

Electrical Pinouts for BS3-004-002

Header 1 – BS3-004-002 – Base System DAI

ECU Pin	Wire Name	ECU Pin	Wire Name	ECU Pin	Wire Name
A1	MAP Sensor Signal - B	A2	TCC/Ford IAC/Vspeedo	A3	IPU Crank Sensor +
B1	TPS Sensor Signal – B	B2	2-Step Enable (optional) / Starting Line Timing Input (optional)	B3	IPU Crank Sensor -
C1	Coolant Temp Signal – A	C2		C3	IPU Cam Sensor +
D1	Air Temp Sensor Signal –A	D2		D3	IPU Cam Sensor -
E1	+5V Supply – TPS / MAP	E2	TPS / MAP / H2O / Air Temp Sensor GND	E3	
F1	<u>Boost Connector Terminal – D</u> • Stage 3 Boost	F2	RUEGO IP - WBO2 – 6	F3	RUEGO IA - WBO2 –2
G1	RUEGO H - WBO2 – 4	G2	RUEGO UN - WBO2 – 1	G3	RUEGO VM - WBO2 – 5
H1	High Side Drive Fuel Pump Relay	H2		H3	
J1		J2	• Vss • REFLO (GM HEI GND)	J3	REF HI PIP (EST)
K1		K2	• Bypass GM HEI • Spare High Side Output	K3	• GM HEI EST • Ford TFI Spout
L1		L2	<u>Boost Connector Terminal A:</u> • Timer Enable • Data Log (Replay) Trigger	L3	+12V Switched
M1	ECM V-Batt - 12V	M2		M3	
N1	RS232 Tx - Calport – A	N2	RS232 Rx - Calport – C	N3	RS232 GND - Calport – B
P1	IAC A LO – C	P2	IAC A HI - D	P3	Main Power Ground
R1	IAC B LO – A	R2	IAC B HI – B	R3	Low Side Drive Fan Relay
S1	INJ 8 – H	S2	INJ 4 – D	S3	Low Side Drive Fuel Pump Relay
T1	INJ 7 – G	T2	INJ 3 – C	T3	<u>Boost Connector Terminal B:</u> • Stage 1 Boost
W1	INJ 6 – F	W2	INJ 2 – B	W3	<u>Boost Connector Terminal C:</u> • Stage 2 Boost
X1	INJ 5 – E	X2	INJ 1- A	X3	Ignition Points
Y1	Injector / ECM V-Batt 1 – 12V	Y2	Injector / ECM V-Batt 2 – 12V	Y3	Main Power Ground

Electrical Pinouts for BS3-004-007 - Base System DAI/DAE)

Header 1 - BS3-004-007 - Base System DAI/DAE

ECU Pin	Wire Name	ECU Pin	Wire Name	ECU Pin	Wire Name
A1	MAP Sensor Signal - B	A2	TCC/Ford IAC/Vspeedo	A3	IPU Crank Sensor +
B1	TPS Sensor Signal - B	B2	2-Step Enable (Optional) / Starting Line Timing Input (optional)	B3	IPU Crank Sensor -
C1	Coolant Temp Signal - A	C2		C3	IPU Cam Sensor +
D1	Air Temp Sensor Signal - A	D2		D3	IPU Cam Sensor -
E1	+5V Supply - TPS / MAP / HED Crank	E2	TPS / MAP / H2O / Air Temp Sensor Ground	E3	
F1	<u>Boost Connector Terminal - D</u> • Stage 3 Boost	F2	RUEGO IP - WBO2 - 6	F3	RUEGO IA - WBO2 - 2
G1	RUEGO H - WBO2 - 4	G2	RUEGO UN - WBO2 - 1	G3	RUEGO VM - WBO2 - 5
H1	High Side Drive Fuel Pump Relay	H2		H3	
J1		J2	<ul style="list-style-type: none"> Vss REFLO (GM HEI GND) 	J3	REF HI PIP (EST)
K1		K2	<ul style="list-style-type: none"> Bypass GM HEI Spare High Side Output 	K3	<ul style="list-style-type: none"> GM HEI EST Ford TFI Spout
L1		L2	<p><u>Boost Connector Terminal A:</u></p> <ul style="list-style-type: none"> Timer Enable All systems & options Data Log (Replay) Trigger - 	L3	+12V Switched
M1	ECM V-Batt - 12V	M2		M3	
N1	RS232 Tx - Calport - A	N2	RS232 Rx - Calport - C	N3	RS232 GND - Calport - B
P1	IAC A LO - C	P2	IAC A HI - D	P3	Main Power Ground
R1	IAC B LO - A	R2	IAC B HI - B	R3	Low Side Drive Fan Relay
S1	INJ 8 - H	S2	INJ 4 - D	S3	Low Side Drive Fuel Pump Relay
T1	INJ 7 - G	T2	INJ 3 - C	T3	<p><u>Boost Connector Terminal B:</u></p> <ul style="list-style-type: none"> Stage 1 Boost
W1	INJ 6 - F	W2	INJ 2 - B	W3	<p><u>Boost Connector Terminal C:</u></p> <ul style="list-style-type: none"> Stage 2 Boost
X1	INJ 5 - E	X2	INJ 1 - A	X3	Ignition Points
Y1	Injector / ECM V-Batt 1 - 12V	Y2	Injector / ECM V-Batt 2 - 12V	Y3	Main Power Ground

Header 2

ECU Pin	Wire Name	ECU Pin	Wire Name	ECU Pin	Wire Name
A1		A2		A3	
B1		B2		B3	Cooling Fan_Hi Lo -1 (optional)
C1	Same as N2 <ul style="list-style-type: none"> TCC Ford IAC V-speedo 	C2	V Batt (-) Power Ground	C3	
D1	<ul style="list-style-type: none"> Reverse Lockout (Viper) -1 Spare 	D2		D3	GM Trans Force Motor Hi (+) - 2
E1		E2		E3	
F1	Trans Oil Temp -2	F2		F3	
G1		G2		G3	
H1	Vss HED +	H2	<ul style="list-style-type: none"> V Batt (-) Power Ground Vss HED (-) 	H3	GM Trans Mode A (SWA) -2
J1		J2	TSS +	J3	<ul style="list-style-type: none"> AC On (Viper) GM Trans Mode B (SWB) - 2
K1	Same as Y2 <ul style="list-style-type: none"> ASD Sense (Viper) DAE Trigger - 2 	K2	TSS-/Sensor Ground	K3	<ul style="list-style-type: none"> Stop Sense (Viper) GM Trans Mode C (SWC) - 2
L1		L2		L3	
M1		M2		M3	Cooling Fan_Hi Lo -2 (optional)
N1		N2		N3	
P1		P2		P3	<ul style="list-style-type: none"> Reverse Lockout (Viper) Spare
R1		R2		R3	
S1	<ul style="list-style-type: none"> DAE Drive Shaft (+) 	S2	Tach LS1 (Duplicate)	S3	<ul style="list-style-type: none"> DAE Drive Shaft (-)
T1	<ul style="list-style-type: none"> DAE Input Shaft (+) 	T2	<ul style="list-style-type: none"> DAE Fuel Pressure Signal 	T3	<ul style="list-style-type: none"> DAE Input & Turbo Shaft (-)
W1	<ul style="list-style-type: none"> 3-Step Enable (optional) DAE Turbo Shaft (+) - 1 	W2		W3	<ul style="list-style-type: none"> DAE Oil, Fuel & Turbo Pres & Pan Vac GND
X1	<ul style="list-style-type: none"> DAE Turbo Pres Signal 	X2	<ul style="list-style-type: none"> DAE Oil Pressure Signal 	X3	<ul style="list-style-type: none"> DAE Pan Vacuum Signal
Y1		Y2	DAE & GEN3 Systems with Options -Data Log Trigger	Y3	<ul style="list-style-type: none"> DAE Oil, Fuel, Turbo Pres & Pan Vac +5V Ref

Electrical Pinouts for BS3-004-017 – Base System 16 Injector/DAI

Header 1 – BS3-004-017 - Base System 16 Injector/DAI

ECU Pin	Wire Name	ECU Pin	Wire Name	ECU Pin	Wire Name
A1	MAP Sensor Signal - B	A2	TCC/Ford IAC/Vspeedo	A3	IPU Crank Sensor +
B1	TPS Sensor Signal – B	B2	2-Step Enable (Optional) / Starting Line Timing Input (optional)	B3	IPU Crank Sensor -
C1	Coolant Temp Signal – A	C2		C3	IPU Cam Sensor +
D1	Air Temp Sensor Signal –A	D2		D3	IPU Cam Sensor -
E1	+5V Supply – TPS / MAP	E2	TPS / MAP / H2O / Air Temp Sensor Ground	E3	
F1	<u>Boost Connector Terminal – D</u> • Stage 3 Boost	F2	RUEGO IP - WBO2 – 6	F3	RUEGO IA - WBO2 –2
G1	RUEGO H - WBO2 – 4	G2	RUEGO UN - WBO2 – 1	G3	RUEGO VM - WBO2 – 5
H1	High Side Drive Fuel Pump Relay	H2		H3	
J1		J2	<ul style="list-style-type: none"> Vss REFLO (GM HEI GND) 	J3	<ul style="list-style-type: none"> Crank HED Signal REF HI PIP (EST)
K1		K2	<ul style="list-style-type: none"> Bypass GM HEI Spare High Side Output 	K3	<ul style="list-style-type: none"> GM HEI EST Ford TFI Spout
L1		L2	<u>Boost Connector Terminal A:</u> <ul style="list-style-type: none"> Timer Enable 	L3	+12V Switched
M1	ECM V-Batt - 12V	M2		M3	
N1	RS232 Tx - Calport – A	N2	RS232 Rx - Calport – C	N3	RS232 GND - Calport – B
P1	IAC A LO – C	P2	IAC A HI - D	P3	Main Power Ground
R1	IAC B LO – A	R2	IAC B HI – B	R3	Low Side Drive Fan Relay
S1	INJ 8 – H	S2	INJ 4 – D	S3	Low Side Drive Fuel Pump Relay
T1	INJ 7 – G	T2	INJ 3 – C	T3	<u>Boost Connector Terminal B:</u> <ul style="list-style-type: none"> Stage 1 Boost
W1	INJ 6 – F	W2	INJ 2 – B	W3	<u>Boost Connector Terminal C:</u> <ul style="list-style-type: none"> Stage 2 Boost
X1	INJ 5 – E	X2	INJ 1- A	X3	Ignition Points
Y1	Injector / ECM V-Batt 1 – 12V	Y2	Injector / ECM V-Batt 2 – 12V	Y3	Main Power Ground

Header 2

ECU Pin	Wire Name	ECU Pin	Wire Name	ECU Pin	Wire Name
A1		A2		A3	
B1		B2	<ul style="list-style-type: none"> DAE2 Trans Line Pres or Waste Gate Pres Signal (optional) 	B3	Cooling Fan_Hi Lo -1 (optional)
C1	Same as N2 <ul style="list-style-type: none"> TCC Ford IAC V-speedo 	C2	V Batt (-) Power Ground	C3	
D1	<ul style="list-style-type: none"> Reverse Lockout (Viper) -1 Spare 	D2		D3	GM Trans Force Motor Hi (+) - 2
E1		E2		E3	
F1	Trans Oil Temp -2	F2	NTK UEGOIP (+) - (optional)	F3	NTK UEGO VS (-) - (optional)
G1	NTK UEGO Heater (-) (optional)	G2		G3	NTK UEGO VS (+) - (optional)
H1	Vss HED +	H2	<ul style="list-style-type: none"> V Batt (-) Power Ground Vss HED (-) 	H3	GM Trans Mode A (SWA) -2
J1	DAE2 Trans Line Pres or Waste Gate Pressure + 5V Ref (optional)	J2	TSS +	J3	<ul style="list-style-type: none"> AC On (Viper) GM Trans Mode B (SWB) - 2
K1	Same as Y2 <ul style="list-style-type: none"> ASD Sense (Viper) DAE Trigger - 2 	K2	<ul style="list-style-type: none"> DAE2 Trans Line Pres or Waste Gate Pres / Accelerometer GND (optional) TSS-/Sensor Ground 	K3	<ul style="list-style-type: none"> Stop Sense (Viper) GM Trans Mode C (SWC) - 2
L1	16 INJ Sys - Injector 16	L2	16 INJ Sys Injector V-Batt (+)	L3	16 INJ Sys - Injector 14
M1	16 INJ Sys - Injector 12	M2		M3	Cooling Fan_Hi Lo -2 (optional)
N1	16 INJ Sys - Injector 13	N2		N3	
P1	16 INJ Sys - Injector 11	P2		P3	<ul style="list-style-type: none"> Reverse Lockout (Viper) Spare
R1	16 INJ Sys - Injector 15	R2	16 INJ Sys - Injector 9	R3	16 INJ Sys - Injector 10
S1		S2		S3	
T1		T2		T3	
W1	<ul style="list-style-type: none"> 3-Step Enable (optional) 	W2	16 INJ Sys Injector V-Batt	W3	
X1		X2		X3	
Y1		Y2	DAE Data Log Trigger	Y3	

Electrical Pinouts for BS3-004-070 – Base System 16 Injector / DAI / DAE

Header 1 – BS3-004-070 – Base System 16 Injector/DAI/DAE

ECU Pin	Wire Name	ECU Pin	Wire Name	ECU Pin	Wire Name
A1	MAP Sensor Signal - B	A2	TCC/Ford IAC/Vspeedo	A3	IPU Crank Sensor +
B1	TPS Sensor Signal – B	B2	2-Step Enable (Optional) / Starting Line Timing Input (optional)	B3	IPU Crank Sensor -
C1	Coolant Temp Signal – A	C2		C3	IPU Cam Sensor +
D1	Air Temp Sensor Signal –A	D2		D3	IPU Cam Sensor -
E1	+5V Supply – TPS / MAP	E2	TPS / MAP / H2O / Air Temp Sensor Ground	E3	
F1	<u>Boost Connector Terminal – D</u> • Stage 3 Boost	F2	RUEGO IP - WBO2 – 6	F3	RUEGO IA - WBO2 –2
G1	RUEGO H - WBO2 – 4	G2	RUEGO UN - WBO2 – 1	G3	RUEGO VM - WBO2 – 5
H1	High Side Drive Fuel Pump Relay	H2		H3	
J1		J2	<ul style="list-style-type: none"> Vss REFLO (GM HEI GND) 	J3	<ul style="list-style-type: none"> Crank HED Signal REF HI PIP (EST)
K1		K2	<ul style="list-style-type: none"> Bypass GM HEI Spare High Side Output 	K3	<ul style="list-style-type: none"> GM HEI EST Ford TFI Spout
L1		L2	<u>Boost Connector Terminal A:</u> <ul style="list-style-type: none"> Timer Enable 	L3	+12V Switched
M1	ECM V-Batt - 12V	M2		M3	
N1	RS232 Tx - Calport – A	N2	RS232 Rx - Calport – C	N3	RS232 GND - Calport – B
P1	IAC A LO – C	P2	IAC A HI - D	P3	Main Power Ground
R1	IAC B LO – A	R2	IAC B HI – B	R3	Low Side Drive Fan Relay
S1	INJ 8 – H	S2	INJ 4 – D	S3	Low Side Drive Fuel Pump Relay
T1	INJ 7 – G	T2	INJ 3 – C	T3	<u>Boost Connector Terminal B:</u> <ul style="list-style-type: none"> Stage 1 Boost
W1	INJ 6 – F	W2	INJ 2 – B	W3	<u>Boost Connector Terminal C:</u> <ul style="list-style-type: none"> Stage 2 Boost
X1	INJ 5 – E	X2	INJ 1- A	X3	Ignition Points
Y1	Injector / ECM V-Batt 1 – 12V	Y2	Injector / ECM V-Batt 2 – 12V	Y3	Main Power Ground

Header 2

ECU Pin	Wire Name	ECU Pin	Wire Name	ECU Pin	Wire Name
A1		A2		A3	
B1		B2	• DAE2 Trans Line Pres or Waste Gate Pres Signal (optional)	B3	Cooling Fan_Hi Lo -1 (optional)
C1	Same as N2 • TCC • Ford IAC • V-speedo	C2	V Batt (-) Power Ground	C3	
D1	• Reverse Lockout (Viper) -1 • Spare	D2		D3	GM Trans Force Motor Hi (+) - 2
E1		E2		E3	
F1	Trans Oil Temp -2	F2	NTK UEGOIP (+) - (optional)	F3	NTK UEGO VS (-) - (optional)
G1	NTK UEGO Heater (-) (optional)	G2		G3	NTK UEGO VS (+) - (optional)
H1	Vss HED +	H2	• V Batt (-) Power Ground • Vss HED (-)	H3	GM Trans Mode A (SWA) -2
J1	DAE2 Trans Line Pres or Waste Gate Pressure + 5V Ref (optional)	J2	TSS +	J3	• AC On (Viper) • GM Trans Mode B (SWB) - 2
K1	Same as Y2 • ASD Sense (Viper) • DAE Trigger - 2	K2	• DAE2 Trans Line Pres or Waste Gate Pres / Accelerometer GND (optional) • TSS-/Sensor Ground	K3	• Stop Sense (Viper) • GM Trans Mode C (SWC) - 2
L1	16 INJ Sys - Injector 16	L2	16 INJ Sys Injector V-Batt (+)	L3	16 INJ Sys - Injector 14
M1	16 INJ Sys - Injector 12	M2		M3	Cooling Fan_Hi Lo -2 (optional)
N1	16 INJ Sys - Injector 13	N2		N3	
P1	16 INJ Sys - Injector 11	P2		P3	• Reverse Lockout (Viper) • Spare
R1	16 INJ Sys - Injector 15	R2	16 INJ Sys - Injector 9	R3	16 INJ Sys - Injector 10
S1	• DAE Drive Shaft (+)	S2		S3	• DAE Drive Shaft (-)
T1	• DAE Input Shaft (+)	T2	• DAE Fuel Pressure Signal	T3	• DAE Input & Turbo Shaft (-)
W1	• 3-Step Enable (optional) • DAE Turbo Shaft (+) - 1	W2	16 INJ Sys Injector V-Batt	W3	• DAE Oil, Fuel & Turbo Pres & Pan Vac GND
X1	• DAE Turbo Pres Signal	X2	• DAE Oil Pressure Signal	X3	• DAE Pan Vacuum Signal
Y1		Y2	DAE Data Log Trigger	Y3	• DAE Oil, Fuel, Turbo Pres & Pan Vac +5V Ref

Electrical Pinouts for BS3-004-004 (LS1) & BS3-004-068 (LS7)

Header 1 – BS3-004-004 (Base LS1) & BS3-004-068 (Base LS7)

ECU Pin	Wire Name	ECU Pin	Wire Name	ECU Pin	Wire Name
A1	MAP Sensor Signal - B	A2	TCC/Ford IAC/Vspeedo	A3	
B1	TPS Sensor Signal – B	B2	2-Step Enable / Starting Line Timing Input	B3	
C1	Coolant Temp Signal – A	C2	LS1 & LS7 Coil 6 - Even F	C3	
D1	Air Temp Sensor Signal –A	D2	LS1 & LS7 Tach Signal	D3	
E1	+5V Supply – TPS / MAP / LS1 HED Cam/Crank	E2	TPS / MAP / H2O / Air Temp Sensor Ground	E3	LS1/LS7 HED Cam Signal
F1	<u>Boost Connector Terminal – D</u> • Stage 3 Boost	F2	RUEGO IP - WBO2 – 6	F3	RUEGO IA - WBO2 –2
G1	RUEGO H - WBO2 – 4	G2	RUEGO UN - WBO2 – 1	G3	RUEGO VM - WBO2 – 5
H1	High Side Drive Fuel Pump Relay	H2	LS1 & LS7 Coil 7 – Coil Harness Odd B	H3	LS1& LS7 Coil 2 – Coil Harness Even B
J1	LS1 & LS7 Coil 3 – Coil Harness Odd F	J2	<ul style="list-style-type: none"> • Vss • LS1/LS7 / MOD / Coil GND • LS1/LS7 HED Crank/Cam Sensor GND 	J3	LS1/LS7 HED Crank Signal
K1	LS1 & LS7 Coil 1 – Coil Harness Odd G	K2	Spare High Side Output	K3	
L1	LS1 & LS7 Coil 4 – Coil Harness Even C	L2	<u>Boost Connector Terminal A:</u> <ul style="list-style-type: none"> • Timer Enable • Data Log (Replay) Trigger 	L3	+12V Switched
M1	ECM V-Batt - 12V	M2	LS1 & LS7 Coil 5 – Coil Harness Odd C	M3	LS1 & LS7 Coil 8 – Coil Harness Even G
N1	RS232 Tx - Calport – A	N2	RS232 Rx - Calport – C	N3	RS232 GND - Calport – B
P1	IAC A LO – C	P2	IAC A HI - D	P3	Main Power Ground
R1	IAC B LO – A	R2	IAC B HI – B	R3	Low Side Drive Fan Relay
S1	INJ 8 – H	S2	INJ 4 – D	S3	Low Side Drive Fuel Pump Relay
T1	INJ 7 – G	T2	INJ 3 – C	T3	<u>Boost Connector Terminal B:</u> • Stage 1 Boost
W1	INJ 6 – F	W2	INJ 2 – B	W3	<u>Boost Connector Terminal C:</u> • Stage 2 Boost
X1	INJ 5 – E	X2	INJ 1- A	X3	
Y1	Injector / ECM V-Batt 1 – 12V	Y2	Injector / ECM V-Batt 2 – 12V	Y3	Main Power Ground

Electrical Pinouts for BS3-004-006 Ford Modular (Mod) Motor

Header 1 – BS3-004-006 (Base Mod Motor)

ECU Pin	Wire Name	ECU Pin	Wire Name	ECU Pin	Wire Name
A1	MAP Sensor Signal - B	A2	TCC/Ford IAC/Vspeedo	A3	Mod Motor - IPU Crank Sensor +
B1	TPS Sensor Signal – B	B2	2-Step Enable / Starting Line Timing Input	B3	Mod Motor - IPU Crank Sensor -
C1	Coolant Temp Signal – A	C2	MOD Coil 6 - Coil Harness Even F	C3	Mod Motor - IPU Cam Sensor +
D1	Air Temp Sensor Signal –A	D2	Tach Signal	D3	Mod Motor - IPU Cam Sensor -
E1	+5V Supply – TPS / MAP	E2	TPS / MAP / H2O / Air Temp Sensor Ground	E3	
F1	<u>Boost Connector Terminal</u> – D • Stage 3 Boost	F2	RUEGO IP - WBO2 – 6	F3	RUEGO IA - WBO2 –2
G1	RUEGO H - WBO2 – 4	G2	RUEGO UN - WBO2 – 1	G3	RUEGO VM - WBO2 – 5
H1	High Side Drive Fuel Pump Relay	H2	MOD Coil 7 – Coil Harness Odd C	H3	MOD Coil 2 – Coil Harness Even C
J1	MOD Coil 3 – Coil Harness Odd F	J2	• Vss • MOD / Coil GND	J3	
K1	MOD Coil 1 – Coil Harness Odd B	K2	Spare High Side Output	K3	
L1	MOD Coil 4 – Coil Harness Even G	L2	<u>Boost Connector Terminal A:</u> • Timer Enable • Data Log (Replay) Trigger	L3	+12V Switched
M1	ECM V-Batt - 12V	M2	MOD Coil 5 – Coil Harness Odd G	M3	MOD Coil 8 – Coil Harness Even B
N1	RS232 Tx - Calport – A	N2	RS232 Rx - Calport – C	N3	RS232 GND - Calport – B
P1	IAC A LO – C	P2	IAC A HI - D	P3	Main Power Ground
R1	IAC B LO – A	R2	IAC B HI – B	R3	Low Side Drive Fan Relay
S1	INJ 8 – H	S2	INJ 4 – D	S3	Low Side Drive Fuel Pump Relay
T1	INJ 7 – G	T2	INJ 3 – C	T3	<u>Boost Connector Terminal B:</u> • Stage 1 Boost
W1	INJ 6 – F	W2	INJ 2 – B	W3	<u>Boost Connector Terminal C:</u> • Stage 2 Boost
X1	INJ 5 – E	X2	INJ 1- A	X3	
Y1	Injector / ECM V-Batt 1 – 12V	Y2	Injector / ECM V-Batt 2 – 12V	Y3	Main Power Ground

Electrical Pinouts for BS3-004-079 (Hemi COP)

Header 1 – BS3-004-079 – Base System Hemi COP

ECU Pin	Wire Name	ECU Pin	Wire Name	ECU Pin	Wire Name
A1	MAP Sensor Signal - B	A2	TCC/Ford IAC/Vspeedo	A3	IPU Crank Sensor +
B1	TPS Sensor Signal – B	B2	2-Step Enable / Starting Line Timing Input	B3	IPU Crank Sensor -
C1	Coolant Temp Signal – A	C2		C3	
D1	Air Temp Sensor Signal –A	D2	Tach Signal	D3	
E1	+5V Supply – TPS / MAP / HED Cam	E2	TPS / MAP / H2O / Air Temp Sensor Ground	E3	HED Cam Signal
F1	<u>Boost Connector Terminal – D</u> • Stage 3 Boost	F2	RUEGO IP - WBO2 – 6	F3	RUEGO IA - WBO2 –2
G1	RUEGO H - WBO2 – 4	G2	RUEGO UN - WBO2 – 1	G3	RUEGO VM - WBO2 – 5
H1	High Side Drive Fuel Pump Relay	H2		H3	
J1		J2	<ul style="list-style-type: none"> Vss Coil GND HED Cam Sensor GND 	J3	Crank HED Signal
K1		K2	<ul style="list-style-type: none"> Spare High Side Output 	K3	
L1		L2	<p><u>Boost Connector Terminal A:</u></p> <ul style="list-style-type: none"> Timer Enable All systems & options Data Log (Replay) Trigger 	L3	+12V Switched
M1	ECM V-Batt - 12V	M2		M3	
N1	RS232 Tx - Calport – A	N2	RS232 Rx - Calport – C	N3	RS232 GND - Calport – B
P1	IAC A LO – C	P2	IAC A HI - D	P3	Main Power Ground
R1	IAC B LO – A	R2	IAC B HI – B	R3	Low Side Drive Fan Relay
S1	INJ 8 – H	S2	INJ 4 – D	S3	Low Side Drive Fuel Pump Relay
T1	INJ 7 – G	T2	INJ 3 – C	T3	<u>Boost Connector Terminal B:</u> • Stage 1 Boost
W1	INJ 6 – F	W2	INJ 2 – B	W3	<u>Boost Connector Terminal C:</u> • Stage 2 Boost
X1	INJ 5 – E	X2	INJ 1- A	X3	Ignition Points
Y1	Injector / ECM V-Batt 1 – 12V	Y2	Injector / ECM V-Batt 2 – 12V	Y3	Main Power Ground

Header 2

ECU Pin	Wire Name	ECU Pin	Wire Name	ECU Pin	Wire Name
A1	Dumb Coil 1	A2		A3	
B1	Dumb Coil 8	B2	Dumb Coil 2	B3	
C1		C2	V Batt (-) Power Ground	C3	Dumb Coil 3
D1		D2	Dumb Coil 4	D3	
E1	Dumb Coil 5	E2	Dumb Coil 6	E3	Dumb Coil 7
F1		F2		F3	
G1		G2		G3	
H1		H2	V Batt (-) Power Ground	H3	
J1		J2		J3	
K1		K2		K3	
L1		L2		L3	
M1		M2		M3	
N1		N2		N3	
P1		P2		P3	
R1		R2		R3	
S1		S2		S3	
T1		T2		T3	
W1		W2		W3	
X1		X2		X3	
Y1		Y2	Data Log Trigger	Y3	

Electrical Pinouts for BS3-004-057
Universal Coil-on-Plug (COP)
System

Header 1 – BS3-004-057 – Universal Coil on Plug (COP) System

ECU Pin	Wire Name	ECU Pin	Wire Name	ECU Pin	Wire Name
A1	MAP Sensor Signal - B	A2	TCC/Ford IAC/Vspeedo	A3	IPU Crank Sensor +
B1	TPS Sensor Signal – B	B2	2-Step Enable / Starting Line Timing Input	B3	IPU Crank Sensor -
C1	Coolant Temp Signal – A	C2	Coil 6 - Even F	C3	
D1	Air Temp Sensor Signal –A	D2	Tach Signal	D3	
E1	+5V Supply – TPS / MAP / HED Cam (only use with 5V HED Cam Sensor)	E2	TPS / MAP / H2O / Air Temp Sensor Ground	E3	HED Cam Signal
F1	<u>Boost Connector Terminal</u> – D • Stage 3 Boost	F2	RUEGO IP - WBO2 – 6	F3	RUEGO IA - WBO2 –2
G1	RUEGO H - WBO2 – 4	G2	RUEGO UN - WBO2 – 1	G3	RUEGO VM - WBO2 – 5
H1	High Side Drive Fuel Pump Relay	H2	Coil 7 – Coil Harness Odd B	H3	Coil 2 – Coil Harness Even B
J1	Coil 3 – Coil Harness Odd F	J2	<ul style="list-style-type: none"> • Vss • Coil GND • HED Cam Sensor GND 	J3	
K1	Coil 1 – Coil Harness Odd G	K2	Spare High Side Output	K3	
L1	Coil 4 – Coil Harness Even C	L2	<u>Boost Connector Terminal A:</u> <ul style="list-style-type: none"> • Timer Enable 	L3	+12V Switched
M1	ECM V-Batt - 12V	M2	Coil 5 – Coil Harness Odd C	M3	Coil 8 – Coil Harness Even G
N1	RS232 Tx - Calport – A	N2	RS232 Rx - Calport – C	N3	RS232 GND - Calport – B
P1	IAC A LO – C	P2	IAC A HI - D	P3	Main Power Ground
R1	IAC B LO – A	R2	IAC B HI – B	R3	Low Side Drive Fan Relay
S1	INJ 8 – H	S2	INJ 4 – D	S3	Low Side Drive Fuel Pump Relay
T1	INJ 7 – G	T2	INJ 3 – C	T3	<u>Boost Connector Terminal B:</u> • Stage 1 Boost
W1	INJ 6 – F	W2	INJ 2 – B	W3	<u>Boost Connector Terminal C:</u> • Stage 2 Boost
X1	INJ 5 – E	X2	INJ 1- A	X3	
Y1	Injector / ECM V-Batt 1 – 12V	Y2	Injector / ECM V-Batt 2 – 12V	Y3	Main Power Ground

Header 2 - BS3-004-057 – Universal Coil on Plug (COP) System

ECU Pin	Wire Name	ECU Pin	Wire Name	ECU Pin	Wire Name
A1		A2		A3	
B1		B2		B3	
C1		C2		C3	
D1		D2		D3	
E1		E2		E3	
F1		F2		F3	
G1		G2		G3	
H1		H2		H3	
J1		J2		J3	
K1		K2		K3	
L1		L2		L3	
M1		M2		M3	
N1		N2		N3	
P1		P2		P3	
R1		R2		R3	
S1		S2		S3	
T1		T2		T3	
W1		W2		W3	
X1		X2		X3	
Y1		Y2	Data Log Trigger	Y3	

Electrical Pinouts for GEN3 Systems with All Available Options

Header 1 – GEN3 System – All Available Options

ECU Pin	Wire Name	ECU Pin	Wire Name	ECU Pin	Wire Name
A1	MAP Sensor Signal - B	A2	TCC/Ford IAC/Vspeedo	A3	IPU Crank Sensor + (Mod, Hemi & Uni COP)
B1	TPS Sensor Signal – B	B2	2-Step Enable (optional) / Starting Line Timing Input (optional)	B3	IPU Crank Sensor - (Mod, Hemi & Uni COP)
C1	Coolant Temp Signal – A	C2	LS1 / LS7 / MOD / Uni COP Coil 6	C3	IPU Cam Sensor + (Base & Mod systems)
D1	Air Temp Sensor Signal –A	D2	LS1 / LS7 / MOD / Uni COP Tach Signal	D3	IPU Cam Sensor – (Base & Mod Systems)
E1	+5V Supply – TPS / MAP / Hemi HED Cam (also Uni COP w/ 5V HED Cam Sensor)	E2	TPS / MAP / H2O / Air Temp Sensor Ground	E3	<ul style="list-style-type: none"> • E85 (IPU Sys) Signal • LS1 / LS7 / Hemi / Uni COP - HED Cam Signal
F1	<u>Boost Connector Terminal – D</u> <ul style="list-style-type: none"> • Stage 3 Boost • NOS (Internal) System Stage 3 - Input 	F2	RUEGO IP - WBO2 – 6	F3	RUEGO IA - WBO2 –2
G1	RUEGO H - WBO2 – 4	G2	RUEGO UN - WBO2 – 1	G3	RUEGO VM - WBO2 – 5
H1	High Side Drive Fuel Pump Relay	H2	LS1 / LS7 / MOD / Uni COP Coil 7	H3	LS1 / LS7 / MOD / Uni COP Coil 2
J1	LS1/LS7/MOD/ Uni COP Coil 3	J2	<ul style="list-style-type: none"> • Vss • REFLO (GM HEI GND) • E85 (IPU Sys) GND • LS1/LS7 / MOD / Uni COP Coil GND • LS1/7 HED Crank & Cam Sensr GND • Hemi & Uni COP Cam HED GND 	J3	<ul style="list-style-type: none"> • Crank HED Signal -2 • REF HI PIP (EST)
K1	LS1 / LS7 / MOD /Uni COP Coil 1	K2	<ul style="list-style-type: none"> • Bypass GM HEI • Spare High Side Output 	K3	<ul style="list-style-type: none"> • GM HEI EST • Ford TFI Spout
L1	LS1 / LS7 / MOD/ Uni COP Coil 4	L2	<ul style="list-style-type: none"> • Boost Connector Terminal A: • Timer Enable All systems & options • Data Log Trigger (also see Hdr 2 Y2) • NOS (Internal & Digi-set) System Stage 1 – Output & Timer Enable 	L3	+12V Switched
M1	ECM V-Batt - 12V	M2	LS1 / LS7 / MOD / Uni COP Coil 5	M3	LS1 / LS7 / MOD / Uni COP Coil 8
N1	RS232 Tx - Calport – A	N2	RS232 Rx - Calport – C	N3	RS232 GND - Calport – B
P1	IAC A LO – C	P2	IAC A HI - D	P3	Main Power Ground
R1	IAC B LO – A	R2	IAC B HI – B	R3	Low Side Drive Fan Relay
S1	INJ 8 – H	S2	INJ 4 – D	S3	Low Side Drive Fuel Pump Relay
T1	INJ 7 – G	T2	INJ 3 – C	T3	<u>Boost Connector Terminal B:</u> <ul style="list-style-type: none"> • Stage 1 Boost • CO2 Boost Increase Valve • NOS (Internal) System Stage 1 - Input
W1	INJ 6 – F	W2	INJ 2 – B	W3	<u>Boost Connector Terminal C:</u> <ul style="list-style-type: none"> • Stage 2 Boost • CO2 Boost Decrease Valve • NOS (Internal) System Stage 2 - Input
X1	INJ 5 – E	X2	INJ 1- A	X3	Ignition Points
Y1	Injector / ECM V-Batt 1 – 12V	Y2	Injector / ECM V-Batt 2 – 12V	Y3	Main Power Ground

Header 2 – GEN3 System – All Available Options

ECU Pin	Wire Name	ECU Pin	Wire Name	ECU Pin	Wire Name
A1	<ul style="list-style-type: none"> • DAE2 Accelerometer Signal • Hemi Dumb Coil 1 • 24 INJ Sys - Injector 17 	A2		A3	24 INJ Sys – Injector 16
B1	<ul style="list-style-type: none"> • Hemi Dumb Coil 8 • 24 INJ Sys - Injector 24 	B2	<ul style="list-style-type: none"> • DAE2 Trans Line Pres or Waste Gate Pres Signal • Hemi Dumb Coil 2 • 24 INJ Sys - Injector 18 	B3	Cooling Fan_Hi Lo -1 (optional)
C1	<p>Same as N2</p> <ul style="list-style-type: none"> • TCC • Ford IAC • V-speedo 	C2	<ul style="list-style-type: none"> • V Batt (-) Power Ground • Hemi 1- Dumb Coil (-) 	C3	<ul style="list-style-type: none"> • Hemi Dumb Coil 3 • 24 INJ Sys - Injector 19
D1	<ul style="list-style-type: none"> • Reverse Lockout (Viper) -1 • Spare 	D2	<ul style="list-style-type: none"> • Hemi Dumb Coil 4 • 24 INJ Sys - Injector 20 	D3	GM Trans Force Motor Hi (+) - 2
E1	<ul style="list-style-type: none"> • Hemi Dumb Coil 5 • 24 INJ Sys - Injector 21 	E2	<ul style="list-style-type: none"> • Hemi Dumb Coil 6 • 24 INJ Sys - Injector 22 	E3	Hemi Dumb Coil 7 / 24 INJ Sys - Injector 23
F1	Trans Oil Temp -2	F2	NTK UEGOIP (+)	F3	NTK UEGO VS (-)
G1	NTK UEGO Heater (-)	G2		G3	NTK UEGO VS (+)
H1	Vss HED +	H2	<ul style="list-style-type: none"> • V Batt (-) Power Ground • Vss HED (-) • Hemi 1- Dumb Coil (-) • 24 INJ System Power Ground 	H3	GM Trans Mode A (SWA) -2
J1	DAE2 Trans Line Pres or Waste Gate Pres + 5V Ref	J2	TSS +	J3	<ul style="list-style-type: none"> • AC On (Viper) • GM Trans Mode B (SWB) - 2
K1	<p>Same as Y2</p> <ul style="list-style-type: none"> • ASD Sense (Viper) • DAE Trigger - 2 	K2	<ul style="list-style-type: none"> • DAE2 Trans Line Pres or Waste Gate Pres / Accelerometer GND • TSS-/Sensor Ground 	K3	<ul style="list-style-type: none"> • Stop Sense (Viper) • GM Trans Mode C (SWC) - 2
L1	16 INJ Sys - Injector 16	L2	16 INJ Sys Injector V-Batt (+)	L3	16 INJ Sys - Injector 14
M1	16 INJ Sys - Injector 12	M2	GM Trans Shift (+) Solenoid B	M3	Cooling Fan_Hi Lo -2 (optional)
N1	16 INJ Sys - Injector 13	N2	GM Trans 4L60E & 80E TCC PWM	N3	GM Trans Force Motor Hi (+) - 1
P1	16 INJ Sys - Injector 11	P2	<ul style="list-style-type: none"> • GM Trans Shift (+) Solenoid A • NOS System Stage 4 - Input 	P3	<ul style="list-style-type: none"> • Reverse Lockout (Viper) • Spare
R1	16 INJ Sys - Injector 15	R2	16 INJ Sys - Injector 9	R3	16 INJ Sys - Injector 10
S1	<ul style="list-style-type: none"> • GM Trans TOSS (+) • DAE Drive Shaft (+) 	S2	Tach LS1 (Duplicate)	S3	<ul style="list-style-type: none"> • GM Trans TOSS (-) • DAE Drive Shaft (-)
T1	<ul style="list-style-type: none"> • GM Trans TISS (+) • DAE Input Shaft (+) 	T2	<ul style="list-style-type: none"> • DAE Fuel Pressure Signal • Baro Comp Signal 	T3	<ul style="list-style-type: none"> • GM Trans TISS (-) • DAE Input & Turbo Shaft (-)
W1	<ul style="list-style-type: none"> • 3-Step Enable (optional) • E85 (HED Sys) Signal • DAE Turbo Shaft (+) - 1 	W2	16 INJ Sys Injector V-Batt	W3	<ul style="list-style-type: none"> • DAE Oil, Fuel & Turbo Pres & Pan Vac GND • GM Trans Oil Temp & Force Motor Lo - • E85 (HED Sys) GND • Baro Comp GND
X1	<ul style="list-style-type: none"> • GM Trans Mode A (SWA) - 1 • DAE Turbo Pres Signal • NOS (Digi-set) System Stage 2 - Output 	X2	<ul style="list-style-type: none"> • GM Trans Mode B (SWB) - 1 • DAE Oil Pressure Signal • NOS (Digi-set) System Stage 3 - Output 	X3	<ul style="list-style-type: none"> • GM Trans Mode C (SWC) - 1 • DAE Pan Vacuum Signal • NOS (Digi-set) System Stage 4 - Output
Y1	GM Trans Oil Temp Signal	Y2	DAE & GEN3 Systems with Options -Data Log Trigger (Hemi & Uni COP systems)	Y3	<ul style="list-style-type: none"> • DAE Oil, Fuel, Turbo Pres & Pan Vac +5V Ref • Baro Comp +5V Ref