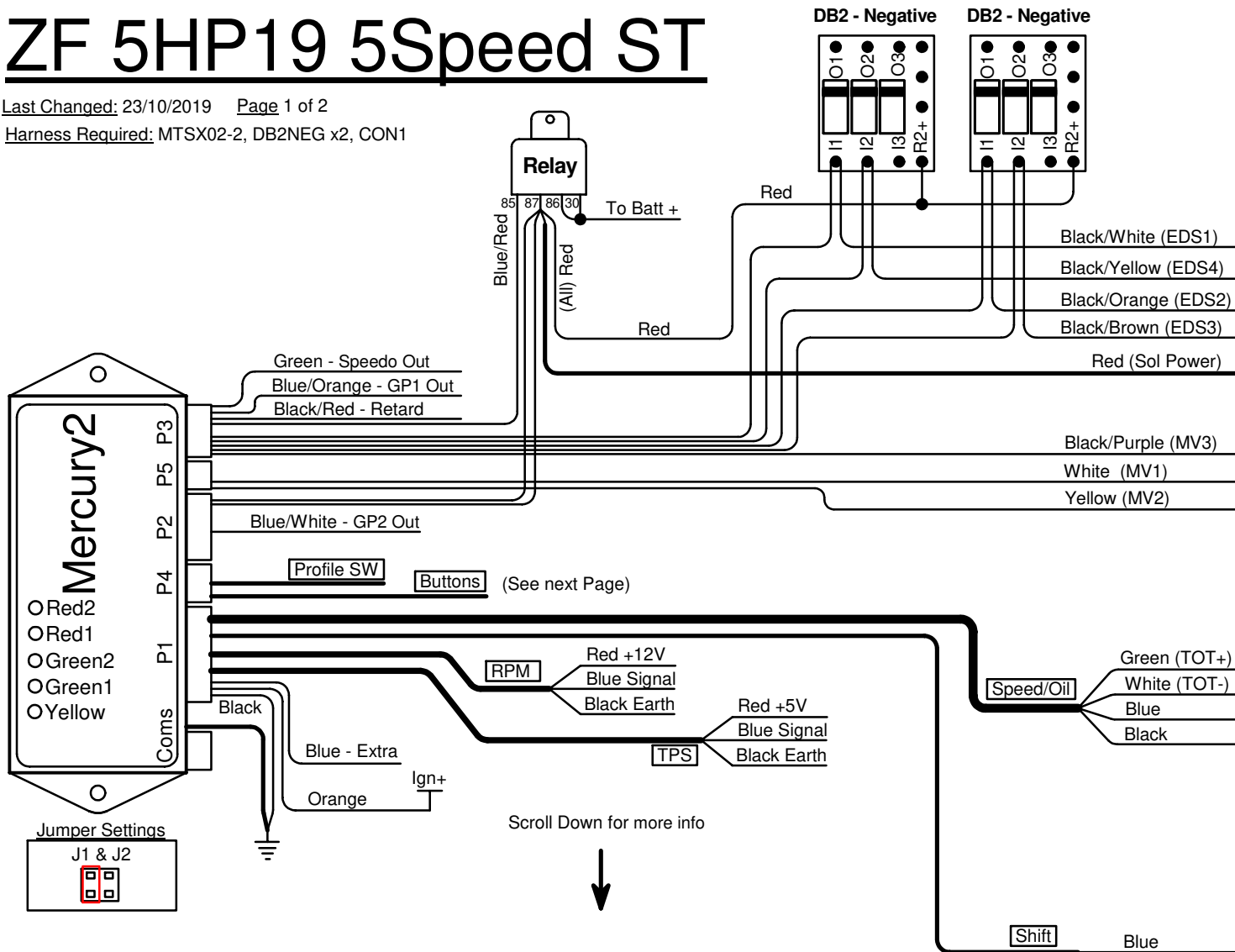


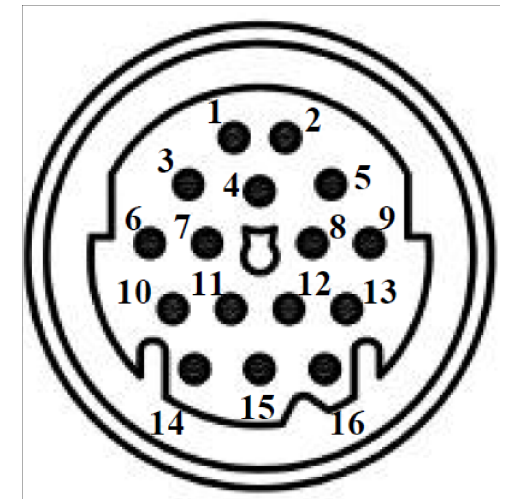
ZF 5HP19 5Speed ST

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Harness Required: MTSX02-2, DB2NEG x2, CON1



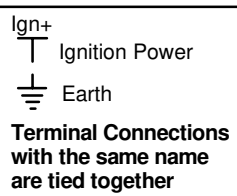
Transmission Solenoid Connector Harness Connector Pin View



Pin	Harness	Color	Connector	Resistance	
				Cold	Hot
1	Speed	Blue	VSS+	P1-11	292 358 Ω
2	Gearbox	Black/White	EDS1	P3-3	5.2 6.8 Ω
3	Gearbox	Black/Orange	EDS2	P3-2	6.2 7.8 Ω
4	Gearbox	Black/Purple	MV3	P3-1	30 34 Ω
7	Gearbox	Black/Brown	EDS3	P3-6	6.2 7.8 Ω
8	Gearbox	White	MV1	P5-1	30 34 Ω
9	Gearbox	Yellow	MV2	P5-3	30 34 Ω
10	Speed	Black	VSS-	Harness -	
11	Gearbox	Black/Yellow	EDS4	P3-7	6.2 7.8 Ω
12	12V	Red		Harness	
13	Oil Temp	Green	TOT+	P1-7	1000 Ω
14	Oil Temp	White	TOT-	Harness -	
16	12V	Red		Harness	

Transmission Selector Switch

Shifter Range switch info required ??

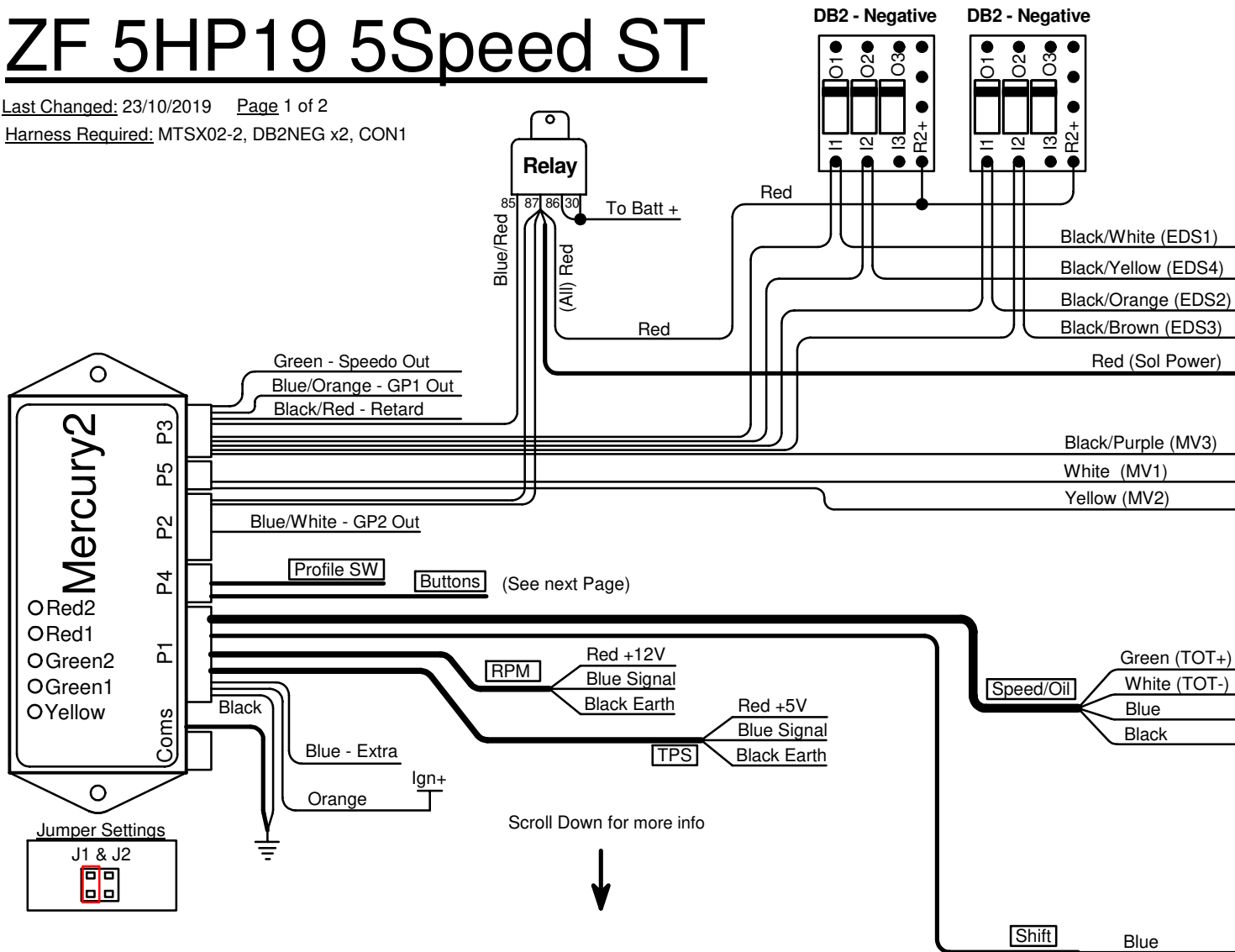


For Led's and Button's wiring go to Page 2

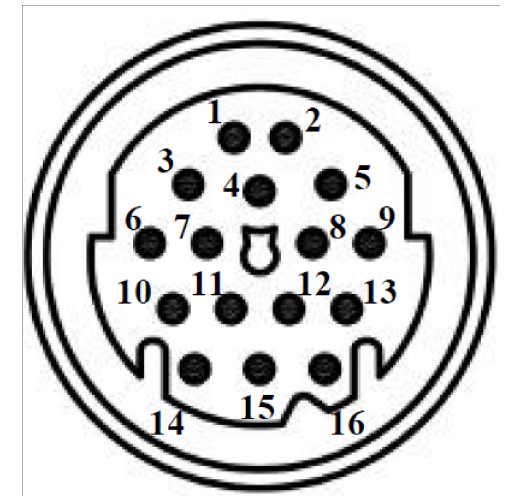
ZF 5HP19 5Speed ST

Last Changed: 23/10/2019 Page 1 of 2

Harness Required: MTSX02-2, DB2NEG x2, CON1



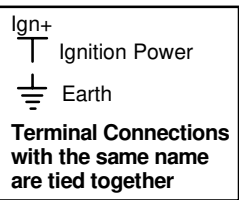
Transmission Solenoid Connector Harness Connector Pin View



Pin	Harness	Color	Connector	Resistance	
				Cold	Hot
1	Speed	Blue	VSS+	P1-11	292 358 Ω
2	Gearbox	Black/White	EDS1	P3-3	5.2 6.8 Ω
3	Gearbox	Black/Orange	EDS2	P3-2	6.2 7.8 Ω
4	Gearbox	Black/Purple	MV3	P3-1	30 34 Ω
7	Gearbox	Black/Brown	EDS3	P3-6	6.2 7.8 Ω
8	Gearbox	White	MV1	P5-1	30 34 Ω
9	Gearbox	Yellow	MV2	P5-3	30 34 Ω
10	Speed	Black	VSS-	Harness -	
11	Gearbox	Black/Yellow	EDS4	P3-7	6.2 7.8 Ω
12	12V	Red		Harness	
13	Oil Temp	Green	TOT+	P1-7	1000 Ω
14	Oil Temp	White	TOT-	Harness -	
16	12V	Red		Harness	

Transmission Selector Switch

Shifter Range switch info required ??

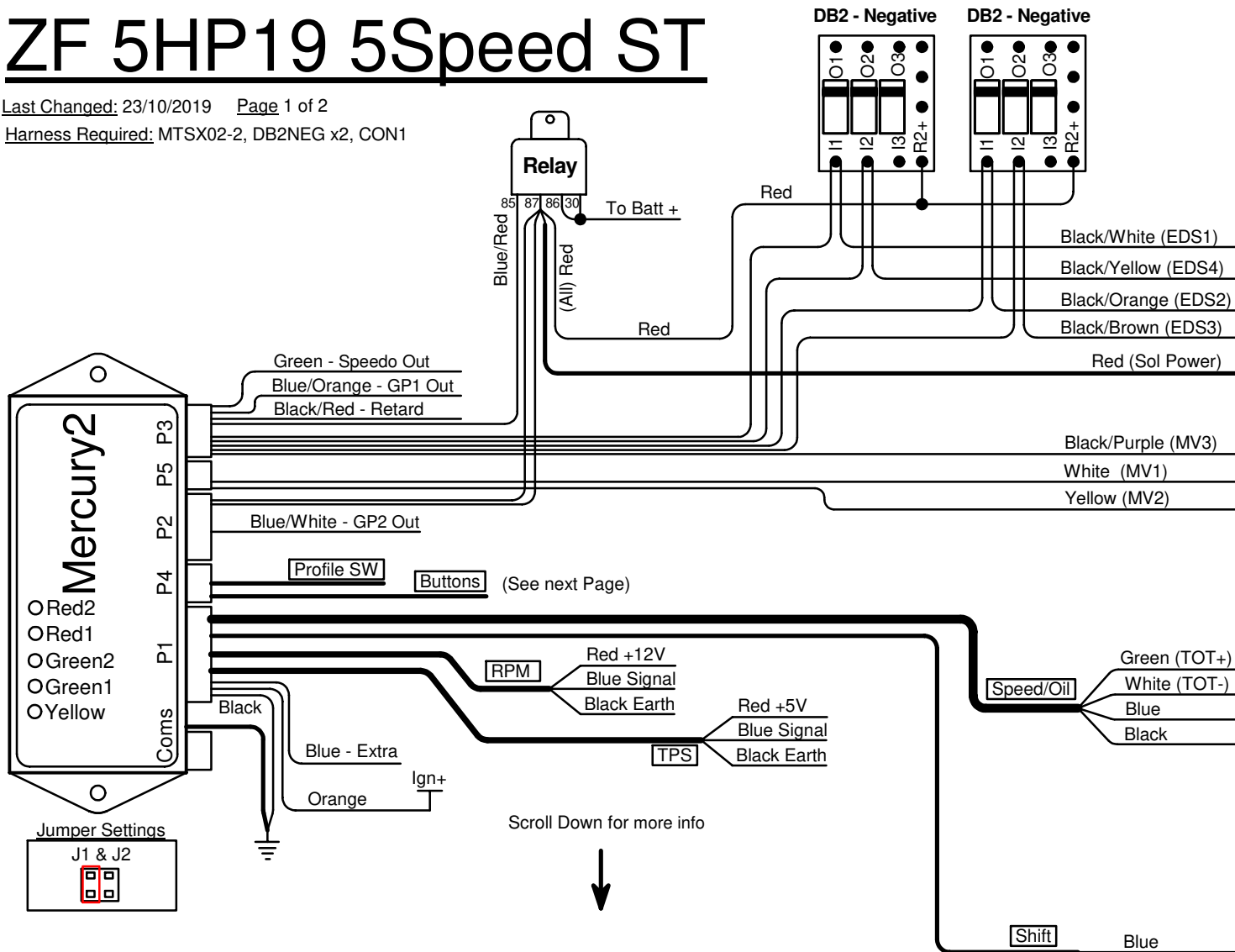


For Led's and Button's wiring go to Page 2

ZF 5HP19 5Speed ST

Last Changed: 23/10/2019 Page 1 of 2

Harness Required: MTSX02-2, DB2NEG x2, CON1

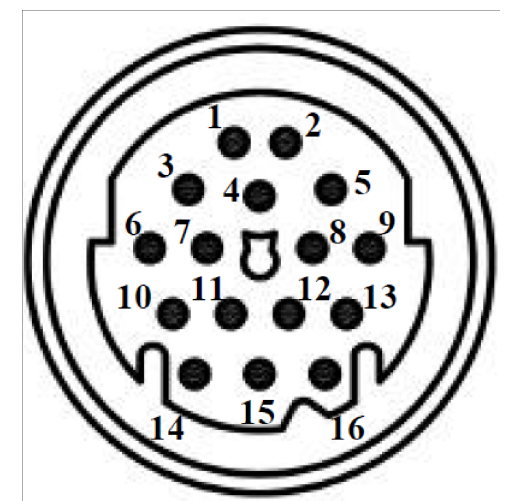


Scroll Down for more info



For Led's and Button's wiring go to Page 2

Transmission Solenoid Connector Harness Connector Pin View



Pin	Harness	Color	Connector	Resistance	
				Cold	Hot
1	Speed	Blue	VSS+	P1-11	292 358 Ω
2	Gearbox	Black/White	EDS1	P3-3	5.2 6.8 Ω
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4	Gearbox	Black/Purple	MV3	P3-1	30 34 Ω
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8	Gearbox	White	MV1	P5-1	30 34 Ω
9	Gearbox	Yellow	MV2	P5-3	30 34 Ω
10	Speed	Black	VSS-	Harness -	
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12	12V	Red		Harness	
13	Oil Temp	Green	TOT+	P1-7	1000 Ω
14	Oil Temp	White	TOT-	Harness -	
16	12V	Red		Harness	

Transmission Selector Switch

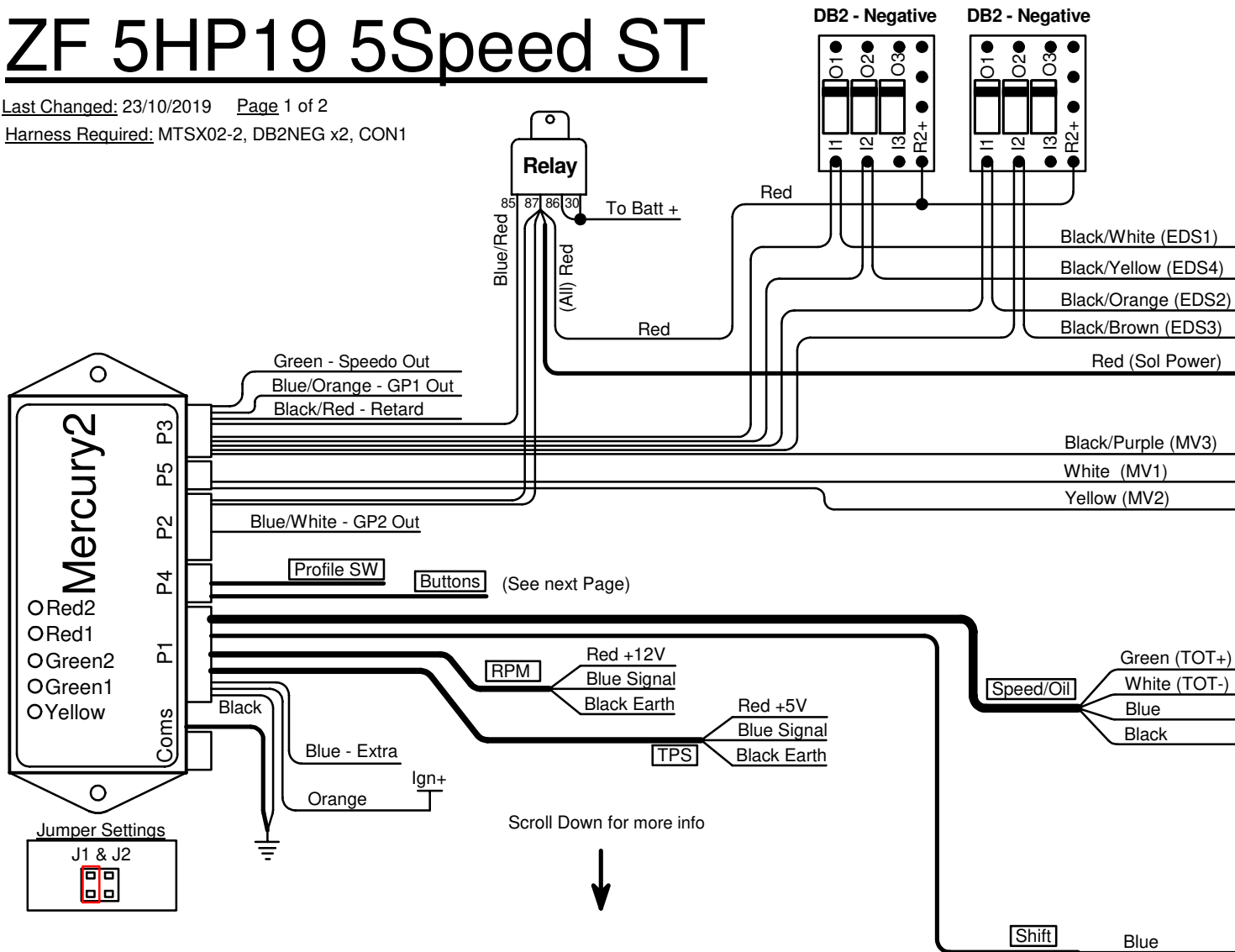
Shifter Range switch info required ??

Ign+
 Ignition Power
 Earth
Terminal Connections with the same name are tied together

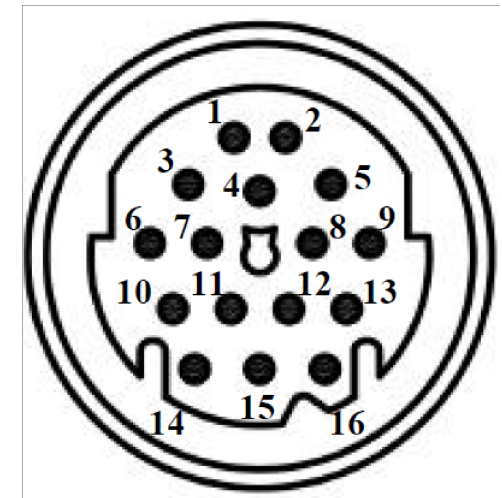
ZF 5HP19 5Speed ST

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Harness Required: MTSX02-2, DB2NEG x2, CON1



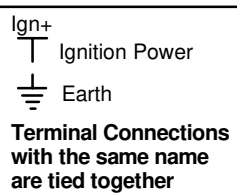
Transmission Solenoid Connector Harness Connector Pin View



Pin	Harness	Color	Connector	Resistance	
				Cold	Hot
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3	Gearbox	Black/Orange	EDS2	P3-2	6.2 7.8 Ω
4	Gearbox	Black/Purple	MV3	P3-1	30 34 Ω
7	Gearbox	Black/Brown	EDS3	P3-6	6.2 7.8 Ω
8	Gearbox	White	MV1	P5-1	30 34 Ω
9	Gearbox	Yellow	MV2	P5-3	30 34 Ω
10	Speed	Black	VSS-	Harness -	
11	Gearbox	Black/Yellow	EDS4	P3-7	6.2 7.8 Ω
12	12V	Red		Harness	
13	Oil Temp	Green	TOT+	P1-7	1000 Ω
14	Oil Temp	White	TOT-	Harness -	
16	12V	Red		Harness	

Transmission Selector Switch

Shifter Range switch info required ??

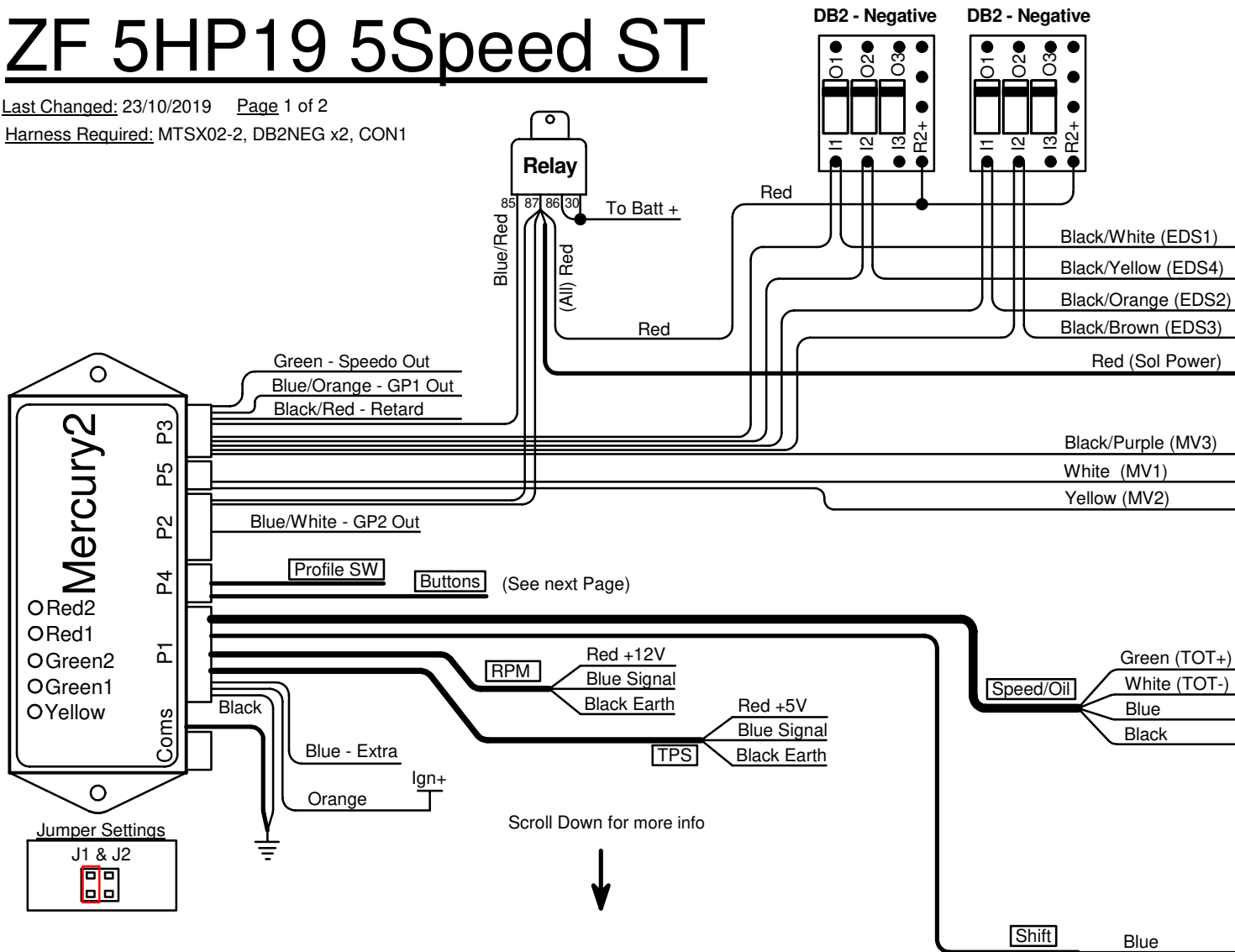


For Led's and Button's wiring go to Page 2

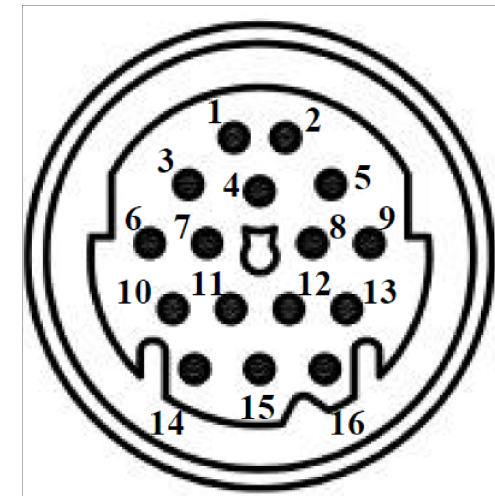
ZF 5HP19 5Speed ST

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Harness Required: MTSX02-2, DB2NEG x2, CON1



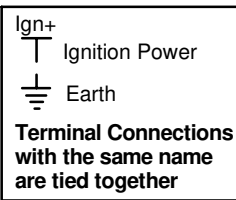
Transmission Solenoid Connector Harness Connector Pin View



Pin	Harness	Color	Connector	Resistance	
				Cold	Hot
1	Speed	Blue	VSS+	P1-11	292 358 Ω
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9	Gearbox	Yellow	MV2	P5-3	30 34 Ω
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13	Oil Temp	Green	TOT+	P1-7	1000 Ω
14	Oil Temp	White	TOT-	Harness -	
16	12V	Red		Harness	

Transmission Selector Switch

Shifter Range switch info required ??



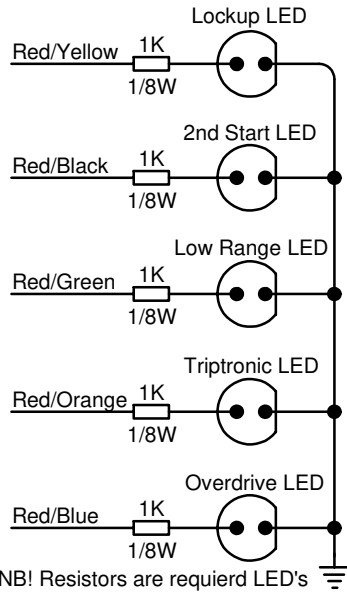
For Led's and Button's wiring go to Page 2

ZF 5HP19 5Speed ST

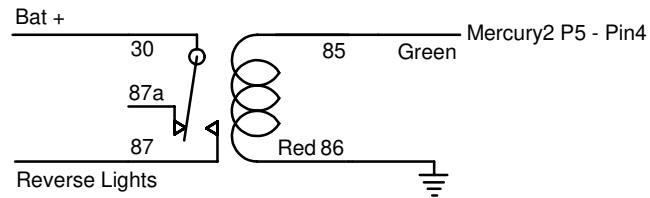
Last Changed: 23/10/2019 Page 2 of 2

Harness Required: MTSX02-2, DB2NEG x2, CON1

LED's



Reverse light Relay



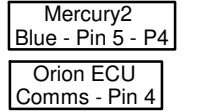
Timing Retard Circuit

TCU

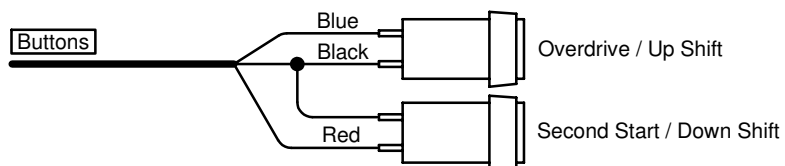
P3 - Pin 5 Black/Red - Retard Output

ECU

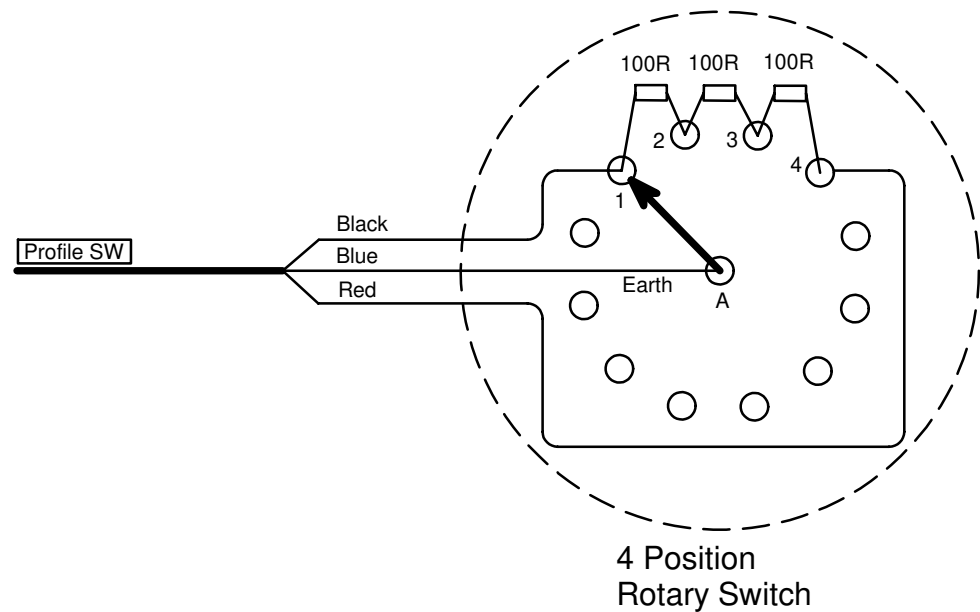
ECU POT input



Tiptronic Buttons



4 Map Switch

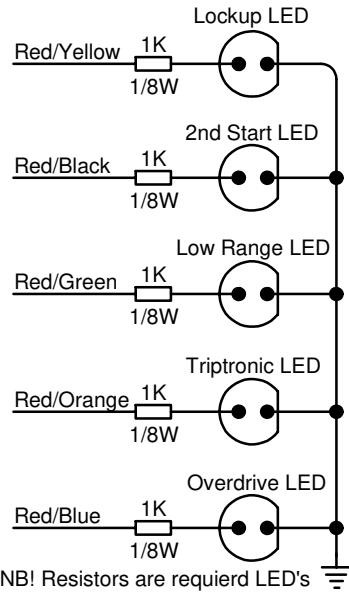


ZF 5HP19 5Speed ST

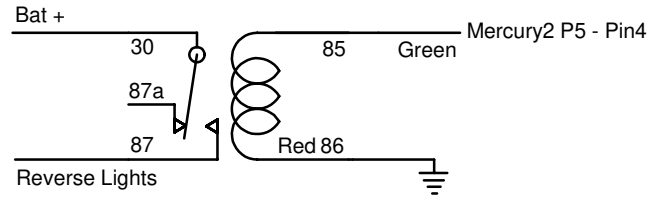
Last Changed: 23/10/2019 Page 2 of 2

Harness Required: MTSX02-2, DB2NEG x2, CON1

LED's



Reverse light Relay



Timing Retard Circuit

TCU

P3 - Pin 5 Black/Red - Retard Output

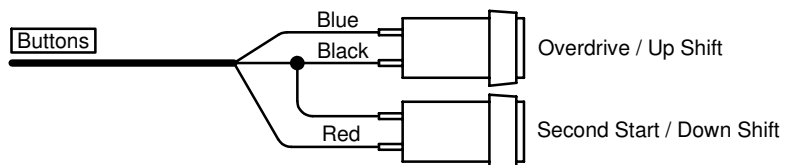
ECU

ECU POT input

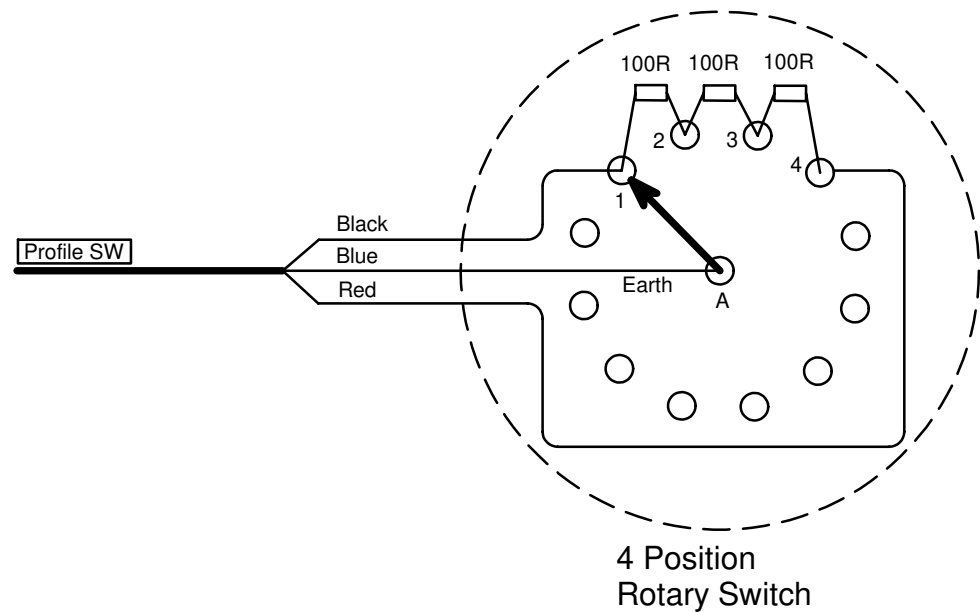
Mercury2
Blue - Pin 5 - P4

Orion ECU
Comms - Pin 4

Tiptronic Buttons



4 Map Switch

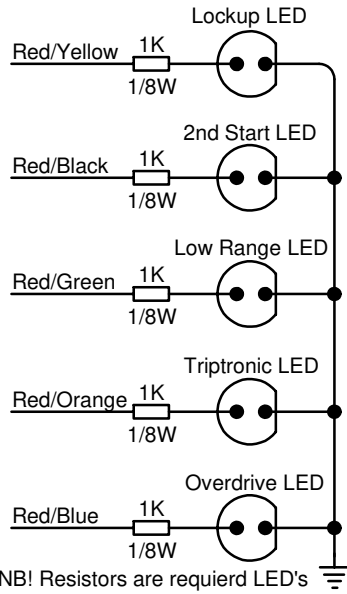


ZF 5HP19 5Speed ST

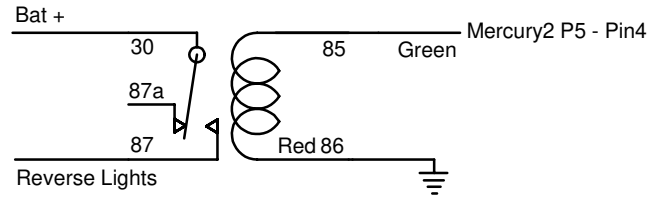
Last Changed: 23/10/2019 Page 2 of 2

Harness Required: MTSX02-2, DB2NEG x2, CON1

LED's



Reverse light Relay



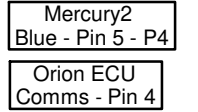
Timing Retard Circuit

TCU

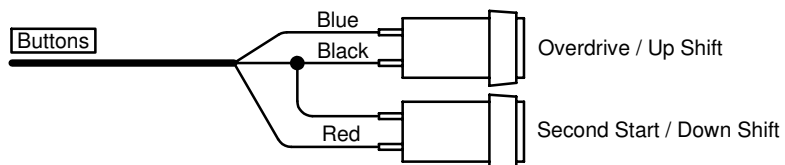
P3 - Pin 5 Black/Red - Retard Output

ECU

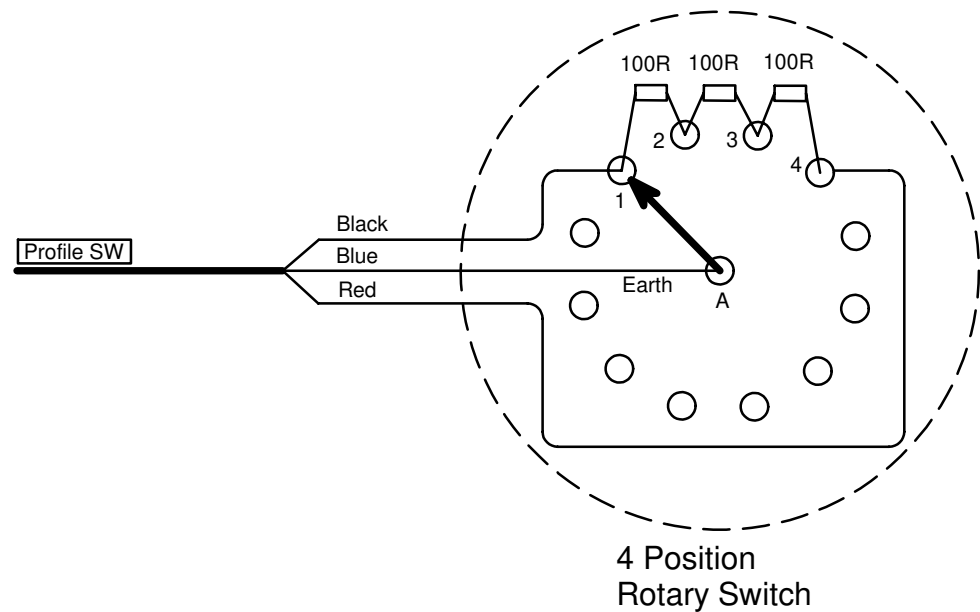
ECU POT input



Tiptronic Buttons



4 Map Switch

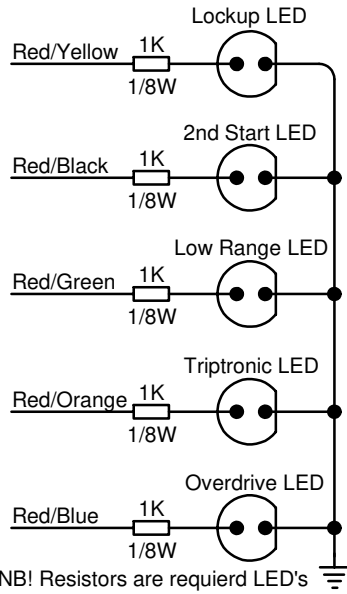


ZF 5HP19 5Speed ST

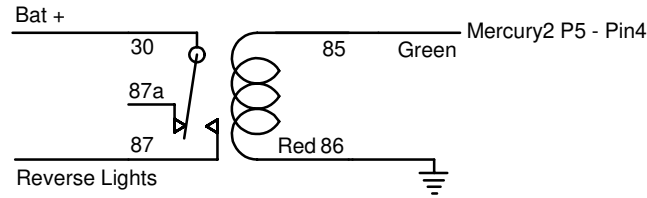
Last Changed: 23/10/2019 Page 2 of 2

Harness Required: MTSX02-2, DB2NEG x2, CON1

LED's



Reverse light Relay



Timing Retard Circuit

TCU

P3 - Pin 5 Black/Red - Retard Output

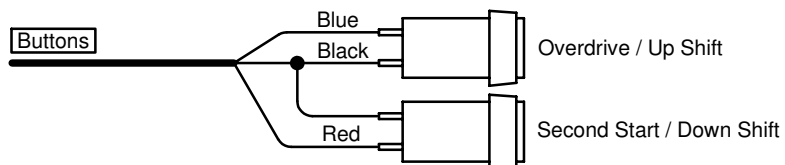
ECU

ECU POT input

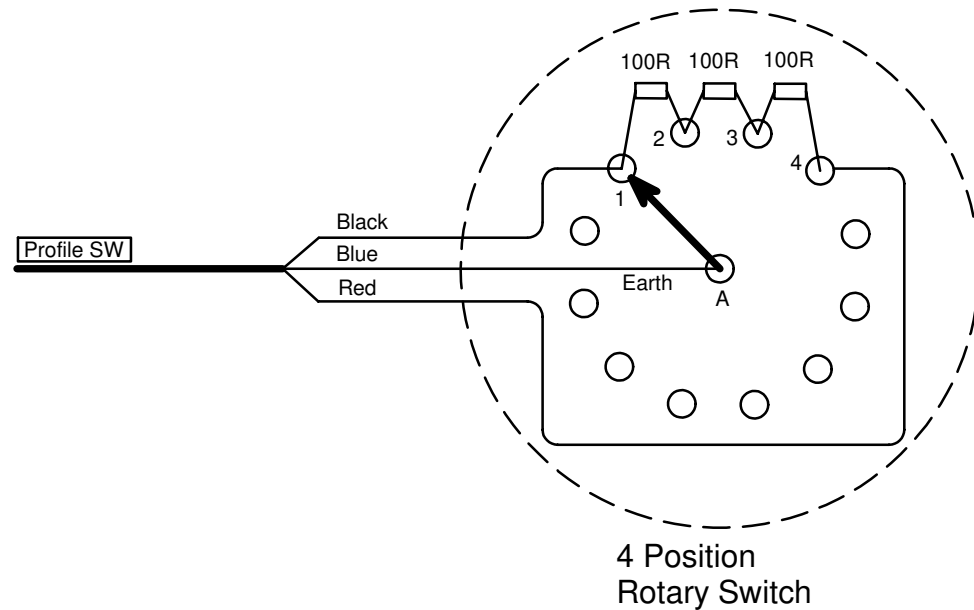
Mercury2
Blue - Pin 5 - P4

Orion ECU
Comms - Pin 4

Tiptronic Buttons



4 Map Switch

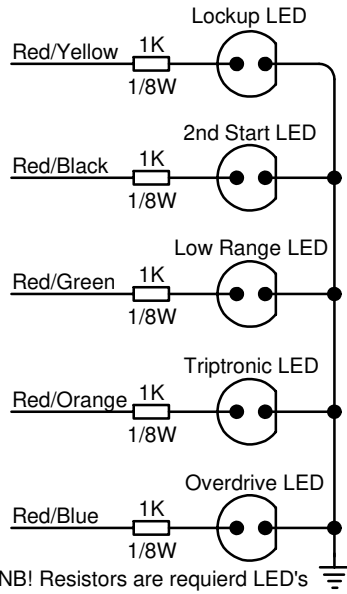


ZF 5HP19 5Speed ST

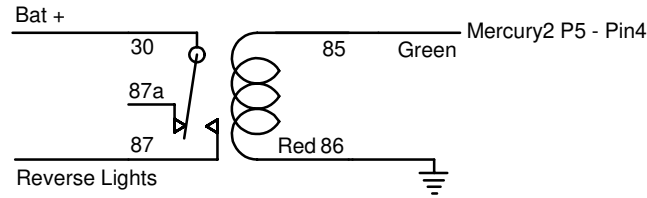
Last Changed: 23/10/2019 Page 2 of 2

Harness Required: MTSX02-2, DB2NEG x2, CON1

LED's



Reverse light Relay



Timing Retard Circuit

TCU

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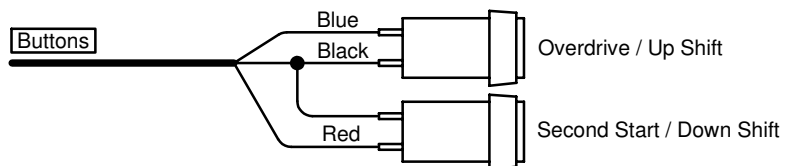
ECU

ECU POT input

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Tiptronic Buttons



4 Map Switch

