

**NUMBER: 299120007.01****MODEL: Karma****DATE: January 26, 2012****MODEL YEAR: 2012****TITLE: 3 Channel WDI INV-CAN Adapter****PRIORITY:**

Vehicles in Operation

APPLICABILITY:

2012 Karma

MARKET REGION:

U.S., Canada, Europe

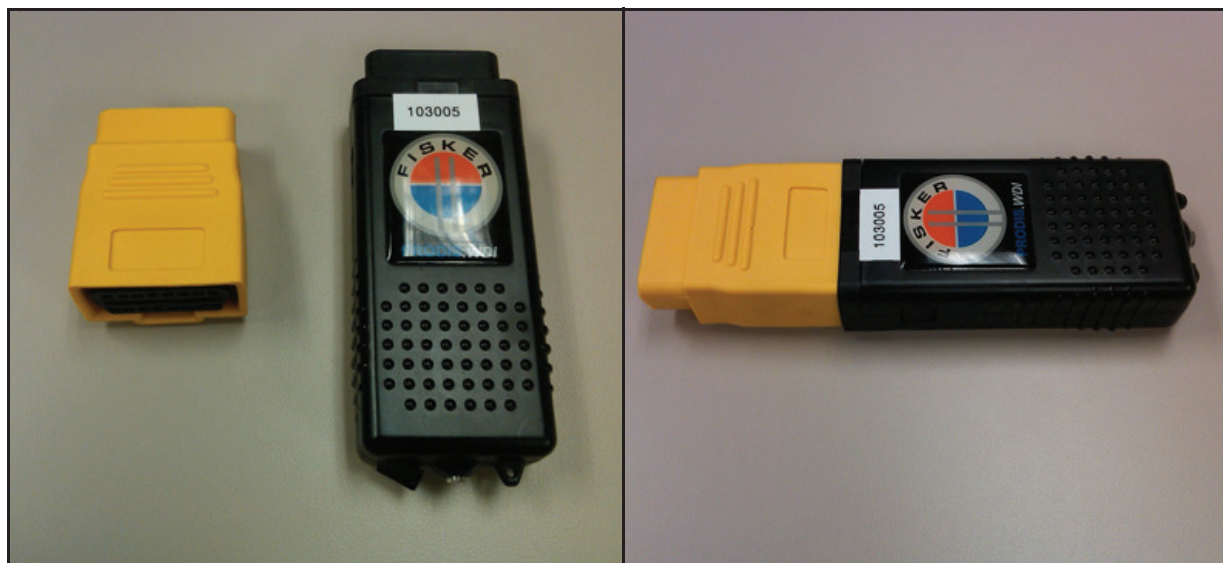
PURPOSE:

Flash reprogramming allows the ECU software to be updated without replacing the ECU. Flash calibration updates for specific vehicle models/ECUs are released as field-fix procedures described in individual service bulletins. This service bulletin describes the use of Fisker WDI INV-CAN adapter when attempting to flash the Generator Inverter (PIM-GEN), Traction Motor Inverter 1 (PIM-TM1), and Traction Motor Inverter 2 (PIM-TM2).

Fisker Retailers using the 3 channel WDI will be required to install the yellow INV-CAN adapter FDT1004 (pictured below) when attempting to flash any of the Inverter ECUs (PIM TM1, PIM TM2, PIM GEN).

OVERVIEW:

- 3 Channel WDI vs. 4 Channel WDI
- 3 Channel WDI **without** INV-CAN adapter installed
- 3 Channel WDI **with** INV-CAN adapter installed
- WDI Identification



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SERVICE BULLETIN

FISKER AUTOMOTIVE, INC.

NUMBER: 299120007.01

MODEL: Karma

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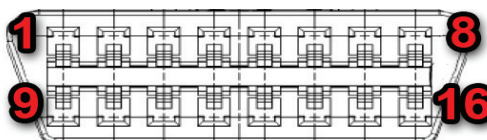
MODEL YEAR: 2012

TITLE: 3 Channel WDI INV-CAN Adapter

3 Channel WDI vs. 4 Channel WDI

The difference between the 3 and 4 channel WDI is the ability of the 4 channel WDI to communicate (flash, read live data, etc...) directly with all 4 CAN buses (Body, Chassis, Powertrain, and Inverter) at the same time.

The 3 channel WDI is only able to do this when the INV-CAN adapter is installed. This INV-CAN adapter reroutes pins 8 (INV-CAN-H) and 9 (INV-CAN-L) of the Data Link Connector (D2301) to pins 6 (PT-CAN-H) and 14 (PT-CAN-L) of the WDI so it can communicate on the 3rd channel. This effectively removes the ability to communicate with any ECU on the PT CAN bus (HCU, BECM, OBCM, ECM, and APM) until the adapter is removed and the technician reconnects to the Fisker Workshop Tester through the MDI Selection screen.



PIN ID	PIN Description	Circuit Description	Comments
1	GMLAN	GM CAN Link	GMLAN Single Wire 33.3k
2	J1850	J1850 COM Circuit	J1850 10.4kbps for HVAC and HSMM
3	B-CAN-H	Body CAN (+)	500k B-CAN Connection (+)
4	Chassis GND	Diagnostic Connector Noisy Ground	
5	Signal GND	Diagnostic Connector Clean Ground	
6	PT-CAN-H	Powertrain CAN (+)	500k PT-CAN (+) OBD II
7			
8	INV-CAN-H	Inverter CAN (+)	500k INV-CAN (+)
9	INV-CAN-L	Inverter CAN (-)	500k INV-CAN (-)
10			
11	B-CAN-L	Body CAN (-)	500k B-CAN (-)
12	C-CAN-H	Chassis CAN (+)	500k C-CAN (+)
13	C-CAN-L	Chassis CAN (-)	500k C-CAN (-)
14	PT-CAN-L	Powertrain CAN (-)	500k PT-CAN (-) OBD II
15	SPBC LIN	LIN Circuit for SPBC	Diagnostic Flash Only
16	CL-30	B+ Battery Feed	B+ Voltage (Hot at all times)

The INV-CAN adapter should only to be used when flashing an inverter. Because it replaces the ability for the WDI to communicate with the PT-CAN bus; the HCU, ECM, BECM, OBCM, and APM will not be available until the adapter is removed.

When switching between using the adaptor and just the WDI, it will be necessary to return to the MDI Selection screen in the Fisker Workshop Tester and reconnect to the WDI and vehicle before continuing diagnostic functions.

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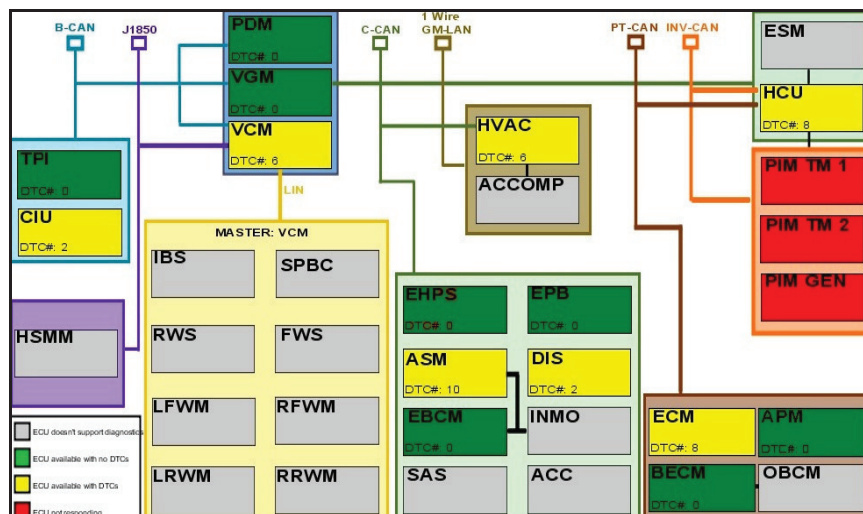
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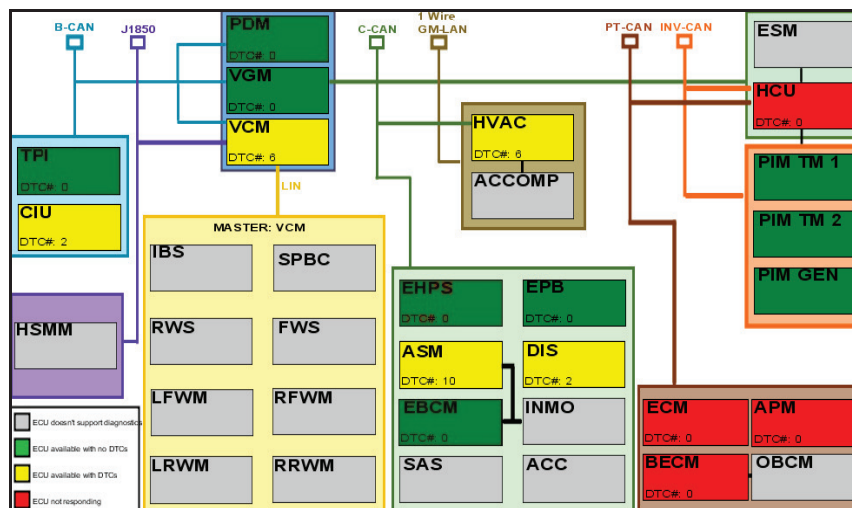
TITLE: 3 Channel WDI INV-CAN Adapter

3 Channel WDI **without** INV-CAN adapter installed



NOTE: In the above picture, PIM TM1, PIM TM2, and PIM GEN ECUs are not communicating because the INV-CAN adapter is not installed.

3 Channel WDI **with** INV-CAN adapter installed



NOTE: In the above picture, PIM TM1, PIM TM2, and PIM GEN ECUs are communicating because the INV-CAN adapter is now installed on the 3 channel WDI. Also note that now the HCU, ECM, BECM, and APM are no longer communicating with the WDI as the PT-CAN is unavailable with the INV-CAN adapter installed.

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WDI Identification

The 3 and 4 channel WDIs are identical in physical appearance, however the 4 channel WDI will be labeled "4x CAN" on the back of it. (See picture below).



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TITLE: 3 Channel WDI INV-CAN Adapter

PARTS REQUIRED:

PART NUMBER	DESCRIPTION
FDT1001	Diagnostic Scan Tool
FDT1004	4 Channel CAN Adapter

SHOP SUPPLIES:

DESCRIPTION
N/A

SPECIAL TOOLS:

DESCRIPTION
N/A

LABOR CODES:

CODE	DESCRIPTION	TIME	DEFECT CODE
N/A		0.0	

SUBLET:

CODE	DESCRIPTION	AMOUNT
N/A		

CAUSAL PART:

PART NUMBER	DESCRIPTION
N/A	

WARRANTY DISPOSITION:

N/A

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