

# **TS Performance Products**



## **Re-Speed**

### **Tire Calibration and Speed Limiter Removal Operation & Installation Manual**

#### **Installation of the TS Performance Re-Speed**

**Read all instructions and fully understand them before installing your TS Performance Re-Speed module. Disconnect the battery terminals and remove keys from ignition before installation.**

Contents:      (1) Switch      (2) Butt Connectors      (2) Zip ties  
                  (2) T-taps      (1) Eyelet Connector      (2) Blue, (1) Pink Connector

### **Installation:**

- 1) Use supplied pink connector, crimp to RED wire on ReSpeed; crimp supplied eyelet to BLACK wire.
- 2) Use the supplied T-tap and tap RED wire into KEY ON +12 V usually located under the dash.
- 3) Connect the black wire to good clean ground.
- 4) Put the other T-tap on black wire to add speed limiter switch later (**Figure 1**).

#### **Speed Sensor Hook-up**

- 5) The speed sensor wires are usually twisted together and sometimes wrapped in black tape unless coming from the ABS or PCM. One of these wires is sensor ground and the other carries the signal. Refer to **Chart D** to locate your speed signal wire. Cut the speed signal wire.
- 6) Using supplied blue butt connectors, connect the Respeeds Green wire to the cut wire coming from sensor. The green wire is the Respeed input and the white wire is the output.
- 7) Connect the Respeeds white wire to the wire going to PCM also using the supplied blue butt connectors.



**Figure 1**



**Figure 2**



**Figure 3**

- a. Mount the switch in an accessible area(**Figure 2**).
- b. Connect purple wire from Respeed to one side of the switch. The two blue connectors will be connected to each side of switch.
- c. Connect supplied wire to the other side of switch. Connect the other side of supplied wire to ground using pink connector (**Figure 3**).
- d. This can be done by crimping pink connector to the supplied wire (**Figure 3**), then connecting that to the red T-tap applied to ground wire earlier in instructions. (**Figure 4**).



**Figure 4**

The speed limiter switch turns the speed limiter on the vehicle on or off. Pushing the switch allows the ReSpeed module to see ground and disable the speed limiter.

## Disable speed limiter

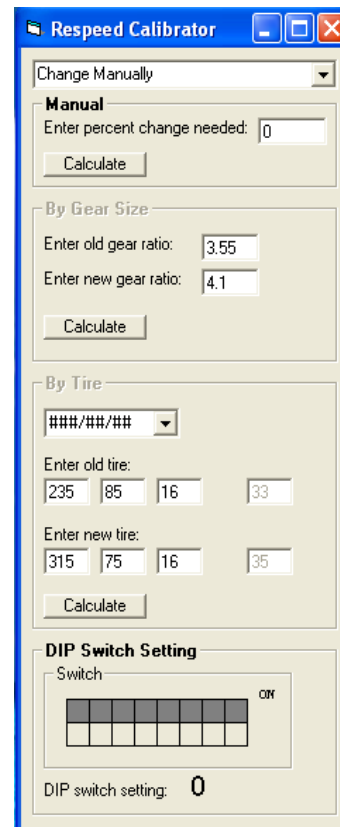
- 1) Leave key off and locate the push button next to the dip switches on re-speed board (**Figure 5**). This button allows the re-speed to go into SET mode if pushed while powering up.
- 2) Hold the button down and turn the vehicle on then release the button.
- 3) The re-speed is now in SET mode. Get the vehicle to the maximum speed desired and push the button again. Now the maximum speed is stored. This lets the computer only to see the maximum speed; disabling the speed limiter. Turn the external switch to ON position. The speed limiter is now disabled and the tachometer should never go above maximum desired speed.



Figure 5

## Tire Calibration

- 1) Locate the 8 pin dip switch on the re-speed shown (**Figure 6**). Each dip switch combination will adjust the speed by a percentage.
- 2) To obtain the percent changes in speed refer to the **Calibration Chart A** on the following page.
- 3) Find your old tire diameter on the left column. From there go over to the new tire diameter, the cell you come to refers to your percent change in tire size.
- 4) Next refer to the **Dip Switch Chart C** on the following page, look at the percent change to find the dip switch settings for the right speed compensation.
- 5) The same method is used for a change in gears. Just refer to the **Gear Ratio Chart B**.
- 6) *If the vehicle has new tires and gears, find the percent change from both charts and add them together.*

A screenshot of the 'Respeed Calibrator' software window. The window has a blue title bar with the text 'Respeed Calibrator' and standard window control buttons. The main content area is divided into several sections. At the top, there is a 'Change Manually' dropdown menu set to 'Manual', followed by an input field for 'Enter percent change needed' with the value '0' and a 'Calculate' button. Below this is the 'By Gear Size' section, which includes input fields for 'Enter old gear ratio' (3.55) and 'Enter new gear ratio' (4.1), with a 'Calculate' button. The 'By Tire' section features a dropdown menu for tire size (set to '###/##/##') and input fields for 'Enter old tire' (235 85 16 33) and 'Enter new tire' (315 75 16 35), with a 'Calculate' button. At the bottom is the 'DIP Switch Setting' section, which shows a row of eight dip switch indicators (all currently off) and a 'DIP switch setting' field with the value '0'.

See our ReSpeed Calculator at [WWW.TSPERFORMANCE.COM](http://WWW.TSPERFORMANCE.COM) to easily obtain dip switch settings.

# Calibration Charts

## Tire Ratios

Tire Change Calibration																				
Old Tire Size (inches)	New tire size (inches)																			
	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
25	0%	4%	8%	12%	16%	20%	24%	28%	32%	36%	40%	44%	48%	52%	56%	60%	64%	68%	72%	76%
26	-4%	0%	4%	8%	11%	15%	19%	23%	27%	31%	35%	38%	42%	46%	50%	54%	58%	62%	65%	69%
27	-7%	-4%	0%	4%	7%	11%	15%	18%	22%	26%	30%	33%	37%	41%	44%	48%	52%	56%	59%	63%
28	-11%	-7%	-4%	0%	3%	7%	11%	14%	18%	21%	25%	29%	32%	36%	39%	43%	46%	50%	53%	57%
29	-14%	-10%	-7%	-3%	0%	3%	7%	10%	14%	17%	21%	24%	27%	31%	34%	38%	41%	45%	48%	52%
30	-17%	-13%	-10%	-7%	-3%	0%	3%	7%	10%	13%	17%	20%	23%	27%	30%	33%	37%	40%	43%	47%
31	-19%	-16%	-13%	-10%	-6%	-3%	0%	3%	6%	10%	13%	16%	19%	22%	26%	29%	32%	35%	39%	42%
32	-22%	-19%	-16%	-13%	-9%	-6%	-3%	0%	3%	6%	9%	12%	16%	19%	22%	25%	28%	31%	34%	38%
33	-24%	-21%	-18%	-15%	-12%	-9%	-6%	-3%	0%	3%	6%	9%	12%	15%	18%	21%	24%	27%	30%	33%
34	-26%	-24%	-21%	-18%	-15%	-12%	-9%	-6%	-3%	0%	3%	6%	9%	12%	15%	18%	21%	23%	26%	29%
35	-29%	-26%	-23%	-20%	-17%	-14%	-11%	-9%	-6%	-3%	0%	3%	6%	9%	11%	14%	17%	20%	23%	26%
36	-31%	-28%	-25%	-22%	-19%	-17%	-14%	-11%	-8%	-6%	-3%	0%	3%	6%	8%	11%	14%	17%	19%	22%
37	-32%	-30%	-27%	-24%	-22%	-19%	-16%	-14%	-11%	-8%	-6%	-3%	0%	3%	5%	8%	11%	14%	16%	19%
38	-34%	-32%	-29%	-26%	-24%	-21%	-18%	-16%	-13%	-10%	-8%	-5%	-3%	0%	3%	5%	8%	10%	13%	16%
39	-36%	-33%	-31%	-28%	-26%	-23%	-21%	-18%	-15%	-13%	-10%	-8%	-5%	-3%	0%	2%	5%	8%	10%	13%
40	-38%	-35%	-33%	-30%	-28%	-25%	-22%	-21%	-18%	-15%	-13%	-10%	-8%	-5%	-2%	0%	2%	5%	7%	10%
41	-39%	-37%	-34%	-32%	-29%	-27%	-24%	-22%	-20%	-17%	-15%	-12%	-10%	-7%	-5%	-2%	0%	2%	5%	7%
42	-40%	-38%	-36%	-33%	-31%	-29%	-26%	-24%	-22%	-19%	-17%	-14%	-12%	-10%	-7%	-5%	-2%	0%	2%	5%
43	-42%	-40%	-37%	-35%	-33%	-30%	-28%	-26%	-23%	-21%	-19%	-16%	-14%	-12%	-9%	-7%	-5%	-2%	0%	2%
44	-43%	-41%	-39%	-36%	-34%	-32%	-30%	-27%	-25%	-23%	-21%	-18%	-16%	-14%	-11%	-9%	-7%	-5%	-2%	0%

Chart A

## Gear Ratios

Gear Ratio Calibration																
Old Gear Ratio	New gear ratio															
	3.07	3.21	3.31	3.42	3.55	3.73	3.91	4.11	4.27	4.56	4.88	5.13	5.29	5.38	5.71	
3.07	0%	-5%	-8%	-11%	-16%	-22%	-27%	-34%	-39%	-49%	-59%	-67%	-72%	-75%	-86%	
3.21	4%	0%	-3%	-6%	-11%	-16%	-22%	-28%	-33%	-42%	-52%	-60%	-65%	-68%	-78%	
3.31	7%	3%	0%	-3%	-7%	-13%	-18%	-24%	-29%	-38%	-47%	-55%	-60%	-63%	-73%	
3.42	10%	6%	3%	0%	-4%	-9%	-14%	-20%	-25%	-33%	-43%	-50%	-55%	-57%	-67%	
3.55	14%	10%	7%	4%	0%	-5%	-10%	-16%	-20%	-28%	-37%	-45%	-49%	-52%	-61%	
3.73	18%	14%	11%	8%	5%	0%	-5%	-10%	-14%	-22%	-31%	-38%	-42%	-44%	-53%	
3.91	22%	18%	15%	13%	9%	5%	0%	-5%	-9%	-17%	-25%	-31%	-35%	-38%	-46%	
4.11	25%	22%	19%	17%	14%	9%	5%	0%	-4%	-11%	-19%	-25%	-29%	-31%	-39%	
4.27	28%	25%	22%	20%	17%	13%	8%	4%	0%	-7%	-14%	-20%	-24%	-26%	-34%	
4.56	33%	30%	27%	25%	22%	18%	14%	10%	6%	0%	-7%	-13%	-16%	-18%	-25%	
4.88	37%	34%	32%	30%	27%	24%	20%	16%	12%	6%	0%	-5%	-9%	-10%	-17%	
5.13	40%	37%	35%	33%	31%	27%	24%	20%	17%	11%	5%	0%	-3%	-5%	-11%	
5.29	42%	39%	37%	35%	33%	29%	26%	22%	19%	14%	8%	3%	0%	-2%	-8%	
5.38	43%	40%	38%	36%	34%	31%	27%	24%	21%	15%	9%	5%	2%	0%	-6%	
5.71	46%	44%	42%	40%	38%	35%	32%	28%	25%	20%	14%	10%	7%	6%	0%	

Chart B

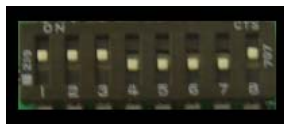
## Dip Switch Chart

%Change in Speed	Dip Switch Values	%Change in Speed	Dip Switch Value
30%	11001100	0%	11111111
29%	10101100	-1%	00111111
28%	00011100	-2%	01011111
27%	01011100	-3%	11101111
26%	10111100	-4%	00101111
25%	11111100	-5%	10001111
24%	01000010	-6%	01110111
23%	00100010	-7%	11010111
22%	11100010	-8%	00010111
21%	10010010	-9%	10100111
20%	00110010	-10%	01000111
19%	11110010	-11%	11111011
18%	10001010	-12%	11011011
17%	00101010	-13%	00011011
16%	01101010	-14%	10101011
15%	10011010	-15%	10001011
14%	11011010	-16%	01110011
13%	01111010	-17%	01010011
12%	00000110	-18%	01100011
11%	11000110	-19%	01000011
10%	01100110	-20%	01111101
9%	00010110	-21%	01011101
8%	01010110	-22%	01101101
7%	11010110	-23%	10001101
6%	00001110	-24%	10110101
5%	01001110	-25%	00010101
4%	10101110	-26%	00100101
3%	00011110	-27%	11111001
2%	01011110	-28%	01011001
1%	00111110	-29%	10101001
0%	11111111	-30%	00001001

**Chart C**

\*\*\* 1 represents dip switch on, 0 represents dip switch off, for example the dip switch settings in **Figure 6** is the equivalent of 11100001.

1 1 1 0 0 0 0 1



**Figure 6**

TS Performance Re-Speed Guide					
Part #	Make	Model	Years	Sensor	Wire Color, Location
1190101	Ford	F-150	1992-1996	VSS	Red/Pink, behind speedometer
			1997-1998	VSS	Grey/ Blk, behind speedometer
		F-250	1992-1996	VSS	Red/Pink, behind speedometer
			1997 HD	VSS	Red/Pink, behind speedometer
			1997-1998 LD	VSS	Grey/BLK, behind speedometer
			1999-2006	ABS	Grey/Blk, from ABS
		F-350	1992-1997	VSS	Red/Pink, behind speedometer
			1999-2006	ABS	Grey/Blk, from ABS
		Bronco	1992-1996 2W ABS	VSS	Red/Pink, behind speedometer
			1994-1996 4W ABS	ABS	Org/Lt.Blue, from ABS (pin 39)
		Explorer	1995-1997	OSS	Grey/Blk, from Transfer case
Mountainer	1995-1997	OSS	Grey/Blk, from Transfer case		
1190102	Ford	Explorer	1998-2001	ABS	Grey/Blk from ABS (pin 19)
			2002-2003	PCM	Grey/Blk at PCM (pin 68)
		Mountainer	1998-2002	ABS	Grey/Blk from ABS (pin 19)
		Sport Trac	1999-2001	ABS	Grey/Blk, from ABS (pin 19)
			2002-2003	PCM	Grey/Blk, at PCM (pin 68)
		Ranger	1998-2000	ABS	Grey/Blk, from ABS (pin 10)
	2001-2002		GEM	Grey/Blk, at GEM Module C201B (pin 14)	
	Dodge	Ram	1992-1997	OSS	White/Orange, from Transfer case
			1998-2002	ABS	White Orange, from ABS
			2003-2005	ABS	Grey/Blk behind battery from ABS
		Dakota	1992-1997	OSS	White/Orange, from Transfer case
	Dakota/Durango	1998-2003	ABS	White/Orange, from ABS	
	Jeep	Cherokee	1992-2001	OSS	White/Orange, from transfer case
		Grand Cherokee	1994-1998	OSS	White/Orange, from Transfer case
			1999-2001	ABS	White/Orange, from ABS (pin 3)
Wrangler		1992	OSS	Blue, from Transfer case	
		1993-2003	OSS	White/Orange, from Transfer case	
Liberty	2002-2003	ABS	Dk Grn/Orange, from ABS		
1190103	Ford	F-250	2007-2008	VSS	Tan/Grn, from back differential
	Dodge	Ram	2006	VSS	Red/Pink, back Differential
		Ram	2007	VSS	Green/Yellow, back Differential

Chart D



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## **DISCLAIMER**

### **READ CAREFULLY BEFORE INSTALLING ANY TS PERFORMANCE PRODUCT**

**REMEMBER THIS IS A HIGH PERFORMANCE PRODUCT. USE AT YOUR OWN RISK. FOR OFF ROAD USE ONLY.**

**Do not use this product until you have carefully read the following agreement.** This agreement sets forth the terms and conditions for the use of the TS Performance product. The installation of this product indicates that the buyer has read and fully understands this agreement and accepts its terms and conditions.

### **DISCLAIMER OF LIABILITY**

TS Performance, its distributors or dealers shall in no way be responsible for the product's proper use and service. The buyer of this system hereby waives all liability claims. The buyer acknowledges that he is not relying on the seller's skill or judgment to select or furnish goods suitable for any particular purpose and that there are no liabilities which extend beyond the description on the face hereof, and the buyer hereby waives all remedies or liabilities, expressed or implied arising by law or otherwise, (including without obligations of the seller with respect to fitness, merchantability and consequential damages) or whether or not occasioned by the seller's negligence.

The seller disclaims any warranty and expressly disclaims any liability for personal injury or damages. The buyer acknowledges and agrees that the disclaimer of any liability for personal injury is a material term for this agreement and the buyer agrees to indemnify the seller and to hold the seller harmless from any claim related to the item of the equipment purchased. Under no circumstances will the seller be liable for any damages or expenses by reason of use or sales of any such equipment.

The seller assumes no liability regarding the improper installation or misapplication of its products. It is the installer's responsibility to check for proper installation and if in doubt the manufacturer is to be contacted.

### **LIMITED LIFETIME WARRANTY**

#### **STATEMENT POLICY**

- The warranty policy is the best warranty within the high performance diesel industry.
- All **TS Performance** products have been inspected, tested and trial in the factory laboratories and on the field.
- Nothing in this Statement of Policy shall alter or enlarge the terms of warranties, obligation or liabilities of these products.
- **TS Performance** is not responsible or liable for any products damaged or destroyed due to improper installation.

#### **TERMS OF WARRANTY**

- The defective product must be freight prepaid and returned to **TS Performance** for further investigation, otherwise this warranty shall be deemed null and voided and of no effect.
- This warranty is void on any products that show evidence of misapplication, negligence, improper installation, and abuse, lack of proper maintenance or alternation from its original design.
- In no event will **TS Performance** be liable for any consequential or incidental damages for breach of any express or implied warranty on the product.
- This warranty is not transferable or assignable.
- **TS Performance** is not responsible or liable for any products damaged or destroyed due to improper installation.

**IN THE EVENT THAT THE BUYER DOES NOT AGREE WITH THIS AGREEMENT: THE BUYER MAY PROMPTLY RETURN THIS PRODUCT IN A NEW ANDN UNUSED CONDITION WITH A DATED PROOF OF PURCHASE TO THE PLACE OF PURCHASE WITHIN TEN (10) DAYS FROM DATE OF PURCHASE FOR A FULL REFUND.**

**THE INSTALLATION OF THIS PRODUCT INDICATES THAT THE BUYER HAS READ AND UNDERSTANDS THIS AGREEMENT AND ACCEPTS ITS TERMS AND CONDITIONS.**