

434913 Rev 2: 1/30/19



Installation Instructions Magnetic Sensor Tachometer 3-3/8"

PRECAUTIONS:

- Read ALL instructions before installing instrument.
- Follow ALL safety precautions when working on vehicle-wear safety glasses!
- ALWAYS disconnect (-) negative battery cable before making electrical connections.

HELP?:

- If after reading these instructions you don't fully understand how to install your instrument(s), contact your local Stewart Warner distributor, or contact our Technical Support Team toll free at 1-800-676-1837
- Additional applications information may be found at www.stewartwarner.com.

GENERAL APPLICATION:

12-volt DC negative (-) ground electrical systems (11-20 VDC operating voltage range for the tachometer, 11-16 VDC for the light bulb.)

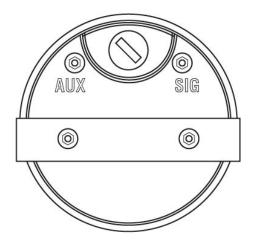
TACHOMETER MOUNTING (Figure 1):

Recommended panel cut-out (hole size) for 3-3/8" tachometer

1

Secure the tachometer in the hole using the supplied bracket and nuts. Be sure to wire the tachometer before mounting.

Figure 1



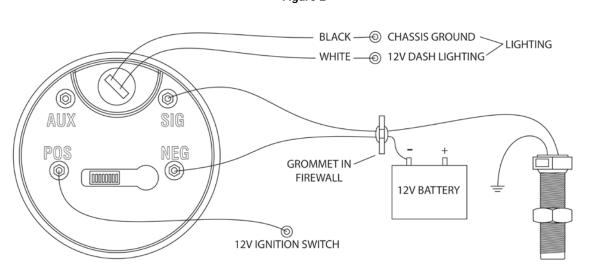
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TACHOMETER WIRING (Figure 2):

- Disconnect negative (-) battery cable.
- Using 18-ga. wire, connect the (NEG) terminal to a clean 2. (rust/paint-free) ground, preferably battery negative terminal.
- Using 18-ga. wire, connect the (POS) terminal to a switched +12V source, like the ignition wire.
- Using 18-ga. wire, connect the (SIG) terminal to one of the mag sensor leads. Connect the other mag sensor lead to ground.
- There are (2) wires for the lighting; Connect the (WHITE) lighting wire to the dash lighting circuit or to a +12V switched circuit. Connect the (BLACK) lighting wire to a chassis ground.
- Calibrate the pulses per revolution (PPR.) Refer to the calibration set-up section.
- 7. Reconnect the negative (-) battery cable & test instrument to ensure that it is working.

4

Figure 2



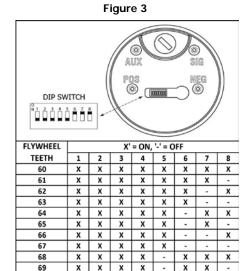
CALIBRATION SET-UP (Figure 3):

- 1. Remove the DIP switch cover on the back of the tachometer.
- Determine the number of teeth on vehicle's flywheel. The Pulses Per Revolution (PPR) will be the same as the number of teeth on the flywheel.

Note: It may be necessary to contact the equipment manufacturer to determine the number of teeth on the flywheel.

- Set the DIP switches to the PPR that matches the number of teeth on the flywheel.
- 4. Replace the DIP switch cover.

TIP: A small screwdriver or pick may aide in the switch setting.



x

70 71

7

Figure 3

FLYWHEEL			X'	= ON,	'-' = C	FF			FLYWHEEL	HEEL X' = ON, '-' = OFF								FLYWHEEL	X' = ON, '-' = OFF						\neg	
TEETH	1	2	3	4	5	6	7	8	TEETH	1	2	3	4	5	6	7	8	TEETH	1	2	3	4	5	6	7	8
73	Х	Х	х	х	-	-	Х	-	97	Х	х	-	х	х	-	х	-	121	Х	Х	-		-		х	-
74	Х	Х	Х	х	-	-		Х	98	х	х	-	х	х	-	-	х	122	Х	Х	-	-	-	-	-	х
75	Х	Х	Х	Х	-	-	-	-	99	Х	Х	-	Х	Х	-	-	-	123	Х	Х	-	-	-	-	-	-
76	Х	Х	Х	-	Х	Х	Х	Х	100	Х	Х		Х	-	Х	Х	Х	124	Х	-	Х	Х	Х	Х	Х	Х
77	Х	Х	Х	-	Х	Х	Х	-	101	Х	Х	-	Х	-	Х	Х	-	125	Х	-	Х	Х	Х	Х	Х	-
78	Х	Х	Х	-	Х	Х	•	Х	102	Х	Х	•	Х		Х		Х	126	Х		Х	Х	Х	Х	•	Х
79	Х	Х	Х	-	Х	Х	•	-	103	Х	Х	٠	Х		Х	•	-	127	Х		Х	Х	Х	Х	•	-
80	Х	Х	Х	-	Х	-	Х	Х	104	Х	Х	-	Х	-	-	Х	Х	128	Х		Х	Х	Х		Х	Х
81	Х	Х	Х	-	Х	-	Х	-	105	Х	Х	•	Х	-		Х	-	129	Х	-	Х	Х	Х	•	Х	-
82	Х	Х	Х	-	Х	-		Х	106	Х	Х		Х	-		-	Х	130	Х	-	Х	Х	Х			Х
83	Х	Х	Х	-	Х	-		-	107	Х	Х	-	Х	-	-	-	-	131	Х	-	Х	Х	Х		-	-
84	Х	Х	Х	-	-	Х	Х	Х	108	Х	Х	•	-	Х	Х	Х	Х	132	Х		Х	Х		Х	Х	Х
85	Х	Х	Х	-	-	Х	Х	-	109	Х	Х	-	-	Х	Х	Х	-	133	Х	-	Х	Х	-	Х	-	-
86	Х	Х	Х	-	-	Х	•	Х	110	Х	Х	•	-	Х	Х		Х	134	Х	-	Х	Х	-	Х	•	Х
87	Х	Х	Х	-	-	Х		-	111	Х	Х		-	Х	Х	-	-	135	Х		Х	Х	-	Х	Х	-
88	Х	Х	Х	-	-	-	Х	Х	112	Х	Х	-	-	Х	-	Х	Х	136	Х	-	Х	Х	-		Х	Х
89	Х	Х	Х	-	-	-	Х	-	113	Х	Х		-	Х		Х	-	137	Х	-	Х	Х	-			-
90	Х	Х	Х	-	-	-		Х	114	Х	Х	-	-	Х	-	-	Х	138	Х		Х	Х	-		-	Х
91	Х	Х	х	-	-	-	-	-	115	х	х	-	-	х	-	-	-	139	х	-	х	Х	-	-	Х	-
92	Х	х	-	х	х	х	х	х	116	х	х	-	-	-	х	х	х	140	х	-	х	-	Х	х	х	х
93	Х	х	-	х	х	х	х	-	117	х	х	-	-	-	х	х	-	141	Х	-	х	-	Х	х	-	-
94	Х	Х	-	Х	Х	Х	-	Х	118	Х	Х	-	-	-	Х	-	Х	142	Х	-	Х	-	Х	Х	-	Х
95	Х	Х	-	Х	Х	Х	•	-	119	Х	Х	•	-	•	Х		-	143	Х	-	Х	•	Х	Х	Х	-
96	X	Х	-	Х	Х	-	Х	Х	120	Х	Х	-	-	-	-	Х	Х	144	Х	-	Х	-	Х	-	Х	Х

9 10

Figure 3

FLYWHEEL			X'	= ON,	'-' = C	FF			FLYWHEEL	X' = ON, '-' = OFF								FLYWHEEL	X' = ON, '-' = OFF							
TEETH	1	2	3	4	5	6	7	8	TEETH	1	2	3	4	5	6	7	8	TEETH	1	2	3	4	5	6	7	8
145	Х	-	Х	-	Х	-	Х	-	169	Х	-	-	Х	-	-	Х	-	193	-	Х	Х	Х	Х	-	х	-
146	Х	-	Х	-	Х	-	-	Х	170	Х	-		Х	-	-	-	Х	194	-	Х	Х	Х	Х	-	-	X
147	Х	-	Х	-	Х		-	-	171	Х	-		Х	-	-	-	-	195	-	Х	Х	Х	Х	-	-	-
148	Х	-	Х	-	-	Х	Х	Х	172	Х	-		-	Х	Х	Х	Х	196		Х	Х	Х		Х	Х	X
149	Х	-	Х	-	-	Х	Х	-	173	Х	-		-	Х	Х	Х	-	197	-	Х	Х	Х		Х	Х	-
150	Х	-	Х	-	-	Х	-	Х	174	Х	-	•	-	Х	Х	-	Х	198		Х	Х	Х	•	Х	-	X
151	Х		Х	-	-	Х		-	175	Х	-	٠		Х	Х		-	199		Х	Х	Х	•	Х	-	-
152	Х	-	Х	-	-		Х	Х	176	Х	-		-	Х	-	Х	Х	200	-	х	Х	Х		-	х	X
153	Х	-	Х	-	-	•	Х	-	177	Х	-	٠	-	Х	-	Х	-	201		Х	Х	Х	•	-	Х	-
154	Х	-	Х	-	-	-	-	Х	178	Х	-		-	Х	-	-	Х	202	-	Х	Х	Х	-	-	-	X
155	Х	-	Х	-	-	-	-	-	179	Х	-		-	Х	-	-	-	203	-	Х	Х	Х		-	-	-
156	Х	-	-	Х	х	Х	Х	Х	180	Х	-		-	-	Х	Х	Х	204	-	Х	Х	-	Х	Х	х	X
157	Х	-	-	Х	Х	Х	Х	-	181	Х	-		-	-	Х	Х	-	205	-	Х	Х	-	Х	Х	-	-
158	Х	-	-	Х	Х	Х		Х	182	Х	-	•		-	Х		Х	206		Х	Х	-	Х	Х	-	X
159	Х	-		Х	Х	Х		-	183	Х	-	•		-	Х		-	207		Х	Х	-	Х	Х	Х	-
160	Х	-	-	Х	Х		Х	Х	184	Х	-	•	-	-	-	Х	Х	208	-	Х	Х	-	Х	-	Х	X
161	Х	-	-	Х	Х		Х	-	185	Х	-		-	-	-	Х	-	209	-	Х	Х	-	Х	-	-	-
162	Х	-	-	Х	х	-	-	Х	186	Х	-		-	-	-	-	Х	210	-	Х	Х	-	Х	-	-	X
163	Х	-	-	Х	Х	-	-	-	187	Х	-		-	-	-	-	-	211	-	Х	Х	-	Х	-	х	-
164	Х	-	-	Х	-	Х	Х	Х	188	-	Х	Х	Х	Х	Х	Х	Х	212	-	Х	Х	-	-	Х	Х	X
165	Х	-	-	Х	-	Х	Х	-	189	-	Х	Х	Х	Х	Х	Х	-	213	-	Х	Х	-		Х	-	-
166	Х	-	-	х	-	Х	-	х	190	-	Х	Х	Х	х	Х	-	х	214	-	х	х	-	-	х	-	х
167	Х	-	-	х	-	Х	-	-	191	-	х	х	х	х	Х	-	-	215	-	х	х	-	-	х	х	-
168	х	-	-	х	-	-	х	х	192	-	х	х	х	х	-	х	х	216	-	х	х	-	-	-	х	Х

Figure 3

FLYWHEEL			X'	= ON,	'-' = O	FF			FLYWHEEL	X' = ON, '-' = OFF										
TEETH	1	2	3	4	5	6	7	8	TEETH	1	2	3	4	5	6	7	8			
217	-	х	Х	-	-	-	х	-	241	-	х	-	-	Х	-	х				
218	-	х	Х	-	-	-	-	Х	242	-	х	-	-	Х	-	-	Х			
219	-	х	Х	-	-	-	-	-	243	-	х	-	-	Х	-	-				
220	-	Х	-	Х	Х	Х	Х	Х	244	-	х	-	-	-	х	х	Х			
221	-	Х	-	Х	Х	Х	Х	-	245	-	Х	-	-	-	Х	х	-			
222	-	Х	-	Х	Х	Х	-	Х	246	-	Х	-	-	-	Х	-	Х			
223	-	Х	-	Х	Х	Х	-	-	247	-	Х	-	-	-	х	-				
224	-	Х	-	Х	Х	-	Х	Х	248	-	Х	-	-	-	-	х	Х			
225	-	Х	-	Х	Х	-	Х	-	249	-	Х	-	-	-	-	х	-			
226	-	Х	-	Х	Х	-	-	Х	250	-	Х	-	-	-	-	-	Х			
227	-	Х	-	Х	Х	-	-	-	251	-	Х	-	-	-	-	-	-			
228	-	Х	-	Х	-	Х	Х	Х	252	-	-	Х	Х	Х	Х	Х	Х			
229	-	Х	-	Х	-	Х	Х	-	253	-	-	х	Х	Х	Х	х	-			
230	-	Х	-	Х	-	Х	-	Х	254	-	-	Х	Х	Х	Х	-	Х			
231	-	Х	-	Х	-	Х		-	255	-	-	Х	Х	Х	Х		-			
232	-	Х	-	Х	-	-	Х	Х												
233	-	Х	-	Х	-	-	Х	-												
234	-	Х	-	Х	-	-	-	Х												
235	-	Х	-	Х	-	-	-	-												
236	-	х	-	-	Х	х	х	х												
237	-	Х	-	-	Х	Х	Х	-												
238	-	х	-	-	х	х	-	х												
239	-	Х	-	-	Х	Х	-	-												
240	-	Х	-	-	Х	-	Х	Х												

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TROUBLESHOOTING:

- Q: My tachometer does not respond at all, what do I do?
- **A:** Check all of the wiring connections and power to the tachometer.
 - If the tachometer needle goes to zero when powered up, but does not respond when the engine is started, there is no signal to the (SIG) terminal. Check to ensure that the terminal is wired to the proper location for a valid signal.
 - If the tachometer needle does not go to zero when powered up, the tachometer is not grounded properly or does not have power to the (POS) terminal. Check to ensure a good chassis ground, preferably at the battery negative. Verify that the (POS) terminal has a 12VDC supply.
- Q: My tachometer does not read correctly, what do I do?
- **A:** First, determine how the reading is incorrect (example: Double, half, quarter, etc.), re-set DIP-switches for correct readings.
 - If the RPM reads double, re-set DIP-switches for ½ the PPR of the current setting.
 - 2. If the RPM reads ½, re-set the DIP-switches for 2 times the current RPM setting.

CLEANING DIRECTIONS:

For proper cleaning of instrumentation/accessories, use a glass cleaner or mild detergent with a spray on and wipe method.

WARRANTY INFORMATION:

TWO (2) YEAR LIMITED WARRANTY. Stewart Warner products are warranted against defects in workmanship and materials for a period of two (2) years from the date of purchase. Proof-of-purchase is required; otherwise, the warranty period shall default to two (2) years from date-of-manufacture (as indicated by the date code on the product). See detailed Warranty Policy for other Terms & Conditions.

STEWART WARNER 1-800-676-1837

www.stewartwarner.com