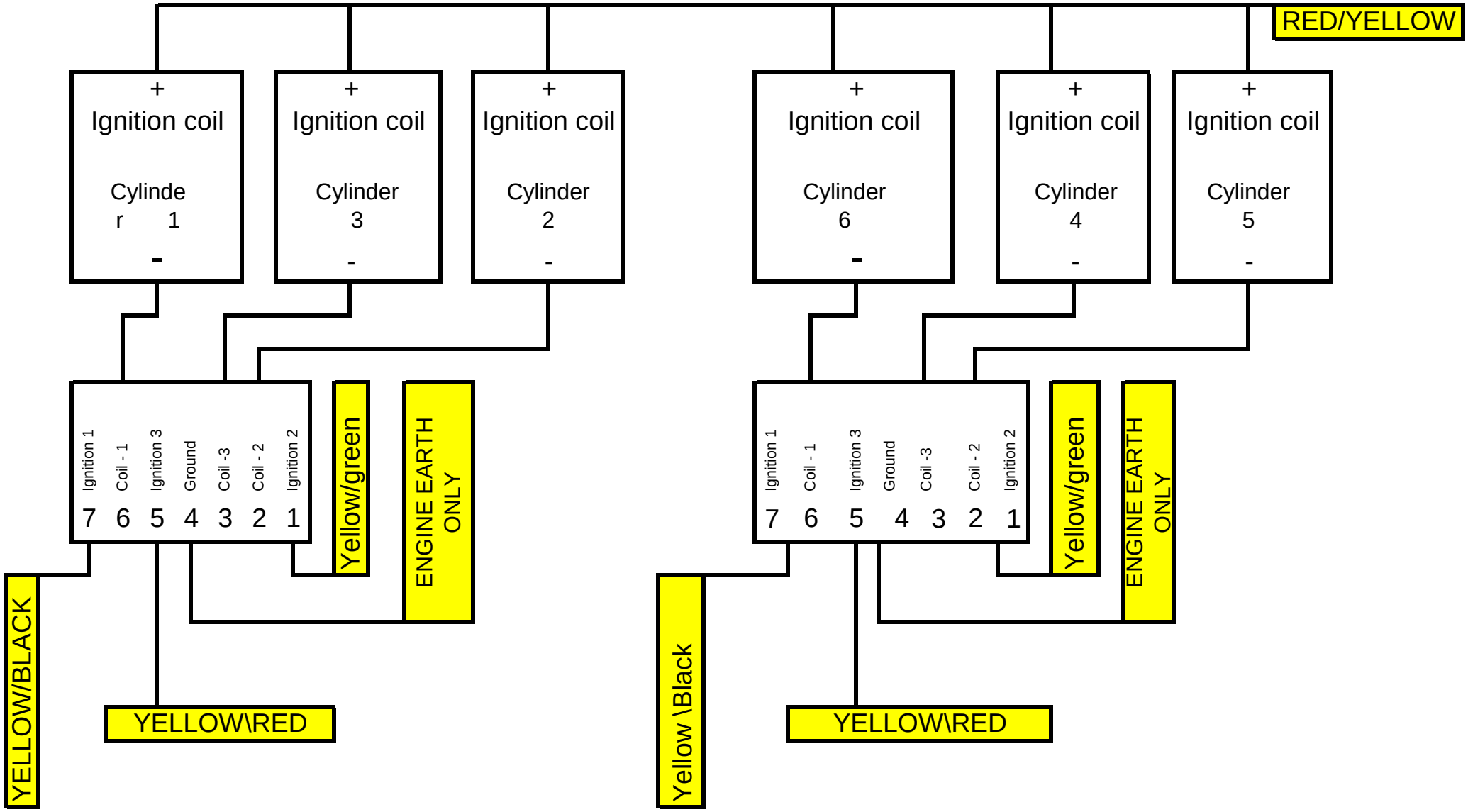
Module 2

TOYOTA 1J and 2J



TOYOTA 36-2

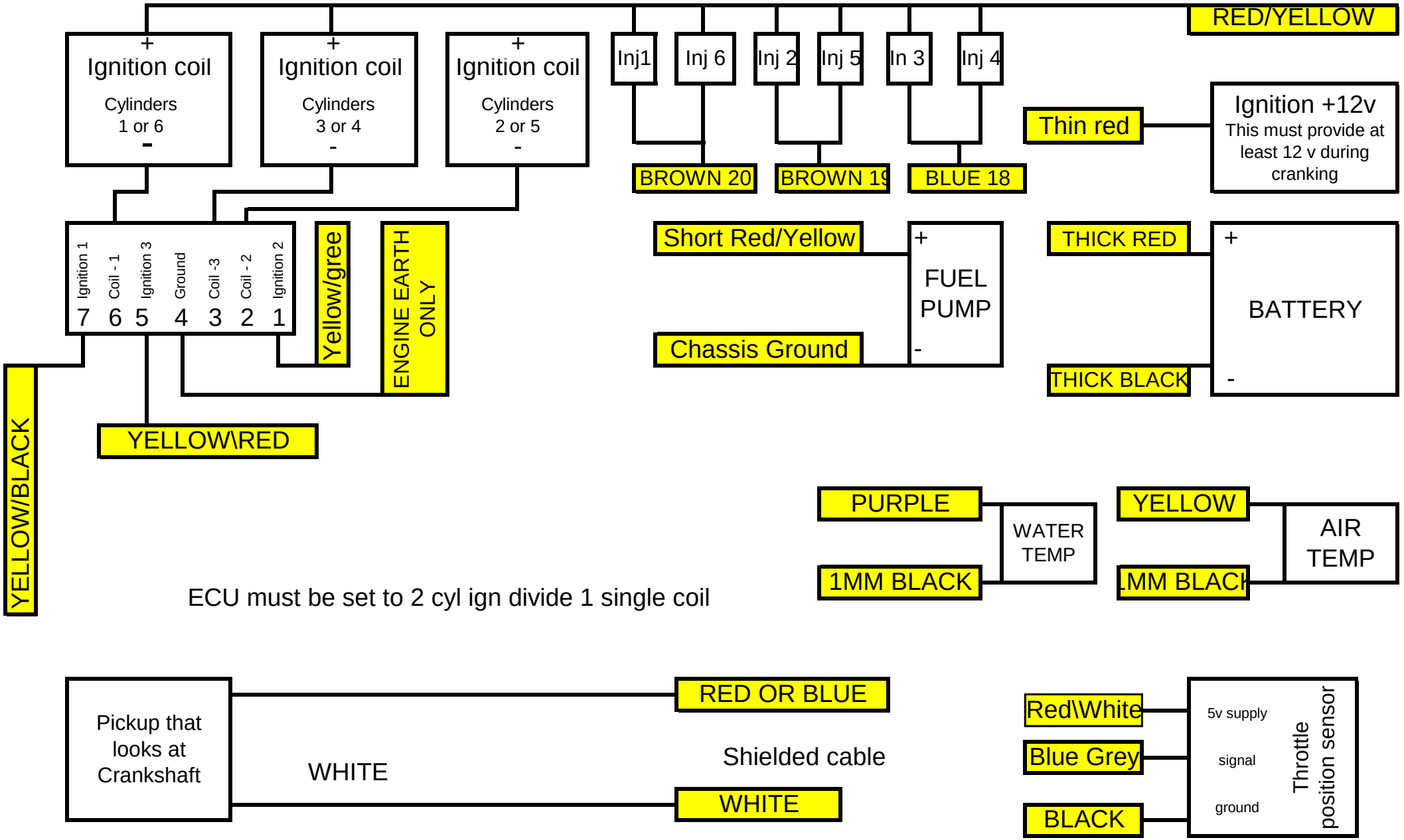
On engines with 3 coils you will use 1 module.
On engines with 6 coils you will use 2 modules.



Module 1

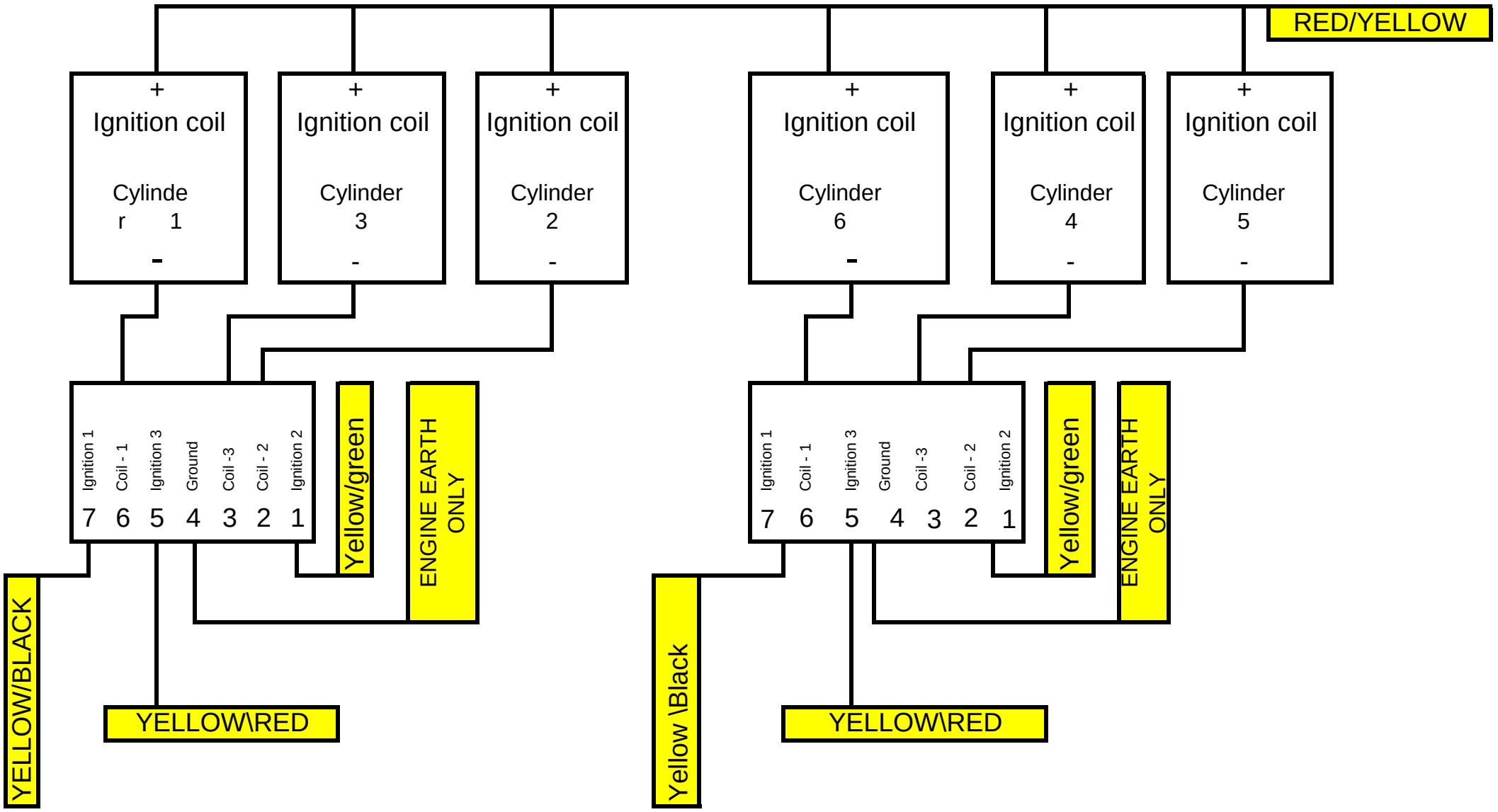
Module 2

TOYOTA 1J and 2



TOYOTA 36-2 3X

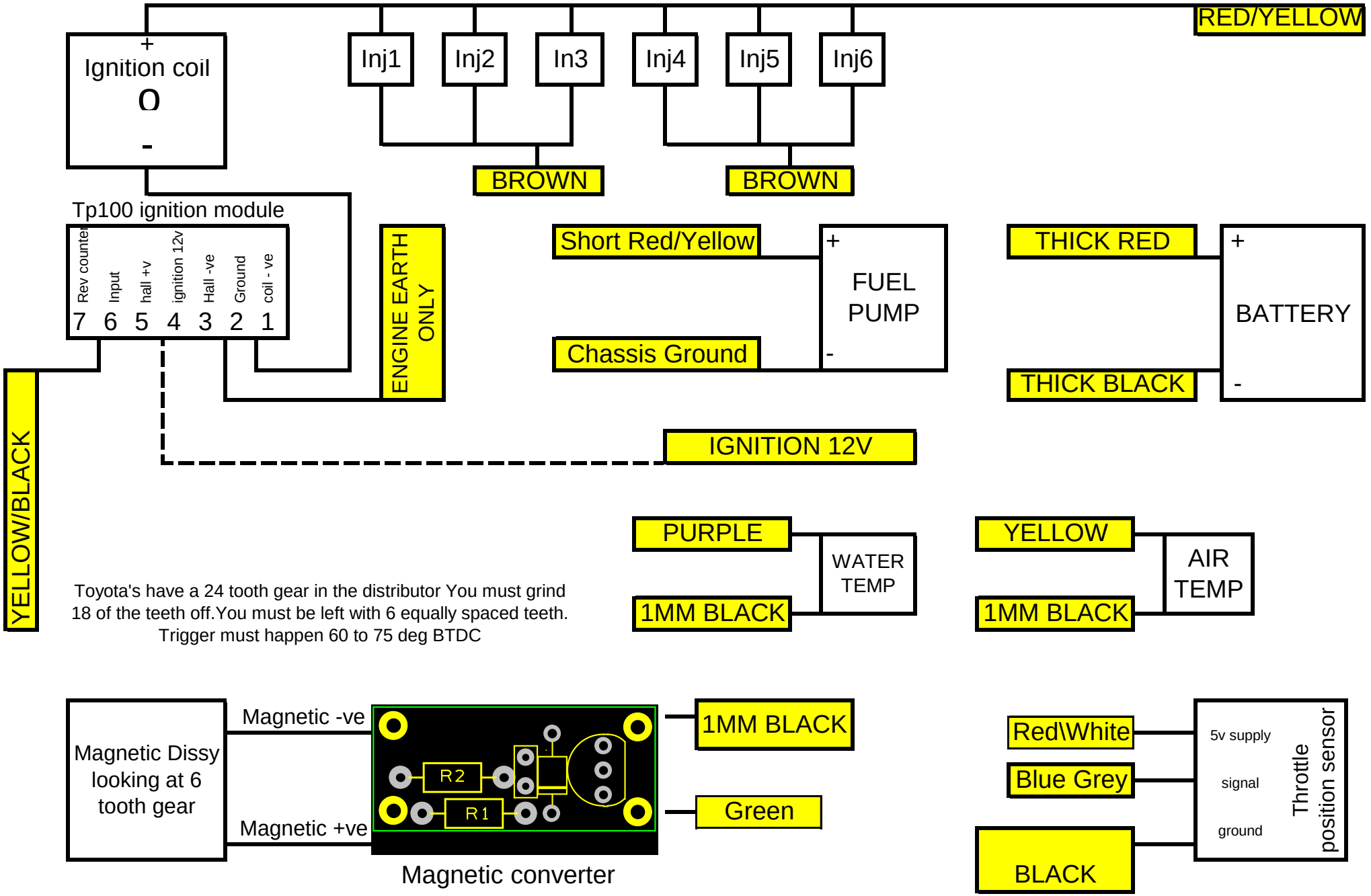
Only one module is shown you will need 2



Module 1

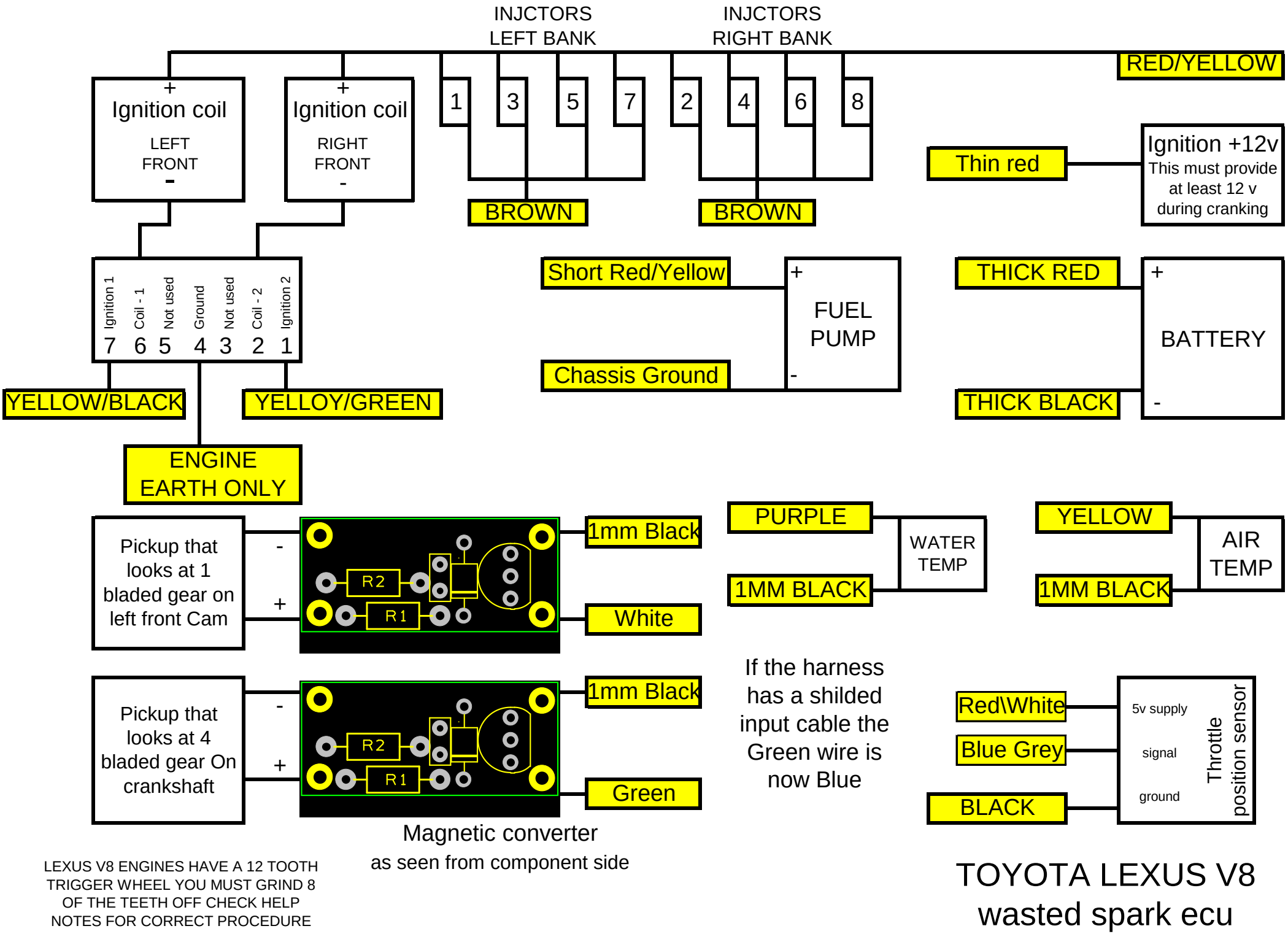
Module 2

TOYOTA 1J and 2J 3X



If the harness has a shilded input cable the Green wire is now Blue

TOYOTA 7M with Dissy

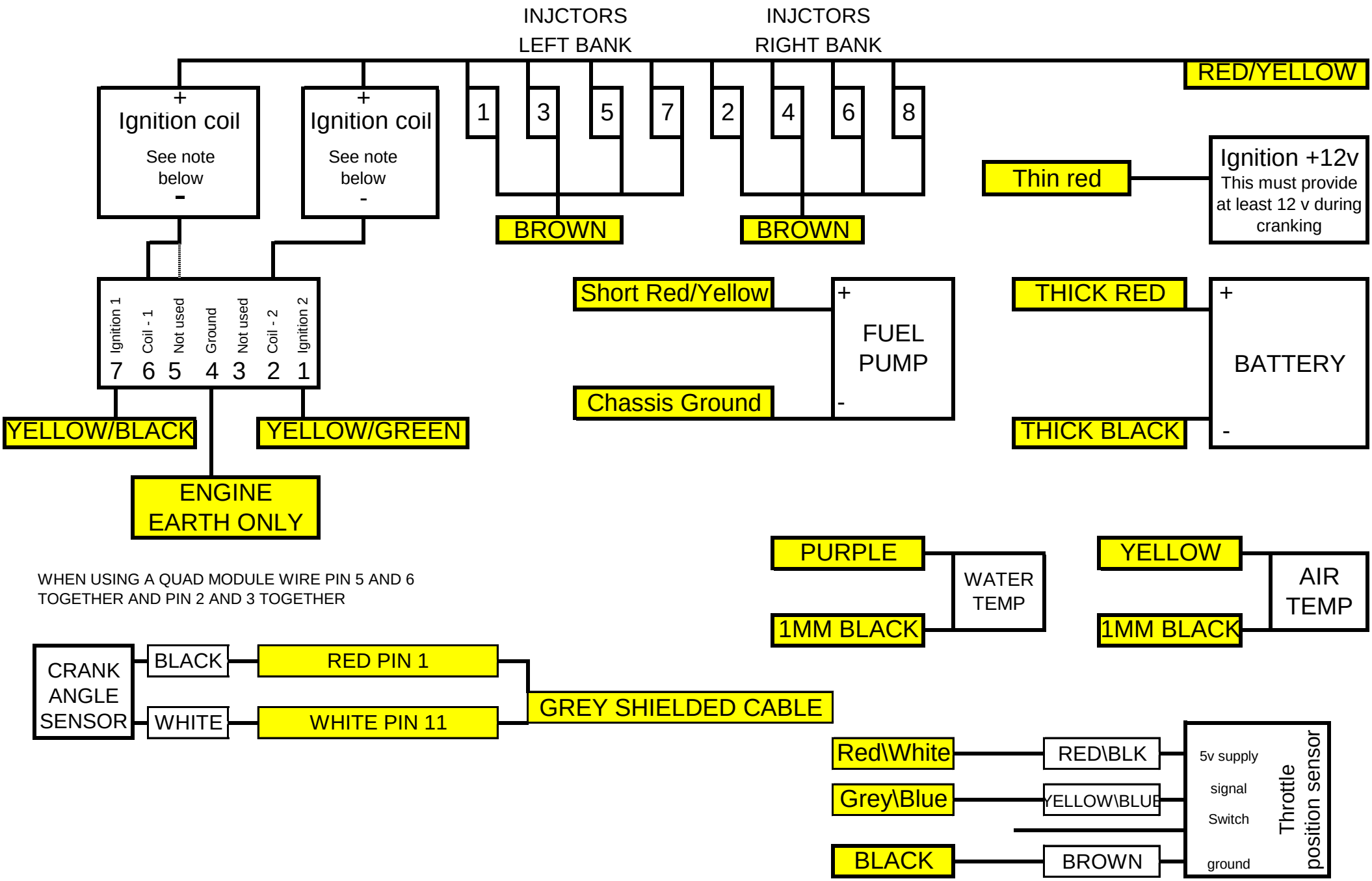


Magnetic converter

as seen from component side

LEXUS V8 ENGINES HAVE A 12 TOOTH TRIGGER WHEEL YOU MUST GRIND 8 OF THE TEETH OFF CHECK HELP NOTES FOR CORRECT PROCEDURE

TOYOTA LEXUS V8 wasted spark ecu



ENGINE MUST BE FITTED WITH THE
SUPPLIED 36-1 TOOTH WHEEL

Tps must only be connected if
you are using a gbox ecu

TOYOTA 36-1 LEXUS V8

Old 36-1 wheel

New 36-1 wheel

Trigger input rising

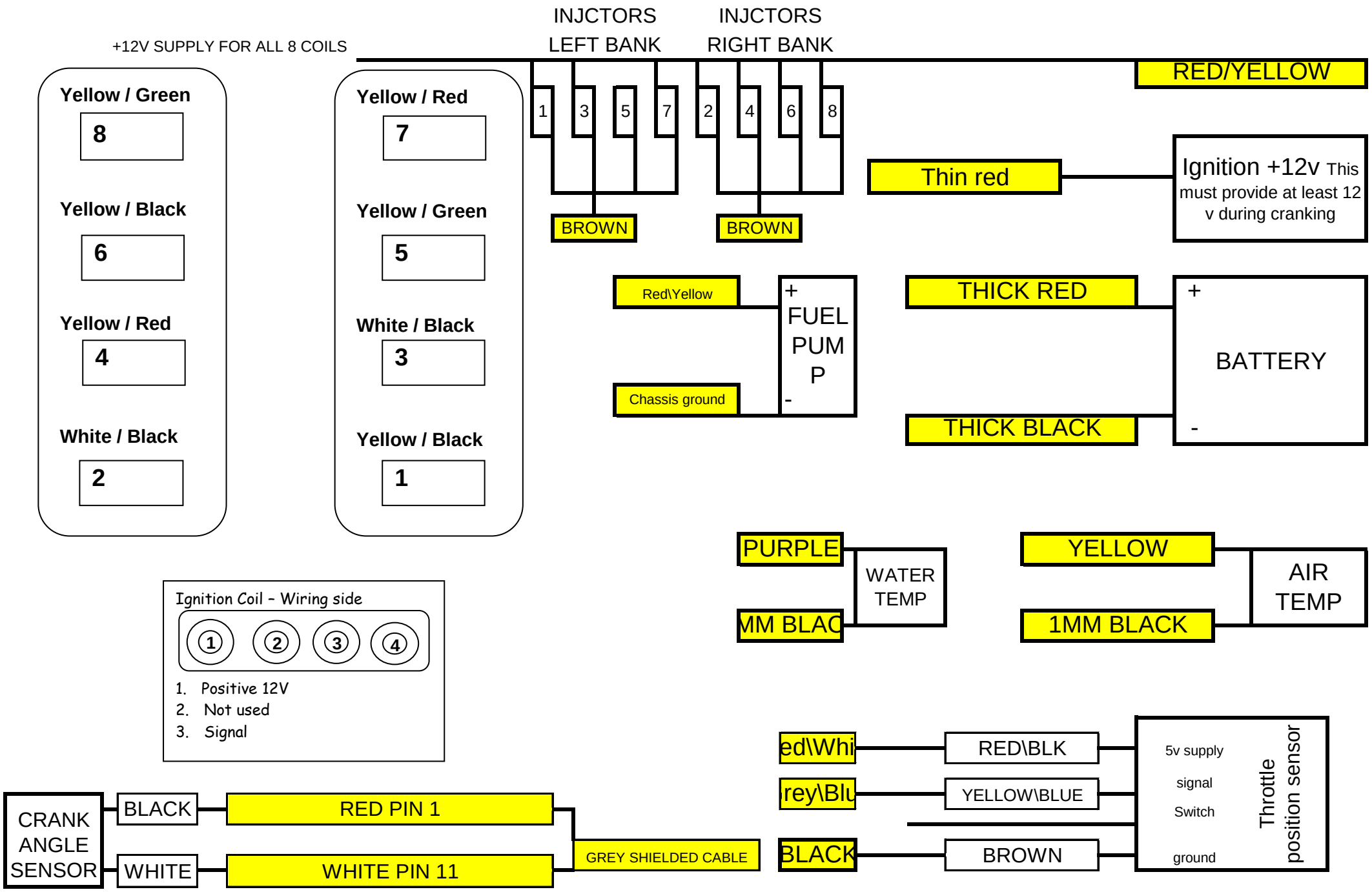
Trigger angle +-55

Yellow\Black to top coil

Trigger input default/falling

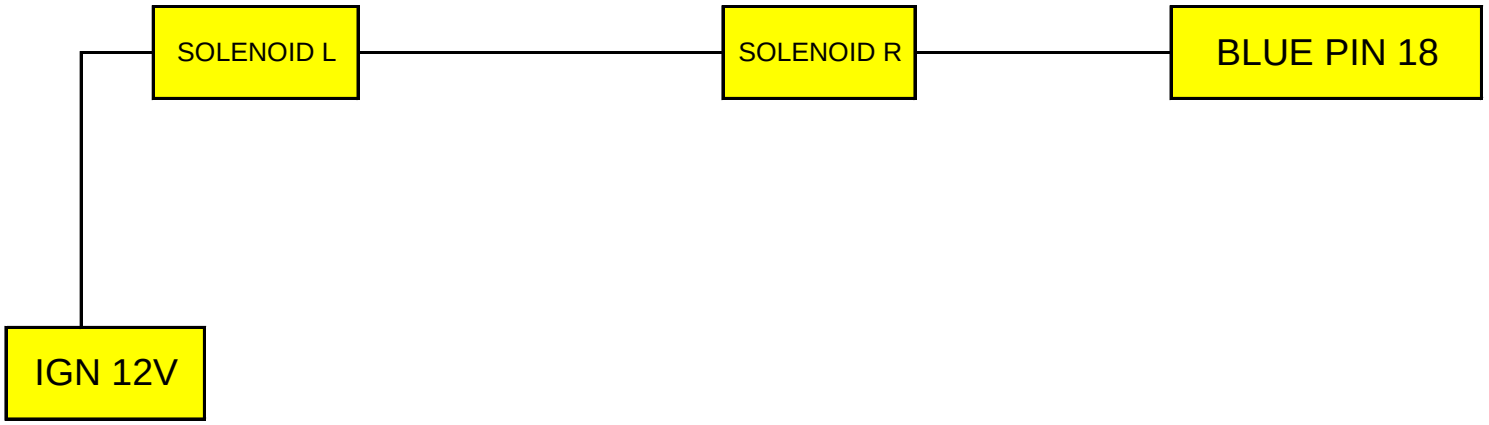
Trigger angle +-60

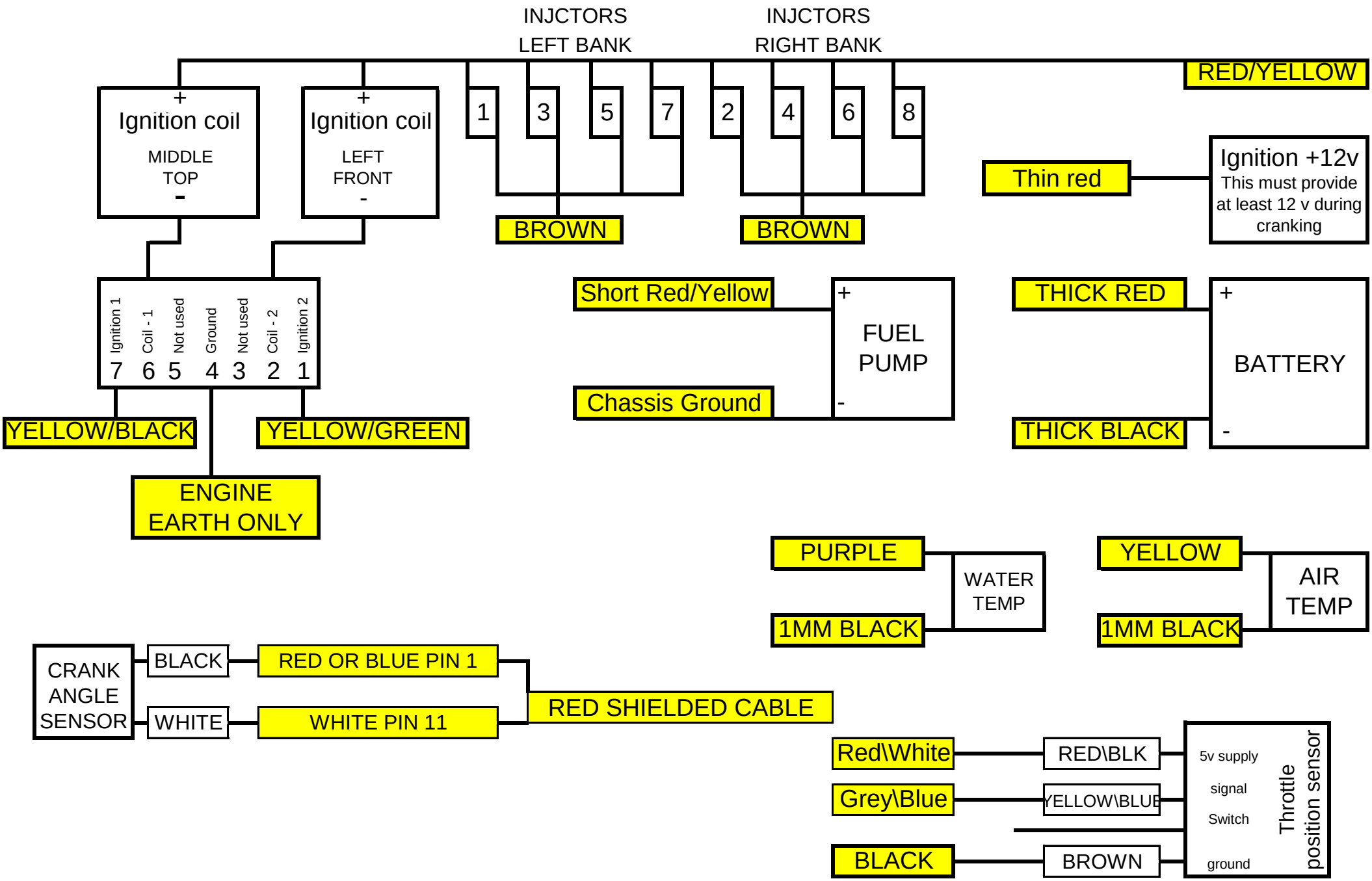
Yellow\Black toleft side coil



TOYOTA 36-1 LEXUS V8

LEXUS VVTI ENGINES





ENGINE MUST BE FITTED WITH THE SUPPLIED 36-1 TOOTH WHEEL

Tps must only be connected if you are using a gbox ecu

TOYOTA 36-1 LEXUS V8

36-1 or 60-2 V8, 2X or 3X ecu's

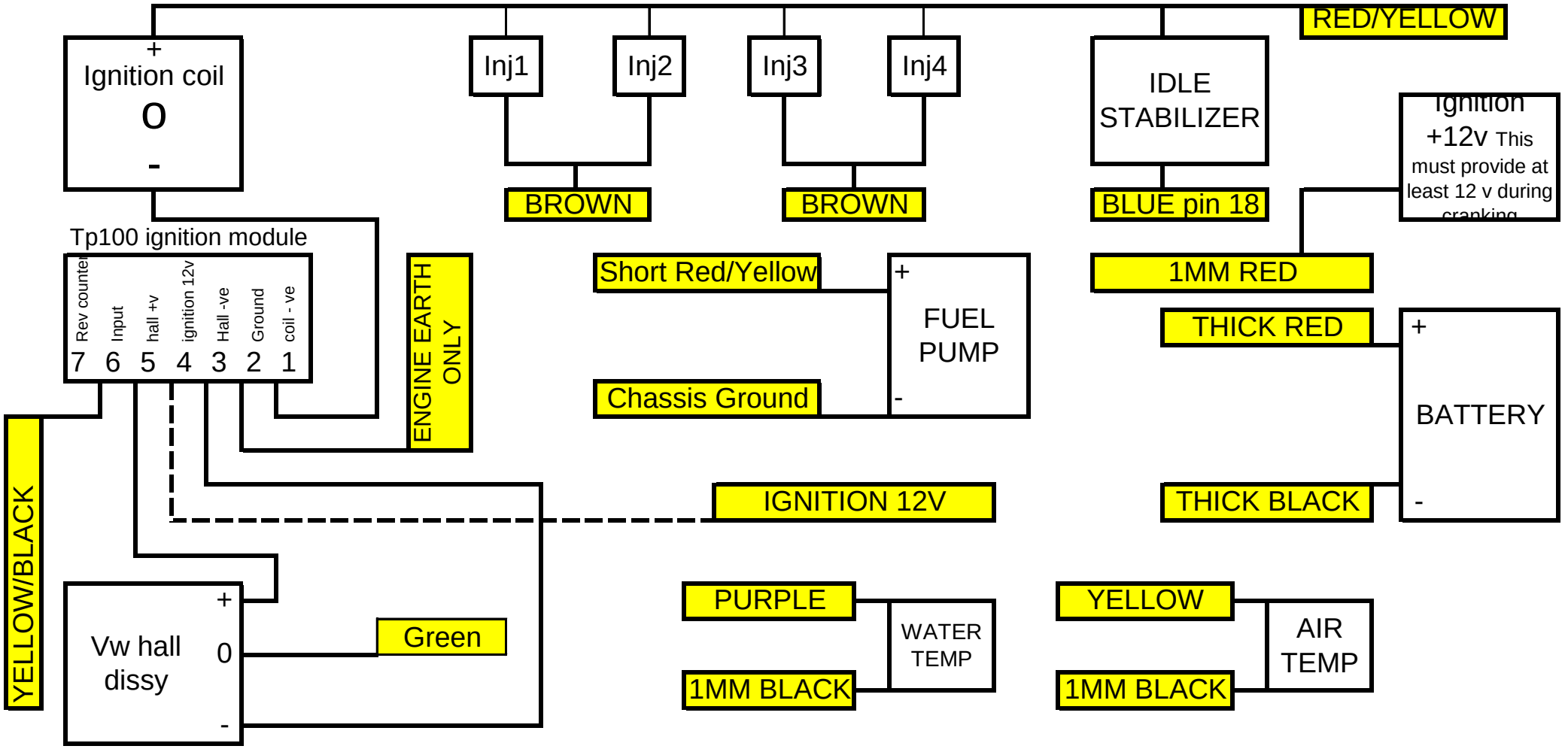
36-1 or 60-2 v8 ecu's 8 cylinder
cylinders must be set to 4 cylinder ignition divide 2
Setting the ecu to wasted spark there will be 4 ignition outputs active White\Black is no 4. There is no GPO
Setting the ecu to single coil with dissy will make 2 ignition outputs active. Yellow\Red is now ignition 2 not Yellow\Gr

36-1 or 60-2 2X ecu's 4 cylinder
Cylinders must be set to 2 cylinder ignition divide 1
The ecu must be set to single coil with dissy.This will make 2 ignition outputs active.
Pin 20 to cylinder 1 and 4
pin 19 to cylinder 2 and 3

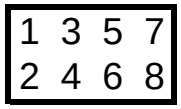
36-1 or 60-2 3X ecu's 6 cylinder
Cylinders must be set to 2 cylinder ignition divide1
The ecu must be set to single coil with dissy.This will make 3 ignition outputs active.
The idle stabiliser wire Blue is used as a 3rd injector output.
Pin 20 to cyl 1 and 6
Pin 19 to cyl 2 and 5
Pin 18 to cyl 3 and 4

36-1 or 60-2 2X ecu's 4 cylinder
Cylinders must be set to 2 cylinder ignition divide 1
The ecu must be set to single coil with dissy.This will make 2 ignition outputs active.
Pin 20 to cylinder 1 and 4
pin 19 to cylinder 2 and 3

Ign 1 will fire cylinder 2 and 3
Ign 2 will fire cylinder 1 and 4



MP9



1 Idle stabilizer +12v

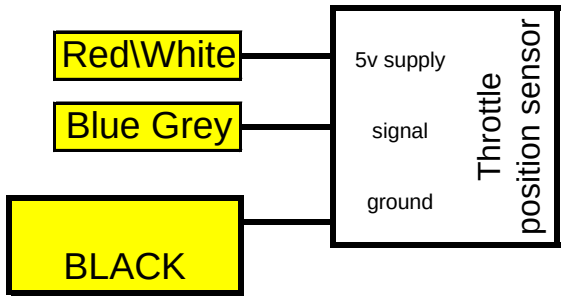
2 Idle stabilizer -ve

4 TPS Ground

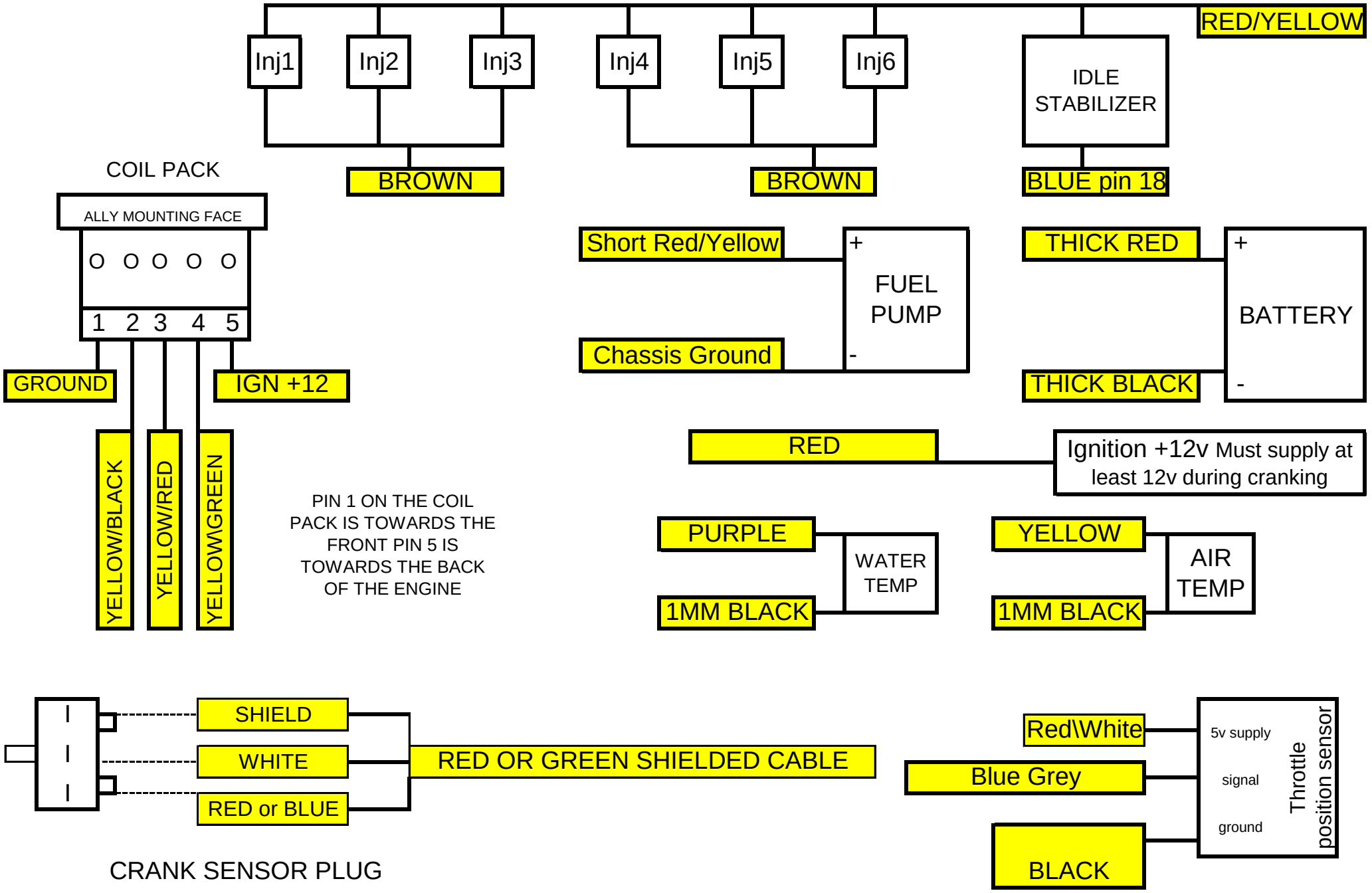
5 TPS Signal

7 TPS Power +5v

If the harness has a shilded input cable the Green wire is now Blue

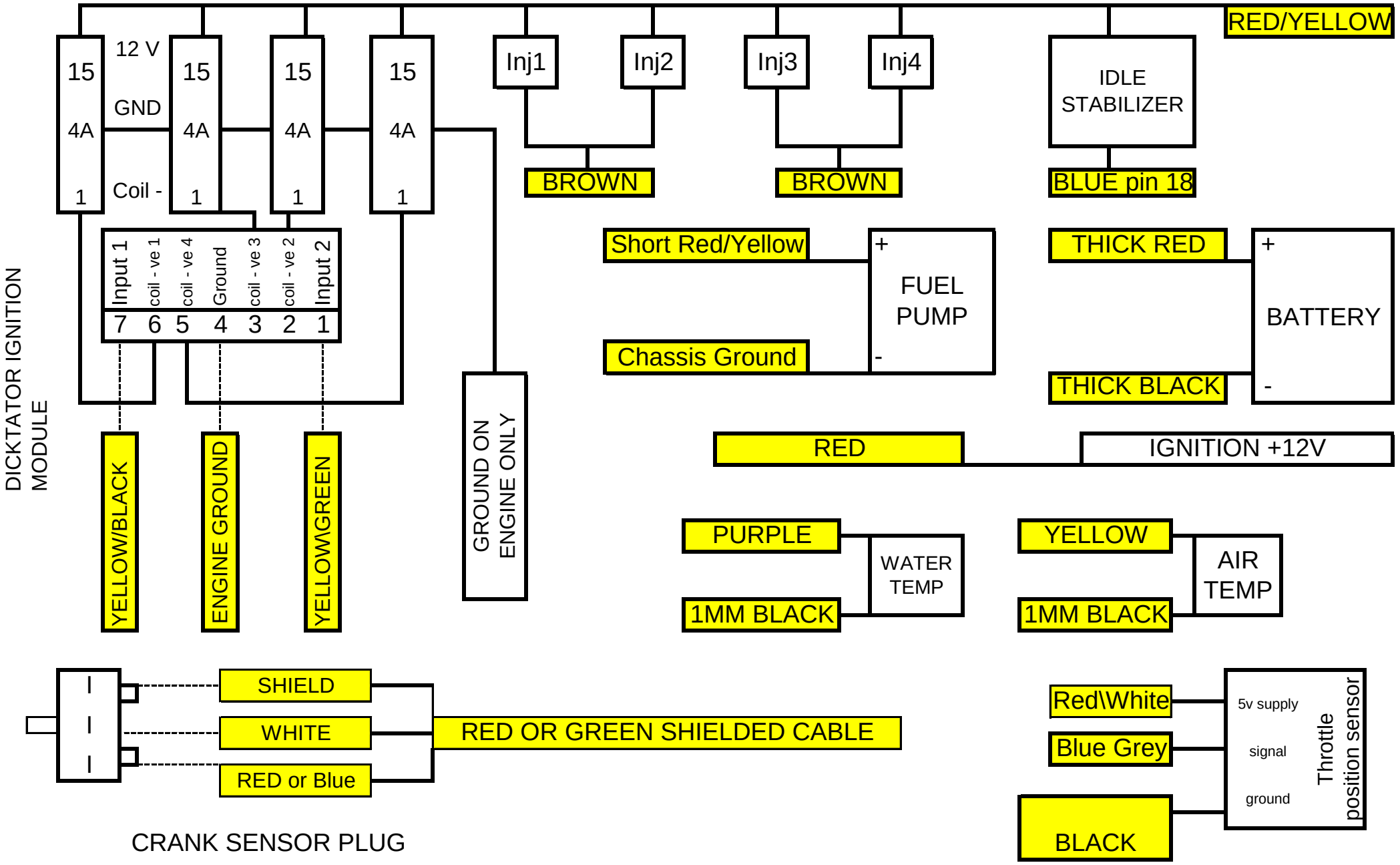


VW MP9



If the harness has a shilded input cable the Green wire is now Blue

VW VR6



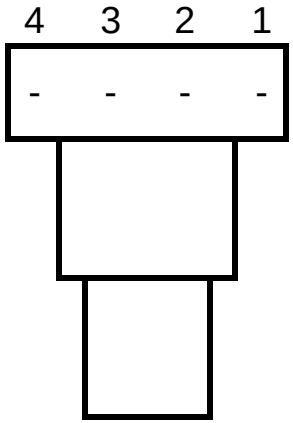
COIL CONNECTION 15 AND 4A WILL NORMALLY BE JOINED TOGETHER IN THE FACTORY HARNESS

VW 20 V ENGINE

THERE ARE 3 DIFFERENT TYPES OF 20 VALVE COIL SETUPS

ABOVE IS ENGINE WITH 3 PIN COIL ON PLUG UNITS

ON 4 PIN COIL ON PLUG ENGINES THE COIL HAS A BUILT IN MODULE

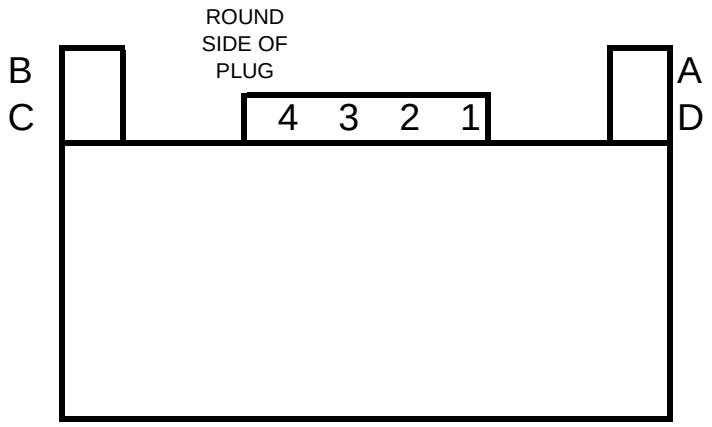


LOOKING IN TO THE COIL PLUG

1 GROUND
2 INPUT
3 GROUND
4 12V SUPPLY

The plug is also marked 1 to 4

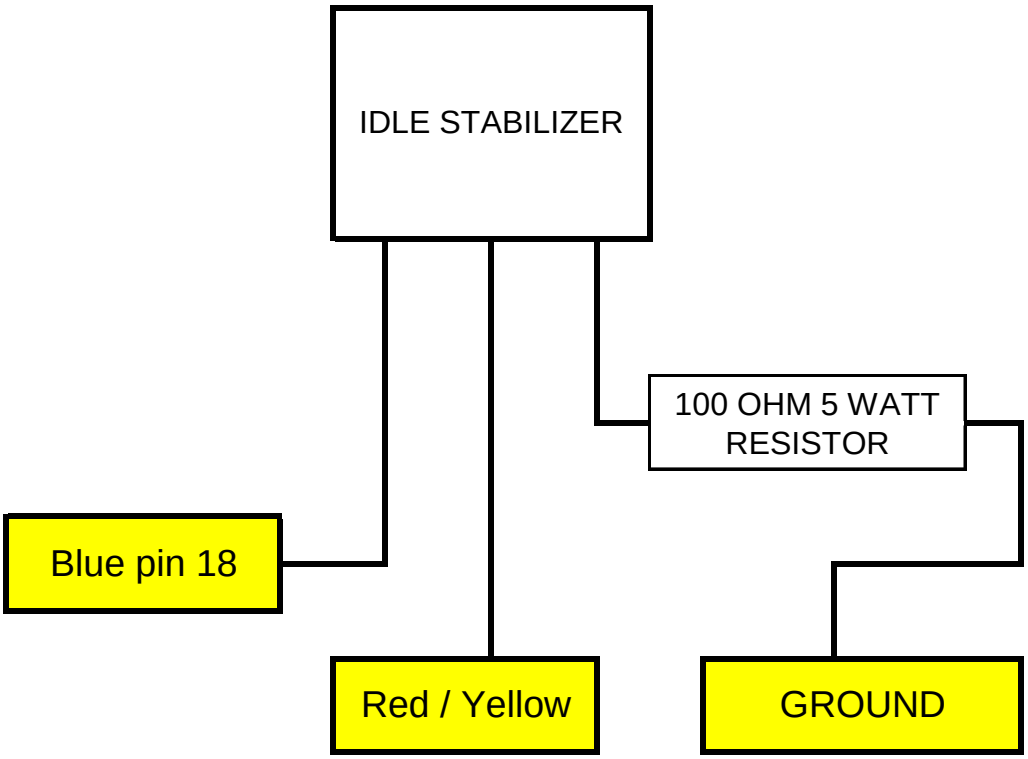
VW BEETLE COIL PACK



1	ORANGE RED	A AND D INPUT
2	LIGHT BLUE	12 V SUPPLY
3	GREEN BLACK	B AND C INPUT
4	ORANGE BLACK	ENGINE GROUND

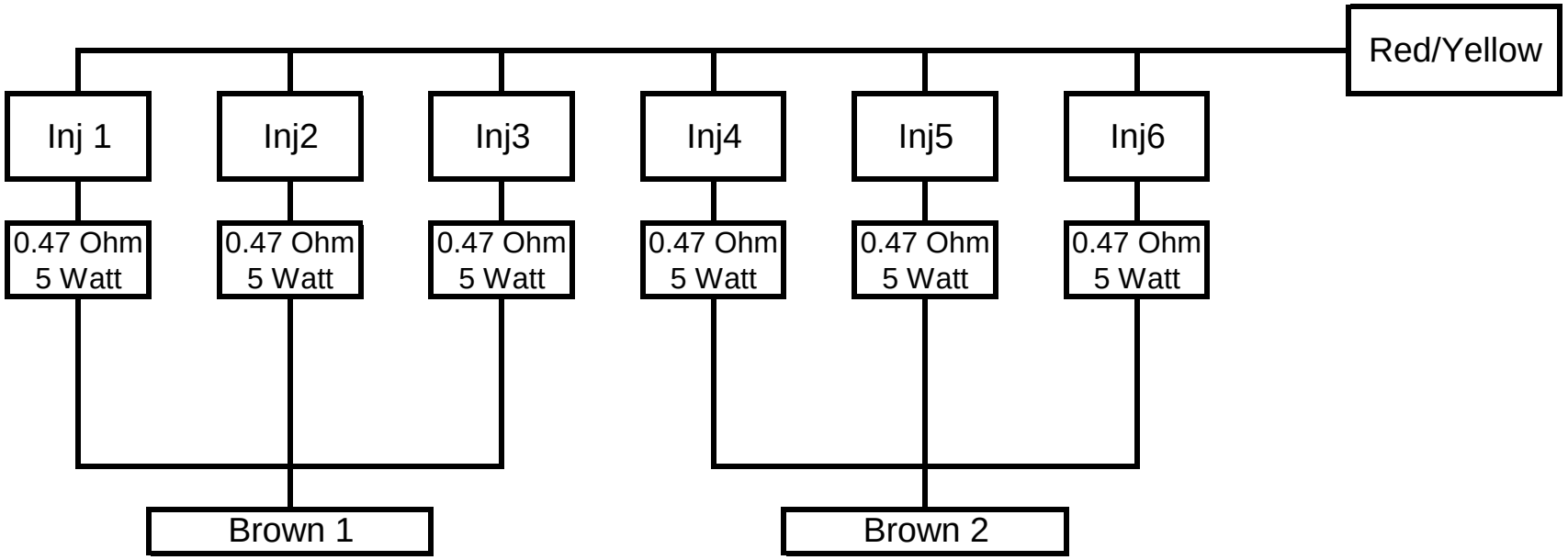
COLOURS MAY BE WRONG TAKEN FROM SUSPECT PLUG

DICKTATOR 3 WIRE IDLE STABILIZER



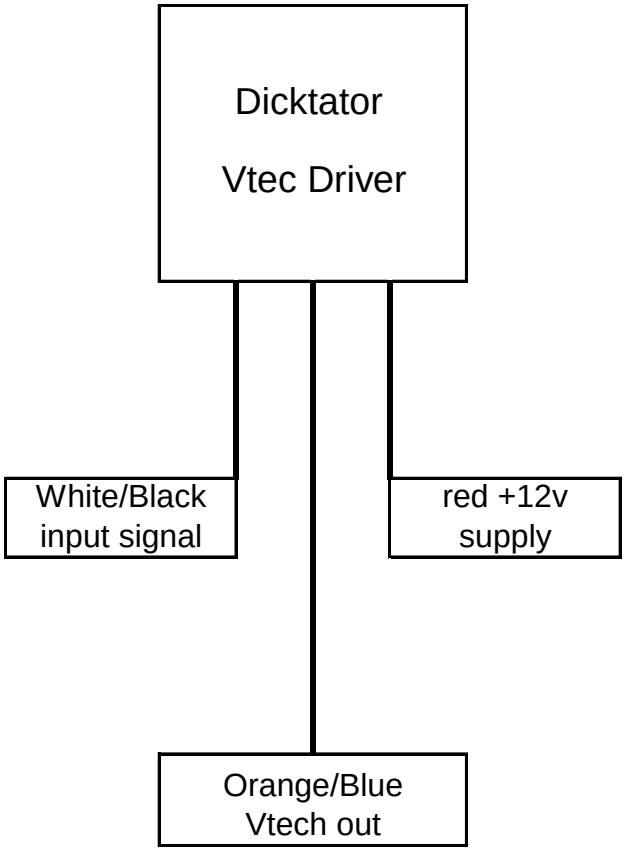
Connect Red\Yellow normally to the center connection.
Start engine
Connect on wire then the other to ground temporarily
The wire that makes the idle go up is connected to Blue idle control wire.
The other wire is connected to ground through a 100 ohm 5 watt resistor

Low Impedance Injectors



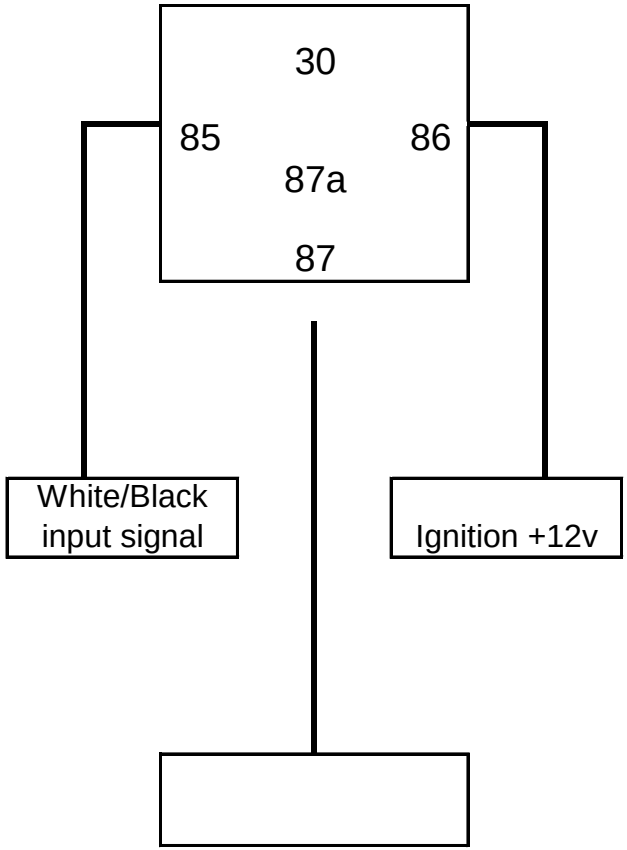
Low Impedance	2 to 3 ohm's
High Impedance	10 to 16 ohm's

This inverts signal and
supply's 12 to the solenoid



When the White/Black switches to
ground,The Orange/Blue supplies +12v for

Using a relay to switch
Posative or negative

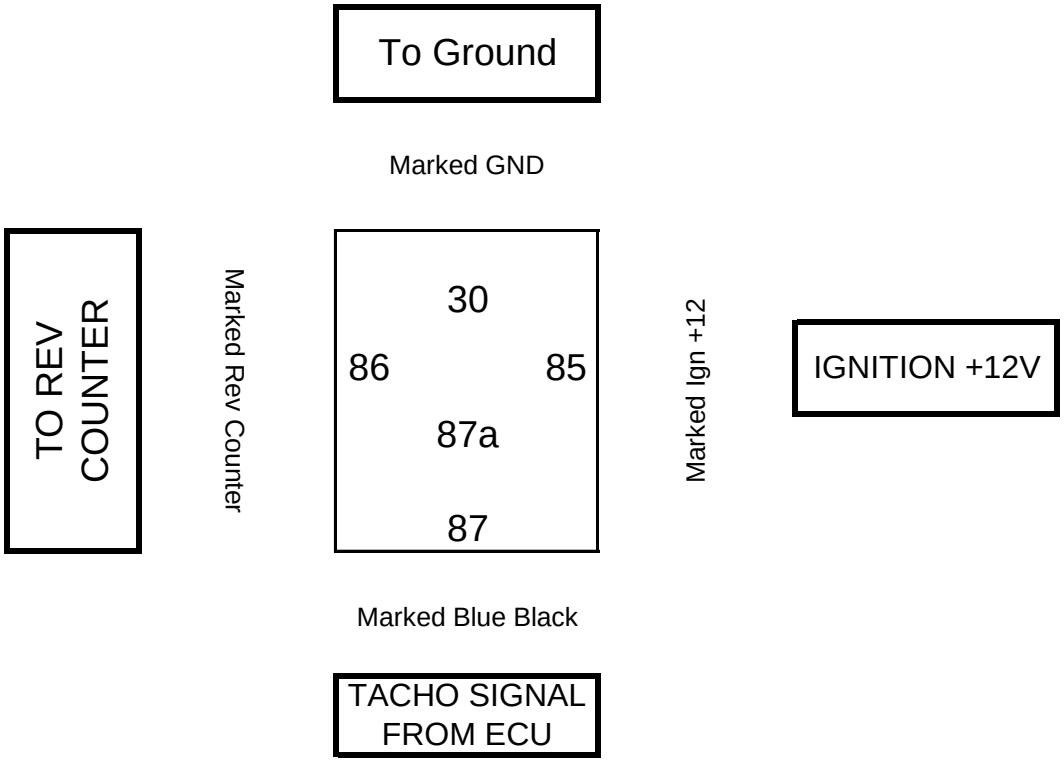


Using 30 and 87a will invert signal

Using 30 and 87 will not invert signal

V TEC DRIVER

Dicktator Rev Counter Booster/Adapter



AS SEEN FROM ABOVE

TERMINAL 85 AND 86 MAY BE REVERSED ON SOME RELAYS USE THE MARKING ON THE COVER

There are 2 types of rev counter

1) Rev counter connects to Ecu with square wave trigger

Dicktator will drive these rev counters directly.

2) Rev counter connects to coil negative

Dicktator will need a tacho adapter to make this type of rev counter work

This is normally needed when you have replaced the stock engine with a wasted spark engine

DICKTATOR ENGINE MANAGEMENT

Laptops with a serial port (9 pin connector) will use a std straight 9 pin male to 9 pin female cable

Or if you want to make one up

9 Pin male		9 Pin female
Pin 2	connects to	Pin 2
Pin 3	connects to	Pin 3
Pin 5	connects to	Pin 5

Later model laptops that do not have serial (9 pin connector) will have to use a USB to Serial adapter available from most computer shops

The adapter will come with software that will have to be installed first
This creates a virtual Serial port.

You can use Windows hyper terminal to test your cable and computer.
Go to Programs ,Accessories , Communications , Hyper terminal
Make a new connection called Cable test ? Click ok
Select your com port click ok
Set settings to 9600 8 None 1 None Click ok
Connect pins 2 and 3 on your serial cable.
If the cable is good anything you type on the keyboard will appear on the screen.
If nothing happens the com port number is wrong or other setting on the computer are incorrect.

A – Engine Ground
B – ECU Ground
C – Trigger
D - +12V

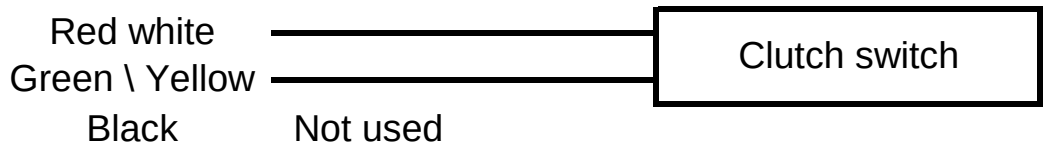
LAUNCH CONTROL

Launch control is enabled by selecting launch control on main setup in pot \aux input

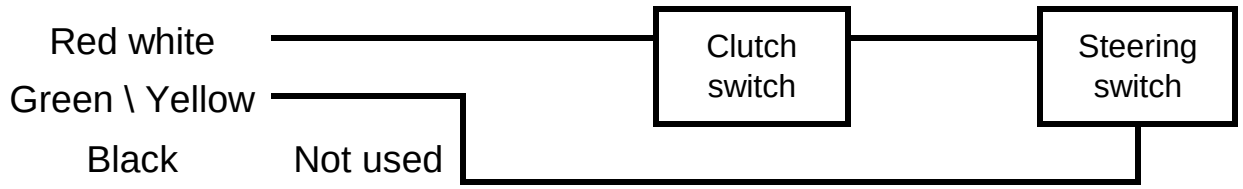
Launch limits are set on output page

Launch rpm	50% of main rev limit to 20 000 rpm
Timing retard	0 to 45 degrees
Fuel enrichment	0 to 30 percent

Arm switch must be connected to pot plug



Two switches can be used in series to have a clutch switch and a dash or steering arm switch



Switches must be normally open close to activate

Launch control operation can be verified on data page

Version 16 launch control will only be active on or after the 5th rpm load site. 750 rpm spacing will be 2500 rpm