#### 2014 RAM 2500/3500 VSIM USAGE INSTRUCTIONS

#### VSIM (VEHICLE SYSTEM INTERFACE MODULE) USAGE INSTRUCTIONS

#### Overview:

The 2013 RAM Truck engineered upfitter module called the VSIM (Vehicle System Interface Module) carry's over for 2014. Its sales code is "XXS" and is standard with Ambulance Prep (sales code AH2), a "must have" option with PTO Prep (sales codes LBN or LBV), and is available as a stand-alone option. It provides a multitude of useful I/O's to increase upfitter friendliness and upfit simplification. Vehicles not ordered with this option from the factory cannot be retrofitted.

Specifics supplied below:

- 1. Ghost drawings showing the module location within the dash panel.
- 2. The VSIM includes an upfitter wire harness kit (part number 68211680AA or 68211680AB) consisting of four separate color coded harness bundles. Each individual color harness must only be plugged into its corresponding VSIM connector cavity, see photos below showing harness color installations.
- 3. A photo of the four individual color coded VSIM upfitter harness bundles. Note that in a few instances an individual wire color is duplicated within a bundle these duplications are further identified with a paper "flag" showing its circuit number. It's recommended that the upfitter, upon harness bundle routing direction determination(s), install additional harness bundle abrasion protection over each bundle (such as harness convolute).
- 4. Photos showing module installation within a vehicle and harness bundles.
- 5. A chart below delineates the circuits within each color harness bundle, circuit number, signal, wire insulation colors, <u>maximum allowable amperage</u> per circuit, and <u>circuit function</u>.
- 6. A chart below delineates the available 125 kbaud CAN bus messages. If downloadable "DBC" files are needed, they should be requested via the website rambbg@chrysler.com.
- 7. Note 1: six "digital output" circuits require "pull-up" resistors for proper function, if the circuit output is to be used. These circuits are flagged in the VSIM chart with a pound sign (#) in front of the circuit number and light blue hi-lite in the box. These circuits require a dedicated 1K-2.2KΩ, ≥0.5W resistor for each individual circuit. See below for the VSIM chart delineating the circuits requiring a "pull-up" resistor and the accompanying appropriate circuit diagram.
- 8. Note 2: the HSD outputs may require "pull-down" resistors for proper function. If a relay is being driven, a resistor will not be necessary. If the output is inputted to a high impedance device such as a multiplexer, data logger, Fluke multimeter, etc., then the resistor may be required. These circuits are flagged in the VSIM chart with a "^" and red hi-light. These circuits should use a dedicated 10KΩ, ≥0.5W resistor for each individual citcuit. See below for the VSIM chart delineating the circuits requiring a "pull-down" resistor and the accompanying appropriate circuit diagram.
- 9. Note 3: PTO idle speed circuits W541, W542, W543 can only be programmed to function if the vehicle was built with PTO option sales codes LBN or LBV.



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Note: When inserting the VSIM harness connectors an audible "click" will be heard when the connector is fully seated.

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### 2014 RAM 2500/3500 VSIM USAGE INSTRUCTIONS

	2014 RAM Truck VSIM I/O's - Sales Code XXS									
	Connector	Circuit		Cavity	Wire	Max.				
#	Identity	#	Upfitters Signal	#	Color	Amps	Function			
	gray	1 '	1 1	1	1 '	1	this wire is included in the VSIM upfitter			
1	24-cavity	<b>└───</b> ′	ļ)	2	WT/VT		harness but is not used			
			1	1	'	1	i			
!					1 '	1	open circuit when gear selector is in Park,			
1	gray		Transmission out of "Park" - Hou		00	0.5	battery positive voltage (12v) when gear			
2	24-cavity	WV504	ουτρατ	3	ВК	0.5	selector is included in the VSIM unfitter			
3	24-cavity	'		4	BR/IB		harness but is not used			
-	24-00111		,		Divice	-	open circuit when PTO circuit is not			
!	gray		<u> </u>	'	'	1	energized, battery positive voltage (12V)			
4	24-cavity	^W743	PTO on indicator - HSD output	5	VT/TN	1.0	when PTO circuit is energized			
							open circuit when MIL is not illuminated,			
!	gray		<u> </u>	'	'	1	battery positive voltage (12V) when MIL is			
5	24-cavity	^W540	MIL lamp on - HSD output	6	BR/DG	0.5	illuminated			
			, ,		· · · · · · · · · · · · · · · · · · ·		open circuit when gear selector is not in			
!	gray	1 /	Transmission "Park" position - LSD	'	1 '	1	Park, battery negative voltage (0V) when in			
6	24-cavity	W700	output	7	YL/DB	0.5	Park			
- I		['	(,		[ '		open circuit when gear selector is not in			
!	gray	1 2	Transmission "Neutral" position -	'	1 '	1	Neutral, battery negative voltage (0V) when			
7	24-cavity	W701	LSD output	8	DG/YL	0.5	in Neutral			
		,	· · · · · · · · · · · · · · · · · · ·			-	open circuit when A/C clutch is not			
!	gray	1 2	HVAC - A/C clutch engaged - LSD	'	1 '	1	engaged, battery negative voltage (0V)			
8	24-cavity	W652	output	9	LB/BR	0.5	when engaged			
		(,	,		,		125 Kbaud CAN+, use in conjunction with			
!	gray	1 /	**CAN communication - side CAN	'	1 '	1	W534; *refer to CAN spreadsheet for			
9	24-cavity	W532	125+	10	BR/DB		available messages			
!		Γ. '	<u>г</u> ,		[ '		125 Kbaud CAN-, use in conjunction with			
!	gray	1 2	**CAN communication - side CAN	'	1 '	1	W532; *refer to CAN spreadsheet for			
10	24-cavity	W534	125-	11	BR/LB		available messages			
!		1 2	1		1 '	1	open circuit when gear selector is not in			
	gray	/ /	Transmission "Reverse" position -		1		Reverse, battery negative voltage (0V)			
11	24-cavity	W702	LSD output	12	DG/DB	0.5	when in Reverse			
!	gray	1 '	1 1			1	this wire is included in the VSIM upritter			
	24-cavity	┟───┘	ļļ	14	LB/OK		harness but is not used			
!		1 2	1 1		1 '	1	activated via W506, relay driver, open			
!		1 2	1 ,	'	1 '	1	circuit when W506 is "OFF", battery			
!		1 2	1 ,	'	1 '	1	negative voltage (0V) when W506 is "ON",			
	gray	1	1				times out after 30 minutes, re-enable by			
12	24-cavity	W/11	Cargo Lamp output - LSD output	15	WI/IN	0.5	cycling W506 switch			
		1 '	Terremission "Drive" position	'	'	1	open circuit when gear selector is not in			
12	24 cavity	1,11702	Transmission Drive position -	16		0.5	Drive, battery negative voltage (UV) when			
15	24-cavity	W/05		10	DG/LB	0.5	in Drive			
!	gray		1		1 '	1	bettopy positive voltage (12V) when any			
14	24-cavity	00/720	any Door Alar - HSD output	17	VT/OR	0.5	door is aiar			
14	24 curry	10725	any boor Ajun hob output	1,	Vij Sk	0.0				

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	Connector	Circuit		Cavity	Wire	Max.				
#	Identity	#	Upfitters Signal	#	Color	Amps	Function			
15	Black	^W/505	howler Siren disable - HSD output	1	16	0.25	open circuit when vehicle speed is below 25MPH, battery positive voltage (12V) when vehicle speed is 25MPH or above			
	20 00111		nomeronen abable nob output	-		0.20	open circuit when horn not pressed (not			
16	Black 16-cavity	^W513	Horn activation - HSD output	2	BR/GY	0.5	energized), battery positive voltage (12V) when pressed (energized)			
17	Black 16-cavity	^W517	side Airbag deployed - HSD output	3	BR/LG	0.5	open circuit when side airbags have not deployed during current key cycle, battery positive voltage (12V) upon airbag deployment during current key cycle			
18	Black 16-cavity	^W662	Tire Pressure Monitor active - HSD output (applicable only to RAM 2500 under 10,000 GVW)	4	VT/YL	0.5	open circuit when the Tire Pressure Monitor (TPM) indicator lamp is off, battery positive voltage (12V) when the TPM indicator lamp is active			
19	Black 16-cavity	^W735	Power feed, "Off" - HSD output	5	РК	0.5	open circuit when key position is in "Accessory/Run/Start", battery positive voltage (12V) when key position is in "Off"			
20	Black 16-cavity	^W710	driver's Seat Belt not latched - HSD output	6	lg/vt	0.25	open circuit when the drivers seat belt is latched, battery positive voltage (12V) when the drivers seat belt is not latched			
21	Black 16-cavity	#W707	Oil Pressure warning signal - LSD digital output	7	VT/GY	0.1	oil pressure signal: Pulse Width Modulation (PWM) between open circuit and battery negative voltage (0V), 100Hz, linear with 0% PWM =0PSI, and 100% PWM=147PSI			
22	Black 16-cavity	#W733	Voltage gauge - LSD digital output	8	VT	0.5	battery voltage signal: Pulse Width Modulation (PWM) between open circuit and battery negative voltage (0V), 100Hz, linear with 0% PWM =5V, and 100% PWM=18V			
23	Black 16-cavity	^W518	front Airbag deployed - HSD output	9	BR/DG	0.5	open circuit when front airbags have not deployed during current key cycle, battery positive voltage (12V) upon airbag deployment during current key cycle			
24	Black 16-cavity	^W515	Panic Alarm activation - HSD output	10	BR/LB	0.5	open circuit when panic alarm is not active, battery positive voltage (12V) when panic alarm is active			
25	Black 16-cavity	^W726	Service Brake pedal depressed - HSD output	11	DG/OR	0.25	open circuit when the service brake pedal is not pressed, battery positive voltage (12V) when the brake pedal is depressed			

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### 2014 RAM 2500/3500 VSIM USAGE INSTRUCTIONS

	2014 RAM Truck VSIM I/O's - Sales Code XXS									
	Connector	Circuit		Cavity	Wire	Max.				
#	Identity	#	Upfitters Signal	#	Color	Amps	Function			
26	Black 16-cavity	^W734	Power feed, "Accessory" - HSD output	12	PK/GY	0.5	open circuit when key position is in "Off/Run/Start", battery positive voltage (12V) when key position is in "Accessory"			
27	Black 16-cavity	^W736	Power feed, "Run" - HSD output	13	PK/YL	0.5	open circuit when key position is in "Off/Accessory/Start", battery positive voltage (12V) when key position is in "Run" fuel level signal: Pulse Width Modulation (PWM) between open circuit and battery negative voltage (0V), 100Hz, linear with 0%			
	Black						PWM = empty tank, and 100% PWM = full			
28	16-cavity	#W538	Fuel level signal LSD digital output	14	BR/OR	0.1	tank			
29	Black 16-cavity	#W744	engine RPM signal - LSD digital output	15	BR/WT	0.25	engine RPM signal: modulation between open circuit and battery negative voltage (0V), output with 0.2Hz/RPM (12 pulses per minute per 1 RPM) @ 50% duty cycle			
30	Black 16-cavity	#W524	vehicle MPH speed signal, LSD digital output	16	BR/YL	0.1	vehicle speed signal: modulation between open circuit and battery negative voltage (0V), output with 10Hz/MPH (600 pulses per minute per 1 MPH) 50% duty cycle			
31	Brown 16-cavity	#W521	Cluster/Auxiliary lighting dimmer, LSD digital output	1	BR/WT	0.1	using the vehicles instrument cluster dimmer control - will dim auxiliary lighting: PWM between open circuit and battery negative voltage (0V), 100Hz, linear with 0%PWM = zero intensity, and 100%PWM = full intensity			
32	Brown 16-cavity	W722	Door Lock double lock function - "Unlock" all, LSD output	2	DG/TN	0.5	relay driver, mirrors vehicle unlock request with a battery negative voltage (0V) for 500ms			
33	Brown 16-cavity	W503	Auxiliary upfitter added flashing lights front output, LSD output	3	TN/VT	0.25	relay driver for front auxiliary light(s), open circuit when W500 is "OFF", flash on/off at 80 flashes per minute (1.333Hz square wave @ 50% duty cycle) when W500 is "ON"			
34	Brown 16-cavity	W506	auxiliary Cargo Lamp switch signal - digital input	4	WT		cargo lamp ON/OFF, use N.O. switch to ground to activate a relay via W711, times out after 30 minutes, re-enable by cycling switch			
35	Brown 16-cavity	W501	Wig Wag switch signal rear, digital input	5	BR/VT		when grounded actuates Wig Wag vehicle rear stop/turn lamps, 80 flashes per minute (1.3Hz square wave @ 50% duty cycle), also actuates circuit W502			

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	2014 RAM Truck VSIM I/O's - Sales Code XXS										
	Connector	Circuit		Cavity	Wire	Max.					
#	Identity	#	Upfitters Signal	#	Color	Amps	Function				
	Brown						this wire is included in the VSIM upfitter				
	16-cavity			6	GY		harness but is not used				
							MANDATORY CIRCUIT FOR PTO USEAGE				
							When grounded via PTO pressure switch,				
							provides feedback to the vehicle that the				
							PTO has pressure; controls PTO actuation				
							and vehicles dash PTO switch LED				
							illumination status.				
							Reference the PTO Operation & Installation				
							Guide chapter, "PTO Quick Start				
							Information" section, pages 2&3. Use the				
	Drouwn						pass through circuit G425 (V1/YL) to				
26	16 covity	14/709	PTO prossure switch digital input	0			this circuit W708				
50	10-cavity	VV 706	Pro pressure switch - digital input	0	UNJEN		this circuit w/08.				
							relay driver, mirrors vehicle lock request				
	Brown		Door Lock double lock function -	-			with a battery negative voltage (0V) for				
37	16-cavity	W721	"Lock" all, LSD output	9	LG/TN	0.5	500ms				
							relay driver for rear auxiliary light(s), open				
	Brown		Auxiliancunfittor added flashing				circuit when WSOITS OFF, hash on/off at				
20	16-covity	W/502	lights rear output LSD output	10		0.25	@ 50% duty cycle) when W501 is "ON"				
50	To-cavity	11302	ingitis real output, LSD output	10	TRY DIX	0.25	relay driver, open circuit when park brake				
	Brown						not set, battery negative voltage (0V) when				
39	16-cavity	W725	Park Brake applied - LSD output	11	DG/WT	0.5	park brake set				
			Wig Wag switch signal front lights,								
			digital input <u>NOTE</u> : this								
			function must not be used on								
			Laramie, Long Horn, nor 7X91 sales				when grounded actuates Wig Wag vehicles				
			code Power Wagon's - all of which				front high beams, 80 flashes per minute				
	Brown		which are equipped with Projector				(1.3Hz square wave @ 50% duty cycle), also				
40	16-cavity	W500	Headlamps (sales code LMC)	12	BR/OR		actuates circuit W503				
							when grounded mutes the vehicle horns				
	Brown		Panic Alarm mute switch signal -				during "Panic Alarm" active (via vehicles				
41	16-cavity	W537	digital input	13	BR/OR		CAN messaging)				
	Brown						when grounded mutes the vehicle horns				
42	16-cavity	W536	Horn switch mute - digital input	14	BR/YL		(via vehicles CAN messaging)				
	Brown						this wire is included in the VSIM upfitter				
	16-cavity			15	OR		harness but is not used				
	Brown						a source for negative battery voltage (OV)				
43	16-cavity	W709	Ground - ground return	16	BK		tor use on VSIM switched digital inputs only				

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	2014 RAM Truck VSIM I/O's - Sales Code XXS									
	Connector	Circuit		Cavity	Wire	Max.				
#	Identity	#	Upfitters Signal	#	Color	Amps	Function			
44	Green 16-cavity	W544	Split Shaft PTO - digital input	2	GY		when grounded signals the controller it's OK to initiate split shaft PTO			
	Green		· · · ·	3	DB		this wire is included in the VSIM upfitter			
	Green			1	W/T/RR		this wire is included in the VSIM upfitter			
4.	TO-Cavity			4	WIJDK		namess but is not used			
40	Green 16-cavity	W541	PTO idle speed 1 - digital input	5	gy/or		NOTE: vehicle must have been built with PTO option sales code LBN or LBV for the cluster to have the necessary programing software for this feature. When grounded sets the PTO Remote 1 RPM (Set the desired RPM for this circuit by using the instrument cluster programing screen, select: PTO/Remote/RPM Preset 1 - then set the desired RPM); speed 1 trumps F425 @ 900RPM and speeds 2&3; RPM up/down ramp rate is 200RPM/sec.			
4	Green 16-cavity	W543	PTO idle speed 3 - digital input	6	GY/YL		NOTE: vehicle must have been built with PTO option sales code LBN or LBV for the cluster to have the necessary programing software for this feature. When grounded sets the PTO Remote 3 RPM (Set the desired RPM for this circuit by using the instrument cluster programing screen, select: PTO/Remote/RPM Preset 3 - then set the desired RPM), speed 3 trumps F425 @ 900RPM; is trumped by speeds 1 or 2; RPM up/down ramp rate is 200RPM/sec.			
	To-cavity	VVJ45	i to fale speed 5 - digital input		SI/IL		open circuit when Electronic Throttle			
							indicator is not illuminated, battery positive			
	Green		Throttle Valve actuator signal -				voltage (12V) when Electronic Throttle			
48	16-cavity	^W742	HSD output	7	BR/OR	0.5	indicator is illuminated			

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	2014 RAM Truck VSIM I/O's - Sales Code XXS									
	Connector	Circuit		Cavity	Wire	Max.				
#	Identity	#	Upfitters Signal	#	Color	Amps	Function			
49	Green 16-cavity	W656	HVAC - upfitter remote A/C select - digital input	11	LB		NOTE: for 3500/4500/5500 Chassis Cabs only equipped with either Ambulance Prep (AH2), or with Touch Screen radios (RH3/RH4) combined with the VSIM module (XXS). Initiated on vehicles built starting Feb., 2014. When grounded it commands the vehicle A/C system to be activated. If the vehicle A/C isn't on, this input will activate the Freon compressor and turn the vehicles blower to "Low" (3-knob control head); or last selected blower speed (on the touch screen controls). Once this circuit is activated (grounded), the vehicles blower speed control can be used to control the vehicles blower speeds BUT the blower-A/C system cannot be turned completely off. When this circuit is deactivated (un-grounded), the vehicles A/C controls return to normal operation.			
	Green		Separated rear tail lighting - digital				when grounded rear stop/turn lamps			
50	16-cavity	W546	input	12	TN/GY		become turn only (via CAN message)			
51	Green 16-cavity	W542	PTO idle speed 2 - digital input	13	GY/BR		NOTE: vehicle must have been built with PTO option sales code LBN or LBV for the cluster to have the necessary programing software for this feature. When grounded sets the PTO Remote 2 RPM (Set the desired RPM for this circuit by using the instrument cluster programing screen, select: PTO/Remote/RPM Preset 2 - then set the desired RPM); speed 2 trumps F425 @ 900RPM, is trumped by speed 1 but trumps speed 3; RPM up/down ramp rate is 200RPM/sec.			
	Green		engine running Hour Meter - USD				open circuit when engine PDM <450, better			
52	16-cavity	^W522	output	14	BR/VT	0.5	positive voltage (12V) when RPM >450			
							open circuit when park lamps are not on,			
	Green						battery positive voltage (12V) when park			
53	16-cavity	^W699	Park Lamp on - HSD output	15	WT/LG	0.5	lamps are on			

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Connector       Circuit       Upfitters Signal       #       Color       Amps       Function         1. LSD=low side driver       1. LSD=low side driver       2. within a bundle one wire of two duplicate colors will be labeled with its circuit number, the r labeled wire will be the other circuit number with that color       3. **readable CAN messages are delineated on the separate CAN spreadsheet; "DBC" files availate request to the rambbg@chrysler.com.         ^"PULL-DOWN" and #"PULL-UP" RESISTORS REQUIRED - EXTERNAL         PULL-DOWN RESISTOR CIRCUITS - HSD'S OUTPUTS         Circuits ^WS04, ^WS05, ^W513, ^W515, ^W517, ^W518, ^W522, ^W540, ^W662, ^W699, ^W710, ^W720, ^W726, ^W726, ^W734, ^W735, ^W736, ^W742, ^W743       These circuits require a dedicated 10K0, 20, down resistor connected from the circuits ground source. See the "Pull-Down" Resistor connected from the circuits are sistor dedicated only to one circuit.         PULL-UP RESISTOR CIRCUITS FOR DIGITAL OUTPUTS       "These circuits require a dedicated 1K-2.2KD pull-up resistor connected from the circuit.         PULL-UP RESISTOR CIRCUITS FOR DIGITAL OUTPUTS       "These circuits require a dedicated 1K-2.2KD pull-up resistor connected from the circuit.         PULL-UP RESISTOR CIRCUITS FOR DIGITAL OUTPUTS       "These circuits require a dedicated 1K-2.2KD pull-up resistor connected from the circuit.         PULL-UP RESISTOR CIRCUITS FOR DIGITAL OUTPUTS       "These circuits require a dedicated 1K-2.2KD pull-up resistor connected from the circuit.         PULL-UP RESISTOR CIRCUITS FOR DIGITAL OUTPUTS       "These circuits require a dedicated 1K-2.2KD pull-up r	2014 RAM Truck VSIM I/O's - Sales Code XXS								
2. within a bundle one wire of two duplicate colors will be labeled with its circuit number, the r labeled wire will be the other circuit number with that color     3. **readable CAN messages are delineated on the separate CAN spreadsheet; "DBC" files availe request to the rambbg@chrysler.com. <b>^''PULL-DOWN"</b> and #''PULL-UP'' RESISTORS REQUIRED - EXTERNAL <u>PULL-DOWN RESISTOR CIRCUITS - HSD'S OUTPUTS</u> <b>Circuits</b> ^W504, ^W505, ^W513, ^W515, ^W517, ^W518, ^W522, ^W540, ^W662, ^W699, ^W710, ^W720, ^W726, ^W734, ^W735, ^W736, ^W742, ^W743 <b>*</b> These circuits require a dedicated 10K0, 20, down resistor connected from the circuits w ground source. See the "Pull-Down" Res Circuits diagram. <b>*</b> Each circuit requiring a "Pull-Up" resistor m a resistor dedicated only to one circuit. <b>PULL-UP RESISTOR CIRCUITS FOR DIGITAL OUTPUTS *</b> These circuits require a dedicated 1K-2.2K0 pull-up resistor connected from the circuits a +12V source. See the "Pull-Up" Resistor O diagram. For Chassis cabs, +12V can be obt from splicing into circuit Fio66 at location " shown in the schematic within the UPFIT WIRING INTERFACE INSTRUCTIONS chapter. Pick-Ups, +12V can be obtained at the wiring cigarette lighter or another +12V source <b>Circuits #W521, #W524, #W538, #W707, #W733, #W744</b>	Connector     Circuit     Cavity     Wire     Max.       #     Identity     #     Upfitters Signal     #     Color     Amps     Function       1. LSD=low side driver     HSD=high side driver								
3. **readable CAN messages are delineated on the separate CAN spreadsheet; "DBC" files availate request to the rambbg@chrysler.com.           ^"PULL-DOWN" and #"PULL-UP" RESISTORS REQUIRED - EXTERNAL           PULL-DOWN RESISTOR CIRCUITS - HSD'S OUTPUTS           Circuits ^W504, ^W505, ^W513, ^W515, ^W517, ^W518, ^W522, ^W540, ^W662, ^W699, ^W710, ^W720, ^W726, ^W726, ^W734, ^W735, ^W736, ^W742, ^W743         *These circuits require a dedicated 10K0, 20. down resistor connected from the circuits was circuits diagram.           *ULL-UP RESISTOR CIRCUITS FOR DIGITAL OUTPUTS         *Each circuit requiring a "Pull-Up" resistor m a resistor dedicated ny to one circuit.           PULL-UP RESISTOR CIRCUITS FOR DIGITAL OUTPUTS         *These circuits require a dedicated 1K-2.2KG pull-up resistor connected from the circuits a +12V source. See the "Pull-Up" resistor Consected from the circuit.           PULL-UP RESISTOR CIRCUITS FOR DIGITAL OUTPUTS         *These circuits require a dedicated 1K-2.2KG pull-up resistor connected from the circuit.           Circuits #W521, #W524, #W538, #W707, #W733, #W744         *These circuits require a dedicated 1K-2.2KG pull-up resistor connected from the circuit.	2. wi label	2. within a bundle one wire of two or labeled wire will be the other circuite	duplicate co it number wi	ors will b th that co	be labeled with its circuit number, the non- lor				
A"PULL-DOWN" and #"PULL-UP" RESISTORS REQUIRED - EXTERNAL         PULL-DOWN RESISTOR CIRCUITS - HSD'S OUTPUTS         Circuits ^W504, ^W505, ^W513, ^W515, ^W517, ^W518, ^W522, ^W540, ^W662, ^W699, ^W710, ^W720, ^W726, ^W726, ^W734, ^W735, ^W736, ^W742, ^W743       *These circuits require a dedicated 10KΩ, 20, down resistor connected from the circuits w ground source. See the "Pull-Down" Resistor dedicated only to one circuit.         ^W734, ^W735, ^W736, ^W742, ^W743       *Each circuit requiring a "Pull-UP" resistor m a resistor dedicated only to one circuit.         PULL-UP RESISTOR CIRCUITS FOR DIGITAL OUTPUTS       *These circuits require a dedicated 1K-2.2KΩ pull-up resistor connected from the circuits a +12V source. See the "Pull-UP" Resistor C diagram. For Chassis cabs, +12V can be obtiform splicing into circuit F606 at location " shown in the schematic within the UPFIT WIRING INTERFACE INSTRUCTIONS chapter. Pick-Ups, +12V can be obtained at the wiring cigarette lighter or another +12V source	<ol><li>**readable CAN messages are delineated on the separate CAN spreadsheet; "DBC" files available via request to the rambbg@chrysler.com.</li></ol>								
PULL-DOWN" and #"PULL-UP" RESISTORS REQUIRED - EXTERNAL         PULL-DOWN RESISTOR CIRCUITS - HSD'S OUTPUTS         Circuits ^W504, ^W505, ^W513, ^W515, ^W517, ^W518, ^W522, ^W540, ^W662, ^W699, ^W710, ^W720, ^W726, ^W734, ^W735, ^W736, ^W742, ^W743       *These circuits require a dedicated 10KΩ, 20, down resistor connected from the circuits w ground source. See the "Pull-Down" Resistor dedicated only to one circuit.         PULL-UP RESISTOR CIRCUITS FOR DIGITAL OUTPUTS       *Each circuits require a dedicated 1K-2.2KΩ pull-up resistor connected from the circuits a +12V source. See the "Pull-UP" Resistor Circuits a +12V source. See the									
Circuits ^W504, ^W505, ^W513, ^W515, ^W517, ^W518, ^W522, ^W540, ^W662, ^W699, ^W710, ^W720, ^W726, ^W734, ^W735, ^W736, ^W742, ^W743	^"PULL-DOV	L-DOWN" and #"PULL-UP PULL-DOWN RESISTOF	P" RESIS	FORS S - HSD	REQUIRED - EXTERNAL				
*Each circuit requiring a "Pull-Up" resistor m a resistor dedicated only to one circuit. PULL-UP RESISTOR CIRCUITS FOR DIGITAL OUTPUTS *These circuits require a dedicated 1K-2.2KO pull-up resistor connected from the circuits a +12V source. See the "Pull-Up" Resistor O diagram. For Chassis cabs, +12V can be obto from splicing into circuit F606 at location " shown in the schematic within the UPFIT WIRING INTERFACE INSTRUCTIONS chapter. Pick-Ups, +12V can be obtained at the wiring cigarette lighter or another +12V source	uits ^W504, ^W50 522, ^W540, ^W66 ^W734, ^W73	, ^W505, ^W513, ^W515, ^W51 ), ^W662, ^W699, ^W710, ^W72 4, ^W735, ^W736, ^W742, ^W7	17, ^W518 20, ^W720 43	*Thes down	se circuits require a dedicated 10KΩ, ≥0.5W pull n resistor connected from the circuits wire to a round source. See the "Pull-Down" Resistor Circuits diagram.				
*These circuits require a dedicated 1K-2.2KQ pull-up resistor connected from the circuits a +12V source. See the "Pull-Up" Resistor C diagram. For Chassis cabs, +12V can be obt from splicing into circuit F606 at location " shown in the schematic within the UPFIT WIRING INTERFACE INSTRUCTIONS chapter. Pick-Ups, +12V can be obtained at the wiring cigarette lighter or another +12V source				*Each a resi	circuit requiring a "Pull-Up" resistor must use stor dedicated only to one circuit.				
	<u>F</u> cuits #W521, #W52	<u>POLL-OP RESISTOR CIRC</u> 1, #W524, #W538, #W707, #W73	*Thes pull- a +1 diag fro sł WIRI Pick-	AL OUTPUTS se circuits require a dedicated 1K-2.2KΩ, ≥0.5W up resistor connected from the circuits wire to 2V source. See the "Pull-Up" Resistor Circuits gram. For Chassis cabs, +12V can be obtained om splicing into circuit F606 at location "D" as hown in the schematic within the UPFITTER NG INTERFACE INSTRUCTIONS chapter. For HD Ups, +12V can be obtained at the wiring to the cigarette lighter or another +12V source.					
*Each circuit requiring a "Pull-Up" resistor m a resistor dedicated only to one circuit.				*Each a resi:	circuit requiring a "Pull-Up" resistor must use stor dedicated only to one circuit.				

# "Pull - Down" Resistor Circuits – HSD's Outputs



# "Pull - Up" Resistor Circuits – for Digital Outputs



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ALL PH OUT

	VSIM CAN BUS Messages									
#	Name	Unit	Comment	FlexKomComment	FlexKomSigName					
1	WakeupRsn_VSIM		Wakeup reason VSIM	Mode 2 of NM_Ud_Srv	Wakeup_VSIM					
2	WakeupCnt		Counter for module wakeup states during network sleep	Mode 2 of NM_Ud_Srv	Wakeup_VSIM					
3	VIN_MSG		VIN Message Information	Vin Information	VIN_INFO					
4	VEH SPEED	km/h	Vehicle speed	Vehicle speed	VEH SPEED					
5	RT DIST	cm	Distance Traveled by Right Wheel	Distance traveled by wheels	ESP DIST					
6	PRND STAT		PRND Status	PRND Status	PRND STAT					
7	PANEL INTS	%	Panel-/display intensity	Interior lighting status (VSIM bus)	Int LT Stat					
8	OIL PRESS	kPaG	Oil pressure	Oil pressure	OIL PRESS					
9	ODO	km	Odometer	Odometer	ODO					
10	Nw Id		Network identification no.	Network identification no.	Nw Id					
11	 NM Ud Srv		Network management userdata service no.	Network management state	 NM					
12	NM Ud Launch		Network management userdata launch type	Network management state	NM					
13	NM Successor		Network management logical successor	Network management state	NM					
14	NM Mode		Network management mode	Network management state	NM					
15	MIL IMP STAT		Malfunction indicator lamp status	Malfunction indicator lamp status	MIL IMP STAT					
16		cm	Distance Traveled by Left Wheel	Distance traveled by wheels	ESP DIST					
17	HL SW MODE		Headlamp switch mode	Headlamp switch mode	HL SW MODE					
18	EngHours	Hours	Engine hours	Engine hours	EngHours					
19	ENG RPM	rnm	Engine revolutions per minute	Engine revolutions per minute	ENG RPM					
20			Drivers seat helt status	Drivers seat helt status						
20	CmdlgnStat		Commanded ignition switch status	Commanded ignition switch status						
22	BRK SW		Brake switch status	Brake switch status	BRK SW					
22	BATT VOLT	Volte	System voltage	System voltage	BATT VOLT					
20		litors	Average filtered fuel level in liters	Average filtered fuel level in liters						
25		inters	Any impact event (VSIM bus)	Impact events (VSIM bus)	Impact					
26			Audio mute request from VSIM	Audio mute request from VSIM	AudMuteBa					
20			Day light brightness mode	Night=[0] Day=[1]	Interior lighting status (VSIM bus)					
28			Driver door ajar	Door aiar						
20	EtWigWagRo		Front wig wag request	Exterior lighting wig wag packet	WigWagPkt					
30	HORN RO		Horn On Bequest = [1]	Horn On Request = [1]	HORN BO					
31			Left rear door aiar	Door ajar						
32	Impact F		Less severe front event	Impact events (VSIM bus)	Impact					
22	NM_Outfitter		Network management	Network management	NM Outfitter					
2/1	NM Sleen Ack		Network management clean acknowledge	Network management state	NM_OUTILET					
25	NM Sleep_Ack		Network management sleep acknowledge	Network management state	NM					
26			Papie alarm muto	Panic alarm muto						
27	PNC_ALW_WOTE		Panic mode active	Panic mode active						
20			Parklamps are on	off-[0] on-[1]	Parklamps are on					
20			Parsianips are on Passonger door ajar	Door aiar						
35	PSG_AJAK		Passenger door ajar Roar wig wag roquest	Exterior lighting wig wag packet	MigWagRkt					
40			Pight roar door aiar	Door aiar						
41	Awako Diag Actu		Stav awake for diagnostics active	Mode 15 of NM Ltd Spy	Awaka VSIM					
+2 //2	Awake Nwet		Stay awake for network startup	Mode 15 of NM_Ud_Srv	Awake VSIM					
45	SupHrpRc		Suppress horn request	Suppress horn request	SupHrpRg					
44			Turn indication left is on	Turn indication status						
45			Turn indication right is on	Turn indication status						
40			VIN Digits (2 bit accii oncodod)	Vin Information						
4/	VIIV_DATA		vity Digits (o bit ascil encoded)	vininiomation						
					·					