

8.1L Engine Wire Harness Connections

Updated With Curtis 23.07.04 F. Runge

Connector: MTRTWR10 10 pin connector

Pin	Wire Color	Description	Customer Connection
A	Pink	VSW	Customer is to connect their +12V key (or power) switch here. Ignition
B	Dk. Blue	FPP 1	no customer connection required, foot pedal position 1
C	Purple / Yellow	IVS	no customer connection required, idle validation switch used in mobil applications
D	Black / Lt. Green	ANA RTN	no customer connection required, analog return = ground
E	open		
F	Lt. Blue / Black	MIL	connect to ground side of a warning light (optional, not required) malfunction light
G	Lt. Green / Red	V REF	no customer connection required, 5 Volt output from ECM
H	open		
J	Lt. Blue / Pink	START IN (interrupt)	customer is to connect their "start command" to one of these two wires. Interrupt type starter configuration allows the starter to engage only when +12V is placed at pin J. The autocranking option allows the ECM software to control the length and duration of the engine cranking sequence (PSI can configure this option for you at very minimal cost). In either case the starter is locked out after engine is running, to prevent starter and flywheel damage.
K	Pink / Black	START IN (autocrank)	

Connector: MTRTWR8 8 pin connector

Pin	Wire Color	Description	Customer Connection
A	Lt. Blue / White	AUX OUT 2	no customer connection required, output – for example run signal
B	Tan / Dk. Green	AUX IN PD 1	no customer connection required, input pull down to ground (example Notstop)
C	Yellow / Lt. Green	TACH	no customer connection required, tachdrive, configurable
D	Tan / Brown	FUEL SELECT	Used to switch fuels on dual fuel calcs - specific to each cal – input
E	Gray / Dk. Blue	GOV SELECT	Used to change run speeds on discrete speed calcs (with AuxInPu2), input
F	Blue / Pink	CAN +	custom configurable for J1939 -31 contact PSI for use
G	Blue / White	CAN -	custom configurable for J1939 -31 contact PSI for use
H	Purple / Dk. Blue	AUX OUT 1	no customer connection required

Connector: MTRTWR6 6 pin connector

Pin	Wire Color	Description	Customer Connection
A	Black / White	Aux In PD2	no customer connection required
B	Yellow / Dk. Blue	AUX IN PU 2	Used to change run speeds on discrete speed calcs (with Gov Select)
C	Dk. Blue / Yellow	AUX IN PU 1	no customer connection required
D	Pink / Yellow	Fuel Pump +	no customer connection required
E	Black	GROUND	no customer connection required
F	Pink / Dk. Green	RELAY FUSED POWER	customer may power a light load device(s) <12A (optional, not required) Pin F is active only when the ECM is active (engine running)

Connector: MTRSHD6 6 pin connector

Pin	Wire Color	Description	Customer Connection
A	Orange, / Blue	INJ +	Connects to trim valves - LP closed loop and fuel injector gasoline
B	Brown / Blue	INJ 1/Aux 3	Gasoline fuel injector
C	Brown / Green	INJ 2/Aux 4	no customer connection required
D	White / Black	Fuel lockoff	ECU controlled ground signal for fuel lockoff
E	White / Red	GASEOUS TRIM	ECU controlled ground signal for closed loop LP fuel trim solenoid
F	Pink / Tan	VSW (fused)	Power (B+) for the fuel lockoff.