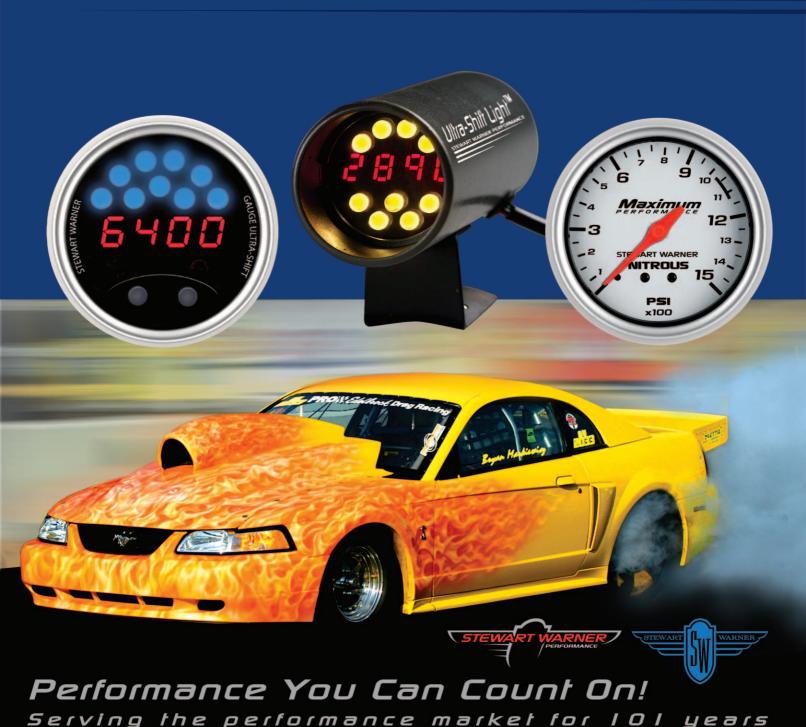
# STEWART WARNER

2006 Performance Products Catalog









Maxima Technologies & Systems, LLC holds the following trademakrs and patents (among others not listed): PATENTS:

U.S. Patent D509,764S

#### TRADE MARKS:

TRADE MARKS:
Track Force USPTO Reg No 1,490,858
Stewart Warner USPTO Reg No 3,020,224
Wings UPTO Reg No 2,918,903
SW (logo) USPTO Reg No 3,001,456
G.U.S. USPTO Reg No 2,911,026
Stewart Warner (logo in wings) USPTO Reg No 2,997,983

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#### Ultra-Shift Lights™





Ultra-Shift Light<sup>TM</sup> (USL) and Gauge Ultra-Shift<sup>TM</sup> (G.U.S.<sup>TM</sup>) offer breakthrough performance for drag racers. USL and G.U.S.<sup>TM</sup> are digital tachs and LED shift lights with peak RPM that cover the full range of engine applications, with resolution to 10 RPM. No pills or modules required! Options include window switch controller and 4-shift technology (peak RPM, 4-shift recall and trap RPM). G.U.S.<sup>TM</sup> puts the digital tach and shift light into a compact 2-1/16" gauge package.

See page 12

STEWART WARNER

#### **Competition Tachs & Gauges**



Competition tachs, gauges, speedometers, shift lights and accessories set a new standard for high-performance and good-looks. Designed with racers in mind, these instruments offer unparalleled reliability, durability and accuracy. Plus, they can be easily customized with LED light kits and paintable bezels. Large, "Face-Forward<sup>TM</sup>" dials with streamlined bezels, bright 3-D orange pointers, engineered resin cases with sealed bulb enclosures, and sealed front ends translate into winning performance!

#### See page 10





New Impact<sup>TM</sup> gauges will inspire you! Available with black or white dials; crisp, easy-to-read graphics; a lighted pointer and backlighting that looks incredible at night; bright stainless steel, streamlined bezel; and domed lens. These gauges are not only good-looking, they're functionally superior with the highest quality construction possible. And, LED light kits are available so you can change gauge colors to match your car's interior.

See page 30



Perhaps the most popular Stewart Warner gauge line ever, Deluxe<sup>TM</sup> established the industry standard more than 40 years ago. Easy-to-read graphics on a black face with a white pointer, low-profile stainless steel bezel and patented light ring for night-time illumination make this gauge one of the most recognizable in the business! Ideal for street rods, hot rods, muscle cars, and even race cars.

See page 24



Wings™

Classic, retro styled Wings<sup>TM</sup> gauges are IDEAL for street rods and collector cars. Available with black, white or cream colored dials; chrome or gold-plate bezels; a distinctive, authentic teardrop pointer with crescent moon dial; and domed lens. If you're aim is originality, put Stewart Warner Wings<sup>TM</sup> in your car or truck--there is NO substitute!





New for 2006: Wings™ tachs are being updated to make them more compatible with today's ignition systems, while speedos now offer easier programming.

See page 32



Your muscle car deserves more power! Adapted from the original 1960s Custom-Deluxe<sup>TM</sup> product line, Power Series<sup>TM</sup> gauges feature a silver disk in the center of the dial--just like the originals; a red, blue or titanium color band that complements Big 3 color schemes; bold, easy-to-read graphics; and white and black pointers with silver hubs.

#### **Power Series**™



See page 36



#### Standard & Standard Plus™

Stewart Warner's Standard gauge line features classic white graphics on a black face with a bright, flat stainless steel bezel, and white pointers. Mechanical gauges use a proven diaphragm mechanism. Dating to the 1940s, Standard gauges are ideal for under-dash mounting.



See page 40



An authentic look for yesterday's or today's cars or trucks, these gauges feature our patented light ring for superior night-time lighting plus a unique black bezel with a brushed bright ring. Bold white-on-black graphics and a classic white pointer with a black hub. The rugged gauges movements are ideal for trucks too.

**Heavy Duty**™



See page 42

#### 5" Instruments







Looking for a way to dress up your classic Chevy or Dodge or Ford dashboard? Stewart Warner's 5" speedometers, tachometers, and 4-in-one gauge clusters are originals--not copies! Available with black-on-white or white-on-black Deluxe<sup>TM</sup> style graphics, contrasting pointers and stainless steel bezels. There are also versions with the Wings<sup>TM</sup> logo. Matching speedometer senders are available.

#### See page 46

#### **Senders & Switches**









Full range of fuel, oil pressure and temperature senders, contained in kits--with gauges--or sold separately, as well as speed sensors and switches. Fuel senders and accessories are available for virtually any car or truck. Specific oil pressure and temperature senders available for SWP and Impact<sup>TM</sup> Series gauges. Also available: electronic fuel-level sensors for gasoline and fuel-cell applications.

#### See page 52











Complete line of SWP gauge pods for cars and trucks, mounting cups and straps, and various SWP and SW gauge panels such as the SW Straight 5 panel. Now, it's easier than ever to put Stewart Warner gauges in your vehicle. And we can support 179 different vehicles with our SWP gauge pods!

#### See page 57

#### **Lighting & Customization**





New Chameleon<sup>TM</sup> offers an unprecedented lighting and customization feature for SWP and Impact<sup>TM</sup> Series gauges by providing variable LED lighting capability for up to eight instruments, with literally more than a million different color combinations. Also available: SWP and Impact<sup>TM</sup> Series LED light kits (single color), replacement light kits, as well as SWP bezel kits for custom projects (e.g. paintable).

See page 55







**Accessories** 

Miscellaneous accessories include adapters for mechanical gauges and temperature senders, tubing kits, stainless steel hose, light kits, fuel pumps and shunts. (Note: Bulk core and casing, special tools, end tips, ferrules and nuts, and drive joint kits and parts are still available in the Stewart Warner Heavy-Duty catalog.) Also available: SWP Ultra-Alert LED warning lights (amber, red, blue).



See page 53

If you are looking for our Heavy Duty Plus<sup>™</sup>, World Wide<sup>™</sup>, Comander<sup>™</sup> gauge lines or core & casing, drive joint kits and halogen lighting or other products, check out our website or request our Heavy Duty catalog from Customer Service at 1-800-676-1837.



Vincent Budano



#### STEWART WARNER "MINI" GAUGES

Stewart Warner's electric "mini" gauges, from the Competition Tachs and Gauges line, are only 1-1/2" in diameter, making them ideal for cars where space is limited. These gauges set a new standard for good-looks and function. Not only do they provide optimal viewing area for a small gauge thanks to our Face-Forward<sup>™</sup> design, they're LED backlit with lighted pointers. In a word, they're AWESOME.

#### Features include:

- ☐ Clean, easy-to-read graphics
- ☐ Black dials only, with aluminum bezel (not removable)
- ☐ Clear pointer with orange back, lighted, for superior night-time visibility
- ☐ Amber, red or blue LED backlighting
- ☐ Totally sealed for all-weather use
- ☐ Easily mounted in or on dashboard or in gauge pod



Custom Pod







116211 (Lit)



116212 (Lit)

#### STEWART WARNER DIESEL PERFORMANCE TACHS

Attention diesel racers and tuners: You need Stewart Warner 6,000 rpm diesel performance tachs NOW. Yes, we know you're out there. Available in 3-3/8" or 5" diameters. The next time you're

club racing at Hockenheim or just flat out racing, you'll get an edge from Stewart Warner thanks to advanced tach electronics, improved accuracy, easy-to-read graphics, and a highly visible pointer.

#### Features include:

- ☐ Innovative lighting scheme—backighting and perimeter lighting which makes the pointer glow at night
- ☐ Optional LED light kits and removable bezels
- ☐ Natural complement to metric gauges and speedometers

### STEWART WARNER DIESEL PERFORMANCE TACHS—FOR SERIOUS RACERS AND TUNERS



114029



#### STEWART WARNER NITROUS GAUGES

Stewart Warner nitrous gauges, from the Competition Tachs & Gauges line, are perfect for drag racing. In addition to their Face-Forward<sup>™</sup> design (which enables the driver to easily see and read the gauge regardless of where it's mounted), they come in two sizes: 2-1/16" and 2-5/8". And, when combined with our Ultra Shift-Light<sup>™</sup> with window switch controller—the awesome product that allows the driver to program any RPM-dependent device, such as a nitrous system, to turn on or off —there is no way you can lose!



Available in 2-1/16" & 2-5/8" diameters 119385 Shown

#### Features include:

- Bold, easy-to-read graphics with reference for optimal pressure range
- ☐ Black, white or silver dials
- ☐ Front-sealed
- ☐ Ideal for use with Ultra-Shift Light<sup>™</sup> with window switch controller

### STEWART WARNER NITROUS GAUGES AND ULTRA-SHIFT LIGHT™ WITH WINDOW SWITCH: YOU CAN'T LOSE!



See our nitrous gauge in Pat Musi's car!



Match your Stewart Warner nitrous gauge with the Ultra-Shift Light<sup>™</sup> with Window Switch



### CUSTOMIZATION OPTIONS—COMPETITION TACHS & GAUGES AND IMPACT™SERIES PRODUCTS

Stewart Warner Competition Tachs & Gauges and Impact<sup>™</sup> series products can be easily customized:

- Change lighting: Replace standard incandescent bulbs with LED light kits. Choose from red, orange, green, blue or white LEDs. Simply remove your standard bulb and insert the LED wafer. It's that easy! (For Competition Tachs & Gauges, Impact™ series gauges.)
- □ **Change bezels:** Replace your gauge's bezel. Just peel off the outer bezel—it's decorative only (not structural)—and install the bezel kit. Choose from black, silver or "paintable" bezels to match the interior of your car! (For Competition Tachs & Gauges only.)
- ☐ **Gauge pods:** Choose from over 200 pods for popular cars and trucks. (For Competition Tachs & Gauges and Impact<sup>™</sup> series gauges.)



Jolynn Viscosi's RX-7







Silver bezel

Black bezel

Maximum

Bo

Fuel 100

Fuel 100

Custom painted bezel

Pod and bezels painted to match custom interior.



**CHANGE THE COLOR NOT THE GAUGE!** 

Our LED light kits allow you to change lighting colors. Look for Chameleon™, coming soon!



**Coming in 2006**—Chameleon<sup>™</sup>, a totally unique LED-based lighting system that enables your Competition Tachs & Gauges to achieve thousands of different color combinations. Chameleon<sup>™</sup> will only be available through special promotions or in Chameleon<sup>™</sup> gauge sets. Watch for our Chameleon<sup>™</sup> ads or go to www.StewartWarner.com for details.

### Cobra® Kit and Individual Gauges







550ABE Reverse Speedometer also available (not part of boxed kit)

#### COBRA® KIT FEATURING DELUXE™ INSTRUMENTS

The original Deluxe<sup>™</sup> Cobra<sup>®</sup> kit from Stewart Warner. Not just a copy. Sold as a kit which includes a 160 mph speedo, 8000 rpm tach, 100 psi oil pressure gauge, 280° water temp gauge, fuel gauge and voltmeter, along with sending units, mounting hardware and lighting. Everything you need to do it right. There was a reason that Shelby used Stewart Warner Deluxe<sup>™</sup> gauges!

#### Features include:

Classic Deluxe<sup>™</sup> graphics—bold and easy-to-read

- ☐ Polished stainless steel, low-profile bezel
- ☐ Original white pointer with black hub and tail
- Other gauges available commonly used as optional Cobra<sup>®</sup> equipment including metric scale gauges
- ☐ Optional Reverse 180 mph speedo (550ABE reverse speedo and 411335-D counter clockwise adapter)

# THERE'S NOTHING BETTER THAN PUTTING ORIGINAL STEWART WARNER DELUXE™ IN YOUR COBRA®!

 $\mathsf{Cobra}^{\texttt{®}}$  is a registered trademark. Stewart Warner makes no claim of endorsement.

COBRA KIT - ORDER KIT #82218						
Included Instruments	Individual Instruments*	Senders Included in Kit				
0-160 MPH Speedo - Mechanical	550BP					
0-8000 RPM Tachometer - Electric (4-, 6-, 8-cylinder)	82170					
0-100 PSI Oil Pressure - Electric	82305	114875				
100-280°F Water Temp - Electric	82307	280ED-F				
240-33.5 OhM Fuel Level	82303	385C-F				
10-16V Voltmeter	82309					
Mounting Hardware	Various					
Light Kits	Various					

<sup>\*</sup> Each instrument can be purchased separately by purchasing the individual kit number listed above.





10 12 14 16 votrs

82309







82305

#### COMPETITION TACHS & GAUGES

### **Competition Tachs & Gauges**





Team JRP's dashboard

### We're breeding champions TODAY with Stewart Warner Competition Tachs and Gauges.

More than ever, racers rely on Stewart Warner instruments, like 7-time ARCA Re/Max Series Champion Frank Kimmel and 2000-2004 NMCA Pro Street Champion Pat Musi. Backed by 100+ years of performance history, these gauges were designed and engineered from the ground-up with the racer in mind. Superior performance, accuracy and durability, combined with advanced lighting and electronics, allows us to deliver a solid 24-month warranty for racing conditions!

#### Features include:

- ☐ Highly accurate—advanced electronics and superior gauge movements
- Large, easy-to-read graphics with low-profile bezels and Face-Forward<sup>™</sup> design enables you to see gauges from any angle at any speed!
- ☐ Totally sealed in front, plus a sealed bulb enclosure—keeps dirt and moisture out
- ☐ Bright orange-red 3-D pointer smoothly transition eye to numbers on the gauge
- ☐ Wide range of mechanical and electrical instruments
- ☐ Outer bezel is decorative and removable—optional bezel kits are available
- ☐ LED light kits also available.

STEWART WARNER COMPETITION TACHS & GAUGES...
PERFORMANCE YOU CAN COUNT ON!



### **Competition Tachs & Gauges**





Pat Musi



Frank Kimmel



Shane Huffman



Vincent Budano

Chuck Foreman, 2nd place finisher in class in 2005 Baja 1000: There were over 350 starters and just under 150 finished. It was the roughest race course we had seen in a long time. Every piece of mechanical equipment was pushed to the limit. The gauges held up great. The truck ran for almost 30 hours. It was nice to have gauges that you could read at a glance. I don't know if we could have done as well as we did if we didn't have the piece of mind that Stewart Warner Gauges gave us."



#### COMPETITION TACHS & GAUGES

### **Ultra-Shift Light Products**



#### Obsessed with winning? So are we.

Stewart Warner's Ultra-Shift Light<sup>™</sup> (USL) products set a new standard in multi-purpose instrumentation for drag racing. USL products serve double duty, with an LED shift light and digital tach. Cool and fast-acting LEDs provide the ideal shift-light solution. And, the USL provides advanced electronics for superior accuracy and reliability.

#### Choose the one that's right for you:

- □ **Ultra-Shift Light™**: Combination LED shift light with digital tach; peak RPM recall; 1-12 cylinder engine applications up to 13,000 rpm—no pills or modules required; amber, red or blue LEDs; programmable through rear of unit via two push-buttons; easy 3-wire installation.
- □ **Ultra-Shift Light**<sup>™</sup> **with 4-Shift Technology**: Same as base USL, except that the unit can be calibrated to four shift points plus it records trap RPM; unit also measures driver reaction times from shift to shift as an indicator of consistency—an ideal feature for the hard-core drag racer.
- □ **Ultra-Shift Light**<sup>™</sup> **with Window Switch**: Same as base USL, except that the unit features a window switch controller that allows the user to program any RPM-dependent device such as a nitrous system; includes 30 amp relay.
- The Gauge Ultra-Shift™ (G.U.S.™): Same as base USL, except that we've put the unit in a compact gauge case and relocated the push-buttons to the front for easier programming. Plus, G.U.S.™ goes all the way to 18,000 rpm, making it ideal for drag bikes. And, it has four brightness levels.

#### Other features:

- ☐ USL packaged in smooth, clean-looking, 1-5/8" diameter tube
- ☐ G.U.S.<sup>™</sup> is contained in a 2-1/16" gauge—ideal for panel or pod mounting
- Adjustable brightness levels
- ☐ Tach display can be turned off
- Mounting bracket included







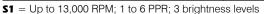
### **Ultra-Shift Light Products**



Select Button



1-5/8" Tube			
LED Color	Amber	Blue	Red
Original (S1)(S4)(S5)	114906	114919	114918
Paintable (S1)(S4)(S5)	114946	114948	114947
Window Switch (S3)(S4)(S6)	114958	114960	114959
4-Shift ((S2)(S3)(S5)	114926	114928	114927
2-1/16" Gauge (G.U.S.™)			
Black Bezel (S3)(S4)(S7)	114929	114931	114930
Silver Bezel (S3)(S4)(S7)	114949	114951	114950



- **S2** = 4 peak recalls plus trap RPM
- **S3** = .5 to 6 PPR; 4 brightness levels; 13,000-18,000 depending on PPR setting (i.e. .5-2 PPR=18,000 RPM; 2.5-4 PPR=15,000 RPM; 5-6 PPR=13,000 RPM)
- S4 = 1 peak recall
- **S5** = Kit includes night cover, mounting hardware and installation instructions
- **S6** = Kit includes 30 amp relay, night cover, mounting hardware and installation instructions
- \$7 = Kit includes mounting hardware and installation instructions



Scroll Button

Gauge Ultra-Shift™ (G.U.S.™)





Gauge Ultra-Shift™ (G.U.S.™) is covered under U.S. patent #D509,764S and U.S. Trade Mark 2,911,026

### COMPETITION TACHS & GAUGES

### **Competition Tachs & Gauges**

TACHOMETERS							
T/DF/wara an	Silver		Black		White		
TYPE/range	5"	3-3/8"	5"	3-3/8"	5"	3-3/8"	
11,000 RPM							
Memory/Shift Light - V - (T1)	114013	-	114012	-	114014	-	
10,000 RPM							
Standard - V - (T3)	114001	114101	114000	114100	114002	114102	
Standard - H - (T3)	114007	114107	114006	114106	114008	114108	
Memory/Shift Light - V - (T1)	-	114110	-	114109	-	114111	
Memory/Shift Light - H - (T2)	114019	114113	114018	114112	114020	114114	
Memory - H - (T4)	114025	-	114024	-	114026	-	
9,000 RPM							
Memory/Shift Light - V - (T1)	114016	-	114015	-	114017	-	
8,000 RPM							
Standard - V - (T3)	114004	114104	114003	114103	114005	114105	
Standard - H - (T3)	114010	114116	114009	114115	114011	114117	
6,000 RPM							
Diesel - H (t5)	114028	114031	114027	114030	114129	114032	



T1 - 1 to 6 PPR applications; 5" include external LED shift light; 3-3/8" shift light LED on dial face; program via control module

- T2 LED shift light is optional; program via control module
- T3 2 to 6 PPR applications, set via dip switches on rear of tach
- **T4** 2, 3, 4 & 6 PPR applications; ; set via dip switches on rear of tach; no microprocessor; complies with NASCAR circle track rules
- T4 Alternator application.

<u>Kits include</u>: mounting strap & in-dash mounting bracket with required hardware, incandescent bulb with socket; red & green light boots; installation instructions; external LED shift light as indicated; remote control









114025







Why is the pointer in different places? See "Return to Zero Function" on page 95 for the answer.





# Competition Tachs & Gauges More than just racing!





Jeremy Varner's award-winning Cavalier (NOPI Class Winner)



Custom '57 Chevy-Inciner8or by Tommy Aloha



Kid Rock's Lincoln w/custom dash & Stewart Warner gauges



Bob Mull's award-winning EVILZ (HIN champion)



BMW's Mini Cooper S gauge package (sold through BMW)



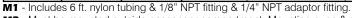
Stewart Warner gauges in '06 Mustang. Pod by MRT (mustangracing.com)

### **Competition Tachs & Gauges**



114555

	2-1/16"		MECHANICAL		2-5/8"		
SILVER	BLACK	WHITE	TYPE/RANGE	SILVER	BLACK	WHITE	
			AIR PRESSURE				
114549	114548	114550	Air Pressure 0-150 psi (M1)	114552	114551	114553	
BOOST & BLOWER PRESSURE							
114531	114530	114532	Blower Press 0-100 psi (M1)	114534	114533	114535	
114374	114373	114375	Boost Press 0-15 psi (M1)	-	-	1	
114377	114376	114378	Boost Press 0-30 psi (M1)	-	-	-	
114525	114524	114526	Boost Press 0-60 psi (M1)	114528	114527	114529	
114386	114385	114387	Boost Press 0-100 psi (M1)	-	-	-	
			FUEL PRESSURE				
114501	114500	114502	Fuel Press 0-15 psi (M2)	114504	114503	114505	
114383	114382	114384	Fuel Press 0-30 psi (M2)	-	-	-	
114507	114506	114508	Fuel Press 0-60 psi (M2)	114510	114509	114511	
114513	114512	114514	Fuel Press 0-100 psi (M2)	114516	114515	114517	
			NITROUS PRESSURE				
119384	119383	119385	Nitrous Press 0-1500 psi	119602	119601	119603	
			OIL PRESSURE				
114519	114518	114520	Oil Press 0-100 psi (M1)	114522	114521	114523	
114389	114388	114390	Oil Press 0-150 psi (M1)	114392	114391	114393	
			OIL TEMPERATURE				
116306	-	-	Oil Temp 140-320°F/2' cap (M3)	-	-	-	
114567	114566	114568	Oil Temp 140-320°F/6' cap (M3)	114570	114569	114571	
116301	116300	116302	Oil Temp 140-320°F/8' cap (M3)	116304	116303	116305	
114573	114572	114574	Oil Temp 140-320°F/12' cap (M3)	114576	114575	114577	
			PRESSURE				
114307	114306	114308	Press 0-200 psi (M1)	114310	114309	114311	
114313	114312	114314	Press 0-300 psi (M1)	114316	114315	114317	
			TRANSMISSION TEMPERATURE				
114579	114578	114580	Trans Temp 140-320°F/9' cap (M3)	114582	114581	114583	
			VACUUM				
114301	114300	114302	Vacuum 0-30 inHg (M1)	114304	114303	114305	
			VAC/BOOST PRESSURE				
114537	114536	114538	Vac/Boost Press 30Hg/15psi (M1)	114540	114539	114541	
114380	114379	114381	Vac/Boost Press 30Hg/25psi (M1)	-	-	-	
114543	114542	114544	Vac/Boost Press 30Hg/40psi (M1)	114546	114545	114547	
			WATER PRESSURE	T			
114585	114584	114586	Water Press 0-15 psi (M4)	114588	114587	114589	
114591	114590	114592	Water Press 0-35 psi (M4)	114594	114593	114595	
			WATER TEMPERATURE				
114555	114554	114556	Water Temp 100-260°F/6' cap (M3)	114558	114557	114559	
114395	114394	114396	Water Temp 100-260°F/8' cap (M3)	114398	114397	114399	
114561	114560	114562	Water Temp 100-260°F/12' cap (M3)	114564	114563	114565	



M2 - Must be mounted outside passenger compartment. Mounting cups & stainless steel braided hose available.

M3 - Includes 1/2" NPT busing; additional adaptors are available.

Kits include: mounting bracket and hardware, incandescent bulb and socket; red & green light boots; installation instructions; additional items if listed in notes

180 -160 240 -140 260 WATER	
180 Maximum 160 240 -140 -	114554
Maximum 160 240 140 240 140 240 Water wares	114556
114591	
15 20 10 Maximum 30	

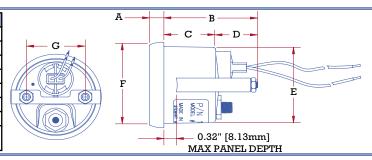
114590

114592

119384

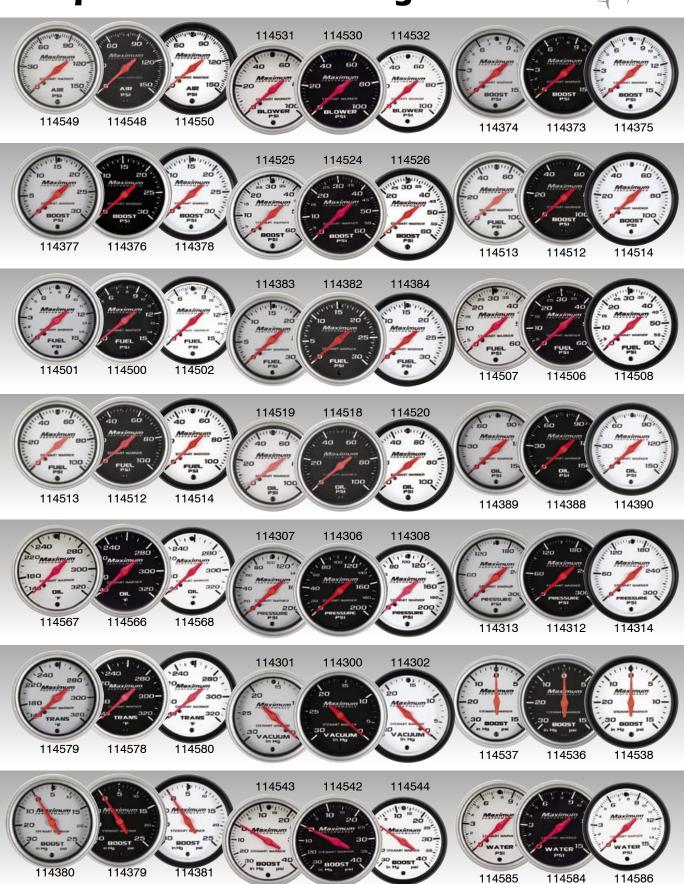


	2-1/16" 2-5/8"		
А	0.37"(9.40mm)	0.37"(38.10mm)	
В	2.31"(58.67mm)	2.31"(58.67mm)	
С	1.60"(40.64mm)	1.60"(40.64mm)	
D	0.71"(18.03mm)	0.71"(18.03mm)	
Е	2.04"(51.82mm)	2.57" (65.28mm)	
F	F 2.18"(55.37mm) 2.74"(69.60n		
G	G 1.50"(38.10mm) 2.00"(50.80		
Min. Panel Cut Out	2.098"+/02 (53.298mm +/508)	2.603" +/02 (66.116 +/508)	



### **Competition Tachs & Gauges**





### **Competition Tachs & Gauges**

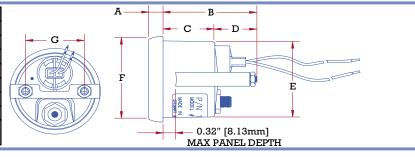


	2-1/16"		ELECTRIC	2-5/8"			
SILVER	BLACK	WHITE	TYPE/RANGE	SILVER	BLACK	WHITE	
AIR/FUEL RATIO							
114901	114900	114902	Air/Fuel Ratio (E1)	114904	114903	114905	
		EX	HAUST TEMPERATURE/PYROME	TER			
114401	114400	114402	Exhaust Temp 200-1600°F (E2)	-	-	-	
114407	114406	114408	Exhaust Temp 600-2200°F (E2)	-	-	-	
			FUEL LEVEL				
114225	114224	114226	Fuel Level 0-90 Ohm	114228	114227	114229	
114231	114230	114232	Fuel Level 73-10 Ohm	114234	114233	114235	
114237	114236	114238	Fuel Level 240-33.5 Ohm (E2)	114240	114239	114241	
114249	114248	114250	Fuel Level 16-158 Ohm	114252	114251	114253	
			FUEL PRESSURE				
114213	114212	114214	Fuel Press 0-15 psi (E3)	114216	114215	114217	
114219	114218	114220	Fuel Press 0-100 psi (E3)	114222	114221	114223	
			OIL PRESSURE				
114255	114254	114256	Oil Press 0-100 psi (E3)	114258	114257	114259	
			OIL TEMPERATURE	V			
114267	114266	114268	Oil Temp 140-320°F (E4)	114270	114269	114271	
			TRANSMISSION TEMPERATURE	E			
114285	114284	114286	Trans. Temp 140-320°F (E4)	114288	114287	114289	
			VOLTMETER				
114201	114200	114202	Voltmeter 8-18V	114204	114203	114205	
			WATER TEMPERATURE				
114273	114272	114274	Water Temp 100-260°F (E4)	114276	114275	114277	

E1 - 0-1 volt input - connect to OEM sensor

<u>Kits include</u>: mounting bracket and hardware, incandescent bulb and socket; red & green light boots; installation instructions; additional items if listed in notes

	2-1/16"	2-5/8"
А	0.37"(9.40mm)	0.37"(38.10mm)
В	2.31"(58.67mm)	2.31"(58.67mm)
С	1.60"(40.64mm)	1.60"(40.64mm)
D	0.71"(18.03mm)	0.71"(18.03mm)
Е	2.04"(51.82mm)	2.57"(65.28mm)
F	2.18"(55.37mm)	2.74"(69.60mm)
G	1.50"(38.10mm)	2.00"(50.80mm)
Min. Panel Cut Out	2.098"+/02 (53.298mm +/508)	2.603" +/02 (66.116 +/508)



**E2** - Sender/sensor or probe available separately; see accessories.

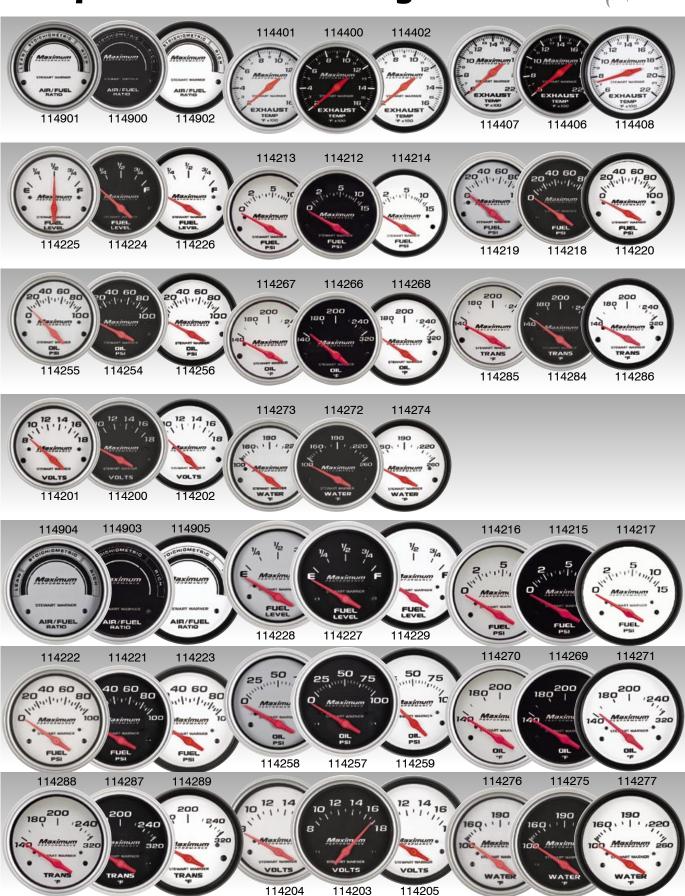
E3 - Includes pressure sender with 1/8" NPT port and 1/4" NPT adaptor fitting.

E4 - Includes 1/8" NPT temperature sender and 3/8" & 1/2" NPT adaptor fittings.

#### COMPETITION TACHS & GAUGES

#### **Competition Tachs & Gauges**





#### COMPETITION TACHS & GAUGES

### **Competition Tachs & Gauges**

PROGRAMMABLE SPEEDOMETERS						
Silver Black White						hite
Range	5″	3-3/8"	5″	3-3/8"	5″	3-3/8"
120 MPH (P1)	-	114701	-	114700	-	114702
160 MPH (P1)	114710	114704	114709	114703	114711	114705
200 MPH (P1)	-	114707	-	114706	-	114708
260 KPH (P2)	114716	114713	114715	114712	114717	114714

P1 - Calibrate/recalibrate using remote reset switch and the drive "1 mile" method

**P2** - Calibrate/recalibrate using remote reset switch and the drive "1 kilometer" method

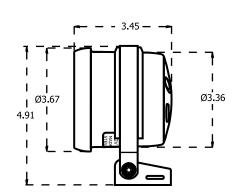
<u>Kits include</u>: remote reset switch; mounting strap & in-dash mounting bracket with required hardware, incandescent bulb with socket; red & green light boots; installation instructions



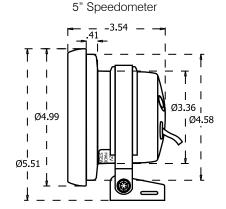
Remote reset switch included with all SWP speedometers. Used for calibration/recalibration as well as accessing the two trip functions.

With our Competition lines speedometers, if you change tire size or gearing, all you have to do is recalibrate the speedometer using the reset switch and drive a

measured mile.



3-3/8" Speedometer



1-1/2" ELECTRIC GAUGES						
	1-1/2" BLACK DIALS					
RANGE/TYPE (LED Color)	AMBER	BLUE	RED			
Fuel Level 240-33.5 (E2)	116218	116220	116219			
Fuel Press 0-15 psi (E3)	116212	116214	116213			
Fuel Press 0-100 psi (E3)	116215	116217	116216			
Oil Press 0-100 psi (E3)	116209	116211	116210			
Oil Temp 140-320°F (E4)	116203	116205	116204			
Trans. Temp 100-280°F (E4)	116206	116208	116207			
Voltmeter 8-18V	116221	116223	116222			
Water Temp 100-260°F (E4)	116200	116202	116201			

- **E2** Sender/sensor or probe available separately; see accessories.
- E3 Includes pressure sender with 1/8" NPT port and 1/4" NPT adaptor fitting.
- **E4** Includes 1/8" NPT temperature sender and 3/8" & 1/2" NPT adaptor fittings.

<u>Kits include</u>: mounting bracket and hardware, installation instructions; additional items if listed in notes

ditional items if listed in notes

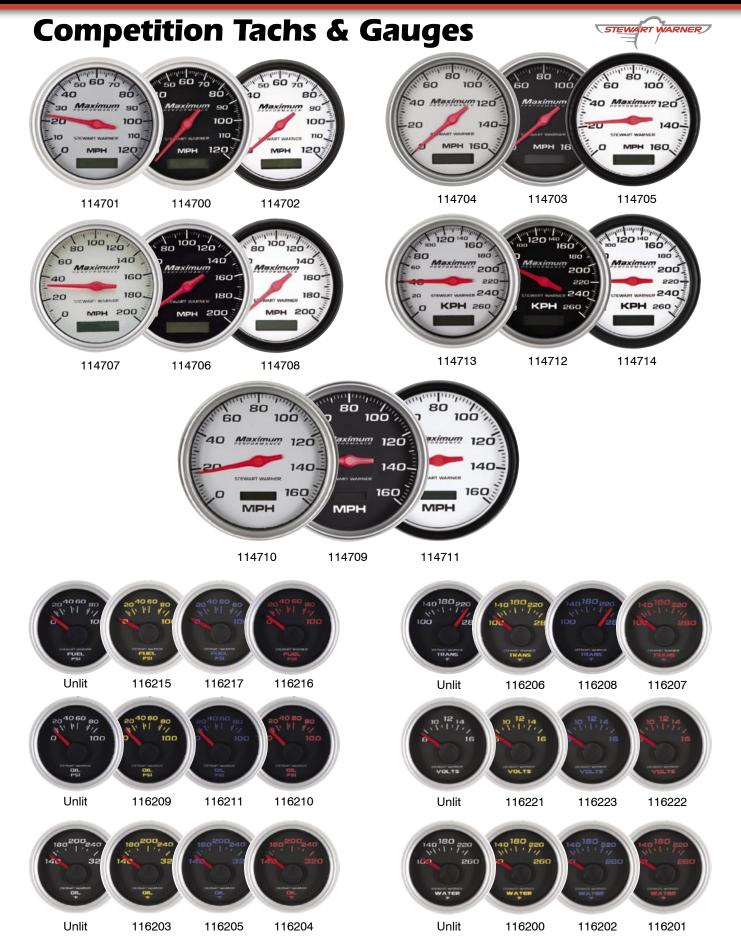
Unlit 116218 116220 116219

Stewart Warner's electric "mini" gauges, from the Competition Tachs and Gauges line, are only 1-1/2" in diameter, making them ideal for cars where space is limited.

Wiring is the same as for full sized electric gauges.







**Competition Tachs & Gauges - Metric** 

TACHOMETERS							
	SIL	VER	BL	ACK	WH	IITE	
TYPE/RANGE	5″	3-3/8"	5″	3-3/8"	5″	3-3/8"	
11,000 RPM							
Memory/Shift Light - V - (T1)	114013	-	114012	-	114014	-	
10,000 RPM							
Standard - V - (T3)	114001	114101	114000	114100	114002	114102	
Standard - H - (T3)	114007	114107	114006	114106	114008	114108	
Memory/Shift Light - V - (T1)	-	114110	-	114109	-	114111	
Memory/Shift Light - H - (T2)	114019	114113	114018	114112	114020	114114	
Memory - H - (T4)	114025	-	114024	-	114026	-	
9,000 RPM							
Memory/Shift Light - V - (T1)	114016	-	114015	-	114017	-	
8,000 RPM							
Standard - V - (T3)	114004	114104	114003	114103	114005	114105	
Standard - H - (T3)	114010	114116	114009	114115	114011	114117	
6,000 RPM							
Diesel - H (t5)	114028	114031	114027	114030	114129	114032	



- T1 1 to 6 PPR applications; 5" include LED shift light; 3-3/8" shift light LED on dial face; program via control module
- T2 LED shift light is optional; program via control module
- T3 2 to 6 PPR applications, set via dip switches on rear of tach
- **T4** 2, 3, 4 & 6 PPR applications; ; set via dip switches on rear of tach; no microprocessor; complies with NASCAR circle track rules
- T5 Alternator application.

<u>Kits include</u>: mounting strap, in-dash mounting bracket, light kit with socket; red & green light boots; installation instructions; external LED shift light if indicated; remote control module included with 3-3/8" memory tachometers

MECHANICAL	GAUGES			
	2-1/16"			
TYPE/RANGE	SILVER	BLACK	WHITE	
AIR PRESSURE				
Air Pressure 10 Bar (M1)	114340	114339	114341	
BOOST PRESSURE				
Boost Press 4 Bar (M1)	114331	114330	114332	
FUEL PRESSURE		_		
Fuel Press 1 Bar (M2)	114319	114318	114320	
Fuel Press 4 Bar (M2)	114322	114321	114323	
Fuel Press 7 Bar (M2)	114325	114324	114326	
OIL PRESSURE				
Oil Press 7 Bar (M1)	114328	114327	114329	
OIL TEMPERATURE				
Oil Temp 60-160°C/1.8m cap (M3)	114346	114345	114347	
VAC/BOOST PRESSURE				
Vac/Boost Press 80cmHg/1 Bar (M1)	114334	114333	114335	
Vac/Boost Press 80cmHg/3 Bar (M1)	114337	114336	114338	
WATER TEMPERATURE				
Water Temp 40-130°C/1.8m cap (M3)	114343	114342	114344	

- M1 Includes 1.8m nylon tubing & 1/8" NPT fitting & 1/4" NPT adaptor fitting.
- **M2** Must be mounted outside passenger compartment. Mounting cups & stainless steel braided hose available.
- M3 Includes 1/2" NPT busing; additional adaptors are available.

<u>Kits include</u>: mounting bracket and hardware, incandescent bulb and socket; red & green light boots; installation instructions; additional items if listed in notes



114029



### COMPETITION TACHS & GAUGES

### Competition Tachs & Gauges - Metric





114713

PROGRAMMABLE SPEEDOMETERS							
	SILVER BLACK		SILVER		ACK	WH	IITE
RANGE	5″	3-3/8"	5″	3-3/8"	5″	3-3/8"	
260 KPH (P2)	114716	114713	114715	114712	114717	114714	

P2 - Calibrate/recalibrate using remote reset switch and the drive "1 KM" method Kits include: remote reset switch; mounting strap & in-dash mounting bracket with required hardware, incandescent bulb with socket; red & green light boots; installation instructions



114712



114714



Remote reset switch included with all SWP speedometers. Used for calibration/recalibration as well as accessing the two trip functions.



114901





114226





114209







ELECTRIC GAUGES							
	2-1/16"						
TYPE/RANGE	SILVER	BLACK	WHITE				
AIR/FUEL RATIO							
Air/Fuel Ratio (E1)	114901	114900	114902				
EXHAUST TEMPERATURE/PYROM	METER (270	° Dial)					
Exhaust Temp 300-1200°C (E2)	114404	114403	114405				
FUEL LEVEL							
Fuel Level 0-90 Ohm	114225	114224	114226				
Fuel Level 73-10 Ohm	114231	114230	114232				
Fuel Level 240-33.5 Ohm (E2)	114237	114236	114238				
Fuel Level 16-158 Ohm	114249	114248	114250				
FUEL PRESSURE							
Fuel Press 1 Bar (E3)	114207	114206	114208				
Fuel Press 7 Bar (E3)	114210	114209	114211				
OIL PRESSURE							
Oil Press 7 Bar (E3)	114261	114260	114262				
OIL TEMPERATURE		,					
Oil Temp 60-160°C (E4)	114264	114263	114265				
TRANSMISSION TEMPERATURE							
Trans. Temp 60-160°C (E4)	114282	114281	114283				
VOLTMETER							
Voltmeter 8-18V	114201	114200	114202				
WATER TEMPERATURE	7						
Water Temp 40-130°C (E4)	114279	114278	114280				

- E1 0-1 volt input connect to OEM sensor
- **E2** Sender/sensor or probe available separately; see accessories.
- E3 Includes pressure sender with 1/8" NPT port and 1/4" NPT adaptor fitting.
- E4 Includes 1/8" NPT temperature sender and 3/8" & 1/2" NPT adaptor fittings. Kits include: mounting bracket and hardware, incandescent bulb and socket; red & green light boots; installation instructions; additional items if listed in notes

#### Deluxe™





#### The gauge that set the standard: Original Stewart Warner Deluxe™

For over 40 years, Stewart Warner Deluxe<sup>™</sup> instruments have set the standard for automotive gauges, with a classic and timeless look that includes the famous SW block logo-your symbol of excellence! From the first Shelbys to Daytonas to muscle cars and street rods, Deluxe<sup>™</sup> gets the job done. And, it remains our most popular line!

#### Features include:

- Bold, easy-to-read, black-on-white graphics that tell you right away it's a Stewart Warner Deluxe™ gauge!
- ☐ Polished stainless steel, low-profile bezel
- ☐ Original white pointer with black hub
- ☐ Wide range of mechanical and electrical instruments
- ☐ 2-5/8" gauges also available



Deluxe<sup>™</sup>: The standard for over 40 years!



### **Deluxe<sup>™</sup>: Tachometers & Speedometers**



		3-3/8"			Additional Kit
Туре	Range	Mech	Elec	Note:	Needed:
Speedometer	0-120 MPH	-	82896	Programmable/ Odometer	82527 or 82646
	0-160 MPH	550BP-D	-		
	180-0 MPH	550ABE	1	Counter Clockwise/ Odometer	411335-D (counter clockwise adapter)
	0-140 KPH	82697	-	Programmable/ Odometer	
	0-140 KPH	-	82656	Programmable/ Odometer	114878 or 82646
Tachometers	5,000 RPM	551AKM-D	-	.5:1 Ratio	
	9,000 RPM	535AH-D	-	.5:0 Ratio	
	6,000 RPM	-	82162B	4-, 6-, 8-Cyl	
	6,000 RPM	-	82162	4-, 6-, 8-Cyl; 12 Pole	
	8,000 RPM	-	82170	4-, 6-, 8-Cyl; 12 Pole	
	8,000 RPM	-	82163	4-, 8-, 12-Cyl; 20 Pole	
		5	5"		
Speedometer	0-160 MPH	-	82698	Programmable/Odo	114878 or 82646
Tachometer	10,000 RPM	-	82699	Ignition coil	

Kits include: Mounting hardware, light kit (bulb & socket), installation instructions. Purchase senders separately.



550ABE Reverse speedometer



82162B



82162B



82170



82692

### Deluxe™: 2-5/8" Gauges



		2-!	5/8"		Additional Kit
Туре	Range	Mech	Elec	Note:	Needed:
Air Pressure	10-100 psi	82408	-		114840 (6 ft. tube) or 114841 (16 ft. tube)
Ammeter	60-0-60	-	82404	Internal Shunt	
Fuel Level	240 Ohm	-	82413		
Fuel Pressure	1-15 psi	82405	-		114840 (6 ft. tube) or 114841 (16 ft. tube)
Oil Pressure	5-100 psi	82406	-		114840 (6 ft. tube) or
	10-100 psi	82407	-		114841 (16 ft. tube)
Oil Temperature	140-325°F	82410-60	-	60" capillary	
	140-325°F	82410-72	-	72" capillary	
	140-325°F	82410-96	-	96" capillary	
Water Temperature	100-265°F	82409-60	-	60" capillary	
	100-265°F	82409-72	-	72" capillary	
	100-265°F	82409-144	-	144" capillary	
Vacuum	0-30 Hg	82411	-		114842

Kits include: Mounting hardware, light kit (bulb & socket), installation instructions. Purchase senders, tubing or shunts separately.

2-5/8" DELUXE™ CHROME PANEL						
Panel/Type	Range(s)	Kit Number:	Notes:	Also Included in Kit:		
Triple Panel						
Fuel Pressure/ Oil Pressure/ Water Temperature	1-15 psi/ 5-100 psi/ 100-265°F	82221	Mechanical	2 ea. of 6 ft. tubing kit 72" cap. on Water Temp ga.		

Kits includes: Mounting panel and hardware, light kit installation instructions and additional accessories as indicated above.



### **D**ELUXE TM

# Deluxe™: 2-1/16" Gauges



		2-1/16"			Additional Kit	
Туре	Range	Mech	Elec	Note:	Needed:	
Air Pressure	10-150 psi	82329	-		114840 (6 ft. tube) or 114841 (16 ft. tube)	
	0-150 psi	-	82346		279C	
Ammeter	30-0-30	-	82310	Internal Shunt		
	60-0-60	-	82311	Internal Shunt		
	100-0-100	-	82313	Internal Shunt		
	100-0-100	-	82343	Reqs. Shunt	407616	
Boost	0-30/0-15	82340	-	Red Pointer		
Exhaust Temp	300-1500°F	-	82335		See probes Page 53	
Fuel Level	240 Ohm	-	82303		Senders Page 48	
	90 Ohm	-	82341		Senders Page 48	
	73 Ohm	-	82342		Use OE sender	
Fuel Pressure	0-16 psi	-	82333		114874	
	1-10 psi	82319	-		Use braided stainless	
	2-30 psi	82320	-		steel hose. Gauge must be mounted outside pas-	
	10-200 psi	82325	-		senger compartment	
Manifold Pressure	2-30 psi	82321	-			
Oil Pressure	0-80 psi	-	82304		279A	
	0-100 psi	-	82305		114875	
	5-80 psi	82322	-			
	5-100 psi	82323	-		114840 (6 ft. tube) or 114841 (16 ft. tube)	
	10-200 psi	82324	-			
Oil Temperature	100-280°F	-	82115		280ED-F	
	140-320°F	-	82308		280EE-F	
	140-325°F	82327-60	-	60" capillary		
	140-325°F	82327-72	-	72" capillary		
	140-325°F	82327-96	-	96" capillary		
	140-325°F	82327-144	-	144" capillary	1	
Trans. Temperature	150-325°F	-	82344		280EE-F	
Water Temperature	100-240°F	-	82306		280EA	
	100-280°F	-	82307		280ED-F	
	100-265°F	82326-60	-	60" capillary		
	100-265°F	82326-72	-	72" capillary	]	
	100-265°F	82326-96	-	96" capillary	1	
	100-265°F	82326-120	-	120" capillary	1	
	100-265°F	82326-144	-	144" capillary	1	
Vacuum	0-30Hg	82328	-		114842	
Voltmeter	10-16V	-	82309	Color Band		
	10-16V	-	82391	Color Band	1	
	20-32V	_	82347	Color Band	1	

Kits include: Mounting hardware, light kit (bulb & socket), installation instructions. Purchase senders, tubing or shunts separately.

### **D**ELUXE TM

### **Deluxe™: Metric**



		2-1	/16"		Additional Kit
Туре	Range	Mech	Elec	Note:	Needed:
Air Pressure	70-1000 kPa	82393			114840 (6 ft. tube) or 114841 (16 ft. tube)
	0-1000 kPa		82388		279C
Ammeter	30-0-30		82310	Internal Shunt	
	60-0-60		82311	Internal Shunt	
	100-0-100		82313	Internal Shunt	
	100-0-100		82343	Reqs. Shunt	407616
Fuel Level	240 Ohm		82303		114876
	90 Ohm		82341		439361-F or 439362-F
	73 Ohm		82342		Use OE sender
Oil Pressure	0-700 kPa		82387		114875
Oil Temperature	60-160°C	82395-72		Tube - 1.83m	
	60-160°C	82395-96		Tube - 2.44m	
	60-160°C	82395-144		Tube - 3.66m	
	60-160°C		82390		280EE-F
Water Temperature	40-130°C	82394-72		Tube - 1.83m	
	40-130°C	82394-96		Tube - 2.44m	
	40-130°C	82394-144		Tube - 3.66m	
	40-115°C		82389		280EC
Voltmeter	10-16V		82309	Color Band	
	10-16V		82391	Color Band	
	20-32V	lle Q analysty inc	82347	Color Band	

Kits include: Mounting hardware, light kit (bulb & socket), installation instructions. Purchase senders, tubing or shunts separately.

		3-3/8″			Additional Kit	
Туре	Range	Mech	Elec	Note:	Needed:	
Speedometer	0-140 KPH	82697		Odometer		
	0-140 KPH		82656	Odometer	114878 or 82646	
Tachometers	5,000 RPM	551AKM-D		.5:1 Ratio		
	9,000 RPM	535AH-D		.5:0 Ratio		
	6,000 RPM		82162B	4-, 6-, 8-Cyl		
	6,000 RPM		82612	4-, 6-, 8-Cyl; 12 Pole		
	8,000 RPM		82170	4-, 6-, 8-Cyl; 12 Pole		
	8,000 RPM		82163	4-, 8-, 12-Cyl; 20 Pole		

Kits include: Mounting hardware, light kit (bulb & socket), installation instructions. Purchase senders separately.

### **Deluxe™: Boxed Kits & Panels**



DELUXE™ BOXED KITS							
Panel/Type	anel/Type Range(s) Kit Number: Notes:						
Boxed Kit							
6-Gauge		82218					
Speedometer	0-160 MPH		3-3/8" Mechanical				
Tachometer	8,000 RPM		3-3/8" Electric	Pressure sender			
Oil Pressure	0-100 PSI		2-1/16" Electric	Temperature sender			
Water Temp	100-280°F		2-1/16" Electric	Fuel level sender			
Fuel Level	240 Ohm		2-1/16" Electric				
Voltmeter	10-16V		2-1/16" Electric				

Kit includes: Light kits, installation instructions and additional accessories as indicated above.

2-1/16" DELUXE™ CHROME PANELS							
Panel/Type	Range(s)	Kit Number:	Notes:	Also Included in Kit:			
Double Panels	Double Panels						
Oil Pressure/ Water Temperature	0-100 psi/ 100-265°F	873137	Electric	Pressure sender Temperature sender			
Oil Pressure/ Water Temperature	5-100 psi/ 100-280°F	873135	Mechanical	6 ft. tubing kit 72" cap. on Water Temp ga.			
Triple Panels							
Oil Pressure/ Water Temperature/ Voltmeter	0-100 psi/ 100-280°F/ 10-16V	873136	Electric	Pressure sender Temperature sender			
Oil Pressure/ Water Temperature/ Voltmeter	5-100 psi/ 100-265°F/ 10-16V	873134	Mechanical (Voltmeter-electric)	6 ft. tubing kit 72" cap. on Water Temp ga.			

Kits include: Mounting panel and hardware, light kits installation instructions and additional accessories as indicated above.

2-5/8" DELUXE™ CHROME PANEL						
Panel/Type Range(s) Kit Number: Notes: Also Included in Kit:						
Triple Panel						
Fuel Pressure/ Oil Pressure/ Water Temperature	1-15 psi/ 5-100 psi/ 100-265°F	82221	Mechanical	2 ea. of 6 ft. tubing kit 72" cap. on Water Temp ga.		

Kits includes: Mounting panel and hardware, light kit installation instructions and additional accessories as indicated above.



82218



## **IMPACT**<sup>TM</sup>



#### You need these gauges!

Your new pick-up looks awesome. Now, it's time for a performance chip. And some new gauges to boot. But not just ANY gauges...you need Stewart Warner Impact™ diesel performance gauges. Finally, a gauge that not only functions well, but also looks like it BELONGS in your truck. Choose an exhaust temp gauge, transmission oil temp gauge, or boost gauge—everything you need to keep an eye on towing, off-road or racing with your big diesel. And, we have a vac/boost gauge too.

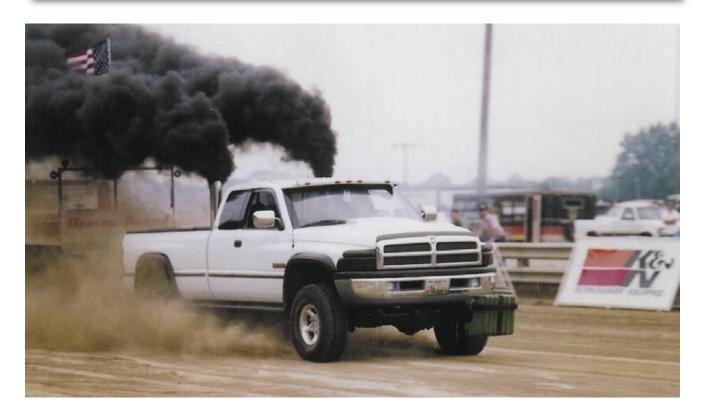


Optional LED Light Kit Shown (114925)

#### Features include:

- ☐ Crisp, easy-to-read, contemporary graphics; white or black dials
- ☐ Polished stainless steel, low-profile bezels with domed lenses
- ☐ Clear pointer with orange back and black hub, lighted
- ☐ Sold as kits, with gauge, sending units and hardware
- ☐ Engine exhaust temp gauge includes thermocouple (probe)
- ☐ Compatible with LED light kits

#### STEWART WARNER MAKES AN IMPACT™



**COMING SOON:** More Impact<sup>™</sup> series gauges, tachs and speedos.

# **IMPACT**<sup>TM</sup>



		2-1/16" Black		2-1/16" White		
Туре	Range	Mech	Elec	Mech	Elec	Note:
Boost	0-30 psi	119916	-	119820	-	Includes tubing kit
Boost	0-60 psi	119917	-	119821	-	Includes tubing kit
Boost	0-100 psi	119918	-	119822	-	Includes tubing kit
Exhaust Temp	0-1600°F	-	119909	-	119815	See 53 for probes
Fuel Pressure	0-15 psi	-	119911	-	119817	Includes sender
Fuel Pressure	0-30 psi	119913	-	119919	-	See 54 for SS hose
Fuel Pressure	0-100 psi	119914	119912	119920	119818	See 54 for SS hose Electric gauge includes sender
Trans. Temperature	140-320°F	-	119910	-	119816	Includes sender
Vac/Boost	30inHg/15psi	119915	-	119819	-	Includes tubing kit

Kits include: Mounting hardware, light kit (bulb & socket), installation instructions. Additional accessories included as indicated above.















119815

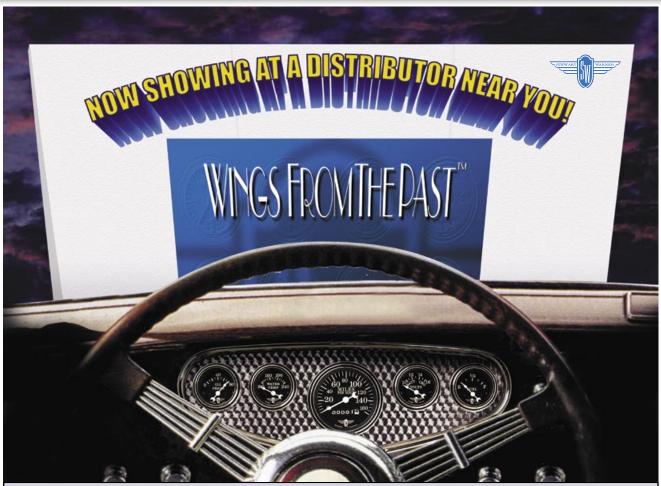






119819 119915

Not all products pictured.



#### Get your original Wings™ today!

Remember the good ol' days when chrome was king and powerful cars ruled the road? When style was just as important as function? If so, we've got the right product for you...original Stewart Warner Wings™. Based on our 1940s style gauges, Wings™ are available with white-on-black, black-on-white, black-on-silver or black-on-cream graphics.

#### Features include:

- ☐ Unique teardrop pointer
- ☐ Chrome- or gold-plated bezels with domed lenses
- ☐ Classic graphics—instantly recognizable as Stewart Warner's
- Wings™ logo (so you know it's Stewart Warner)
- ☐ Available as kits with sending units, or as individual part numbers
- Wings for Truckers<sup>™</sup> available (consult your distributor)



**MEMBER** 

#### **SUPER PRIZE PROGRAM**

Stewart Warner is a proud sponsor of the National Street Rod Association's Super Prize Program. Earn a chance to win a FREE Gold Wings™ set of instruments at each of the NSRA's shows. Be sure to look for Stewart Warner Wings™ instruments at a distributor near you!



### Wings<sup>TM</sup>

### Wings™



















Kit 82243





Kit 82244











Kit 82222













Kit 82523











### Wings™



WINGS™ BOXED KITS								
6-Gauge Kits	Mechanical	Electric	Tach Signal:					
Black	82225	82223	Gas/Ign.; 4, 6, 8-Cyl.					
White	82224	82222	Gas/Ign.; 4, 6, 8-Cyl.					

Electric tachometer (8,000 RPM); electric speedo (160 MPH) & speed sensor; 10-16V voltmeter; 240 Ohm fuel level & sender; 0-80 psi oil pressure (elec kits include pressure sender/mechanical kits include 6 ft. tubing kit w/fittings); 100-240°F water temperature (elec kits include temperature sender/mech kits include 72" capillary tube).

5-Gauge Kits	Mechanical	Electric	
Black	82227	82229	
White	82226	82228	
Beige	-	82243	
Gold	-	82230	
Silver	-	82244	

Electric speedo (160 MPH) & speed sensor; 10-16V voltmeter; 240 Ohm fuel level & sender; 0-80 psi oil pressure (elec kits include pressure sender/mechanical kits include 6 ft. tubing kit w/fittings); 100-240°F water temperature (elec kits include temperature sender/mech kits include 72" capillary tube)

Kits include: All kits include mounting hardware, light kits and installation instructions.











20 10 30 BOOST 10 40 30







































## Wings™



	Blac	:k	Whi	te	Beige	Gold	Silver	
	2-1/1	6"	2-1/1	6"		2-1/16"		
Type/Range	Mech	Elec	Mech	Elec	Elec	Elec	Elec	Additional Kit Needed:
Air Pressure 10-150 psi	82488	-	82487	-	-	-	-	114840 (6 ft. tube) or 114841 (16 ft. tube)
Air Suspen. 2-100 psi	82484	-	82483	-	-	-	-	114840 (6 ft. tube) or 114841 (16 ft. tube)
Boost 40 psi/30 HG	82492	-	82491	-	-	-	-	114842
Fuel Level 240 Ohm	-	82472	-	82471	82532	82522	82499	See fuel senders page 52
90 Ohm	-	82494	-	82493	-	-	-	
73 Ohm	-	82496	-	82495	-	-	-	
Oil Press 80 psi	82476		82475					114840 (6 ft. tube) or 114841 (16 ft. tube)
		82474		82473	82530	82520	82497	279A
Oil Temp 140-320°F	-	82490	-	82489	-	-	-	280EE-F
Pyrometer <sup>4</sup> 300-1500°F	-	82486	-	82485	-	-	-	See page 53 for probes
Water Temp 100-240°F	-	82478	-	82477	82531	82521	82498	280EC
100-265°F								
72" cap.	82480-72		82479-72					
96" cap.	82480-96		82479-96					
144" cap.	82480-144		82479-144					
Voltmeter 10-16V	-	82482	-	82481	82533	82523	82610	
	3-3/8	В"	3-3/8	В"				
Tachometer 8,000 RPM	-	82660	-	82659	82613	82608	82614	4, 6, 8-cylinder
3,500 RPM	-	82672 <sup>1</sup>	-	82671 <sup>1</sup>	-	-	-	See note 1 below
3,500 RPM	-	82674 <sup>2</sup>	-	82673 <sup>2</sup>	-	-	-	See note 2 below
Speedometer 80 MPH	82666	-	82665	-	-	-	-	
120 MPH	-	82670 <sup>3</sup>	-	82669 <sup>3</sup>	-	-	-	See note 3 below
160 MPH	82664		82663					
		82662 <sup>4</sup>		82661 <sup>4</sup>	82612 <sup>4</sup>	82607 <sup>4</sup>	82611 <sup>4</sup>	See note 4 below

Kits include: Mounting hardware, light kit (bulb & socket), installation instructions. Purchase senders or tubing separately.

1 Programmable for alternator or order sender 114878 for mechanical take-off applications

<sup>&</sup>lt;sup>2</sup> For tone/flywheel applications and requires sender 82674

<sup>&</sup>lt;sup>3</sup> Senders: Mechanical take-off applications require sender 82527; Tone/Flywheel applications require sender 82646

<sup>&</sup>lt;sup>4</sup> Senders: Mechanical take-off applications require sender 114878; Tone/Flywheel applications require sender 82646



# You feel the power...your heart is pounding...the G's force you back in your seat.

Glancing down, your Stewart Warner instruments respond quickly and accurately, and you know all is well. Stewart Warner salutes the muscle cars of yesterday and today with POWER SERIES™, derived from the real thing—our 1960s Custom-Deluxe™ "Green Line" gauges used on Big 3 muscle cars. Available in three accent colors—burgundy, titanium and blue/gray—to complement popular car color schemes.

#### Features include:

- Silver disk in center of gauge, just like the originals
- ☐ Specially designed pointer with black base and silver hub
- ☐ Bold, easy-to-read graphics
- ☐ Chrome-plated bezels
- Sold as kits with sending units, or as individual part numbers







Coming in the future: Original style "Green Line" gauges!

### Power Series TM

#### **Power Series**™















Box Kit 82247













Box Kit 82254



Box Kit 82253











### **Power Series**™



POWER SERIES BOXED KITS					
6-Gauge Kits	Mechanical	Electric	Tach Signal:		
Blue/Gray	82250	82247	Gas/Ign.; 4, 6, 8-Cyl.		
Burgundy	82248	82245	Gas/Ign.; 4, 6, 8-Cyl.		
Titanium	82249	82246	Gas/Ign.; 4, 6, 8-Cyl.		

Electric tachometer (8,000 RPM); electric speedo (160 MPH) & speed sensor; 10-16V voltmeter; 240 Ohm fuel level & sender; 0-80 psi oil pressure (elec kits include pressure sender/mechanical kits include 6 ft. tubing kit w/fittings); 100-240°F water temperature (elec kits include temperature sender/mech kits include 72" capillary tube).

5-Gauge Kits	Mechanical	Electric	
Blue/Gray	82256	82253	
Burgundy	82254	82251	
Titanium	82255	82252	

Electric speedo (160 MPH) & speed sensor; 10-16V voltmeter; 240 Ohm fuel level & sender; 0-80 psi oil pressure (elec kits include pressure sender/mechanical kits include 6 ft. tubing kit w/fittings); 100-240°F water temperature (elec kits include temperature sender/mech kits include 72" capillary tube)

Kits include: All kits include mounting hardware, light kits and installation instructions.

#### Box Kit 82250











82844

82763

82841

Box Kit 82246

Box Kit 82245

82517

82752









82753

82515





82839





82754



82757









82837

82840

82758

### **Power Series**™



	Blue/Gi	ray Ring	Burgun	dy Ring	Titaniu	ım Ring	Additional Kit
	2-1	/16″	2-1	/16"	2-1/16"		Needed:
Type/Range	Mech	Elec	Mech	Elec	Mech	Elec	
Fuel Level 240 Ohm	1	82517	1	82515	1	82516	Senders Page 52
Oil Press 0-80 psi	82763	-	82755	-	82759	ı	114840 (6 ft. tube) or 114841 (16 ft. tube)
	-	82760	-	82752	-	82756	279A
Water Temp 100-265°F	82844	-	82842	-	82843	-	72" capillary included
100-240°F	-	82761	-	82753	-	82757	280EC
Voltmeter 10-16V	-	82762	-	82754	-	82758	
	3-3	3/8″	3-3	3/8″	3-3	3/8"	
Tachometer 8,000 RPM (4, 6, 8-cyl.)	1	82838		82845	1	82837	
Speedometer 160 MPH	-	82841	-	82839	-	82840	114878 or 82846

Kits include: Mounting hardware, light kit (bulb & socket), installation instructions. Purchase senders or tubing separately.

#### Box Kit 82249

Box Kit 82248

Box Kit 82250













82516 82759





















#### Standard & Standard Plus™







#### Want to dress up your classic collector car?

Add Stewart Warner Standard<sup>™</sup> or Standard Plus<sup>™</sup> gauges. Cars or trucks from the '40s through the '60s are especially suited for single, double or triple gauge panels, typically mounted under those big dashboards. If you want an authentic line of classic old-style Stewart Warner gauges, then Standard<sup>™</sup> is the line for you. And, if you need lighting just like the originals, step up to Standard Plus<sup>™</sup> gauges.

#### Features include:

- ☐ Original white-on-black graphics arranged in a 60° arc
- ☐ Flat bright stainless steel bezel
- ☐ Unique pointer with hub at bottom of gauge
- ☐ 2-1/32" diameter case-same as originals
- ☐ Standard<sup>™</sup> gauges in sealed case, non-illuminated
- ☐ Standard Plus<sup>™</sup> sold as kits with gauges, mounting panels (1-, 2- or 3-gauge) and lighting (external, indirect)



82214B72



82215B



82217B

### STANDARD™ & STANDARD PLUS™

#### Standard & Standard Plus™



STANDARD GAUGES						
		2-1,	/32″		Additional Kit	
Туре	Range	Mech	Elec	Note:	Needed:	
Ammeter	20-0-20	-	82201	Internal Shunt		
	30-0-30	-	82200	Internal Shunt		
	60-0-60	-	82202	Internal Shunt		
Fuel Level	240 Ohm	-	82211		Senders Page 52	
Pressure	0-50 psi	82207	-			
	0-100 psi	82209	-		114840 (6 ft. tube) or 114841 (16 ft. tube)	
	0-80 psi	82208	-		111011 (1011. 1450)	
Temperature	100-250°F	82210-36	-	Tube - 36"		
	100-250°F	82210-48	-	Tube - 48"		
	100-250°F	82210-60	-	Tube - 60"		
	100-250°F	82210-72	-	Tube - 72"		
	100-250°F	82210-144	-	Tube - 144"		
<u> (its include</u> : Moun	ting hardware, in	stallation instruc	tions. Purchase	fuel sender or tubin	g separately.	



82210

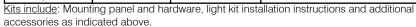


82209



82211

STANDARD PLUS™ GAUGE PANELS					
Panel/Type	Range(s)	Kit Number:	Also Included in Kit:		
Single Panels					
Ammeter	60-0-60	82212B			
Pressure	0-100 psi	82213B	6 ft. tubing kit w/fittings		
Temperature	100-250°F	82214B72	72" capillary		
Double Panel	Double Panels				
Ammeter/ Pressure	60-0-60; 0-100 psi	82215B	6 ft. tubing kit w/fittings		
Pressure/ Temperature	0-100 psi; 100-250°F	82216B	72" capillary; 6 ft. tubing kit w/fittings		
Triple Panel					
Ammeter/ Pressure/ Temperature	60-0-60; 0-100 psi; 100-250°F	82217B	72" capillary; 6 ft. tubing kit w/fittings		











### **Heavy Duty**™





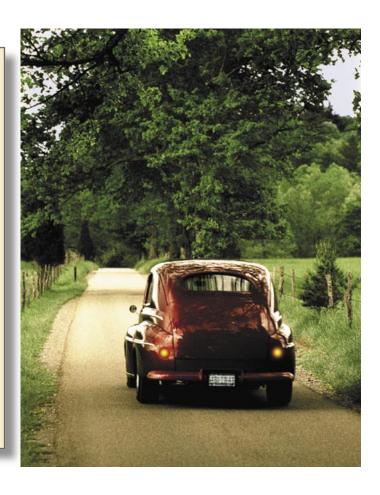
# Another classic line from Stewart Warner—original Heavy Duty™ gauges.

An authentic look for yesterday's or today's cars or trucks, these gauges feature our patented light ring for superior night-time lighting plus a unique black bezel with a brushed bright ring. They're original...and HEAVY DUTY™!

#### Features include:

- ☐ Bold white-on-black graphics
- ☐ Black raised bezel with distinctive brushed bright rim
- ☐ Classic white pointer with black hub
- ☐ Rugged gauge movements-ideal for trucks too
- ☐ Matching 5" tach or speedo available

GOOD-LOOKING YET RUGGED, IDEAL FOR TRUCKS TOO



# **Heavy Duty**™









82164B





550HF-D

550HH-D







284D

284J

284M







284L

284H

284B

# HEAVY DUTY™

# **Heavy Duty**™: **Gauges**



		2-1/16"			Additional Kit
Туре	Range	Mech	Elec	Note:	Needed:
Air Pressure	5-100 psi	284N	-		114840 (6 ft. tube) or 114841 (16 ft. tube)
	0-150 psi	-	284T		279C
Ammeter	60-0-60	-	284A	Internal Shunt	
	100-0-100	-	284AA	Reqs. Shunt	407616
	150-0-150	-	284AD	Reqs. Shunt	407616
Boost	0-30/0-15	284BF	-	Red Pointer	
Exhaust Temp	300-1500°F	-	82334		82505
Fuel Level	240 Ohm	-	284M		Senders Page 52
	90 Ohm	-	284BS		Senders Page 52
	73 Ohm	-	284BR		Use OE sender
Fuel Pressure	0-16 psi	-	284AM		114874
	0-15 psi	284E	-		Use braided stainless steel hose. Gauge must be mounted outside passenger compart- ment
Oil Pressure	0-80 psi	-	284AE		279A
	0-100 psi	-	284L		114875
	5-100 psi	284D	-		114840 (6 ft. tube) or
	10-200 psi	284P	-		114841 (16 ft. tube)
Oil Temperature	140-320°F	-	284K		280EE-F
	140-325°F	284C36	-	36" capillary	
	140-325°F	284C72	-	72" capillary	
	140-325°F	284C144	-	144" capillary	]
Trans Oil Pressure	20-300 psi	284R	-		114840 (6 ft. tube) or
	25-400 psi	284S	-		114841 (16 ft. tube)
Water Temperature	100-230°F	-	284AF		280EA
	100-280°F	-	284J		280ED-F
	100-265°F	284B36	-	36" capillary	
	100-265°F	284B72	-	72" capillary	]
	100-265°F	284B144	-	144" capillary	]
Vacuum	0-30Hg	284AH	-		114842
	0-30Hg	82301	-	Motor Minder	114842
Voltmeter	10-16V	-	284H	Color Band	
	20-32V	-	284AJ	Color Band	1

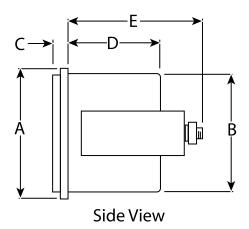
Kits include: Mounting hardware, light kit (bulb & socket), installation instructions. Purchase senders, tubing or shunts separately.

# **Heavy Duty**<sup>™</sup>: Tachs/Speedometers

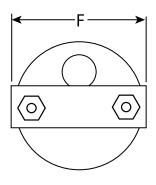


		3-3/8″			Additional Kit
Туре	Range	Mech	Elec	Note:	Needed:
Speedometer	5-85 MPH		82642	Odometer	114878 or 82646
	5-85 MPH		82604	Odometer	Square Wave
	0-80 MPH	550HF-D		Odometer/High-Beam	
	0-160 MPH	550HH-D		Odometer	
Tachometers	6,000 RPM	535AK-D		.5:1 Ratio	
	6,000 RPM		82164B	4-, 6-, 8-Cyl (Ignition)	
	8,000 RPM		82165	4-, 8-, 12-Cyl (Ignition)	
	8,000 RPM		82171B	4-, 6-, 8-Cyl (Ignition)	

Kits include: Mounting hardware, light kit (bulb & socket), installation instructions. Purchase senders separately.



Gauges				
Dimension	2-1/16" G	auges	2-5/8" Ga	uges
	in.	cm	in.	cm
А	2.28	5.79	.N/A	.N/A
В	2.06	5.23	.N/A	.N/A
С	.375	.95	N/A	.N/A
D	1.38	3.51	.N/A	.N/A
E	2.26	5.74	.N/A	.N/A
F	2.25	5.72	.N/A	.N/A



**Back View** 

Tachometer/Speedometer					
Dimension	3-3/8" Me	3-3/8" Mechanical		ctric	
	in.	cm	in.	cm	
А	3.81	9.68	3.69	9.37	
В	3.34	8.48	3.34	8.48	
С	.49	1.24	.49	1.24	
D	2.31	5.87	2.61	6.63	
E	3.56	9.04	4.12	10.46	
F	3.59	9.12	3.59	9.12	

#### 5" Instruments



## Looking for a way to dress up your classic Chevy or Dodge or Ford dashboard?

Check these out...classic 5" Stewart Warner speedometers, tachometers and 4-in-one gauge clusters. They're BIG and ORIGINAL. No copies here! Available with white-on-black or black-on-white Deluxe $^{\text{TM}}$  style graphics, they're perfect for your restoration.

#### Features include:

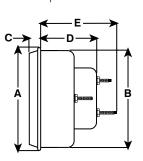
- ☐ Black or white pointers with black hub
- ☐ Polished stainless steel bezels
- ☐ Matching white-faced 10,000 rpm tachs now available
- □ Block SW or Wings<sup>™</sup> logos to match your gauges
- ☐ Mechanical take-off or magnetic pick-up senders for tachs

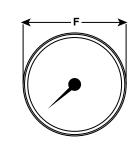
#### ANOTHER BLAST FROM THE PAST FROM STEWART WARNER!

	5	5″	
Type/Range	Black Dial	White Dial	Order Sender:
Speedometer 160 MPH Block Logo	82698	82898	114878 or 82646
Speedometer 160 MPH Wings Logo	82848	82846	114878 or 82646
Tachometer 10,000 RPM Block Logo	82699	-	(Signal from ignition coils)
Tachometer 10,000 RPM Wings Logo	82849	82847	(Signal from ignition coils)
4-In-One Cluster <sup>1</sup> No Logo	366ACY	-	See note 1 below
4-In-One Cluster <sup>1</sup> Wings Logo	366ADH	366ACY-1	See note 1 below

Kits Include: Mounting hardware; light kits; installation instructions.

<sup>&</sup>lt;sup>1</sup> Includes pressure sender and temperature sender. Order fuel sender separately.





Dimensions	Tachs/Speedos	4-Gauge Cluster
A&F	5.4"	5.4"
В	5.04"	5.0"
С	.7"	.7"
D	2.62"	1.12"
E	3.4"	1.95"







82847

366ADH

#### SPECIALTY PRODUCTS

#### **Specialty Products/Tools**





82682

#### Hand Held Tachometer

0-4000 RPM clockwise and counterclockwise. 3" diameter and 4" long. Use for direct measure on rotating shaft.

82682 - Tachometer

412850 - 12" extension shaft

412850-1 - 3" extension shaft

96798 - Cone rubber tip

96799 - Cup rubber tip



82459

#### Mini Panel

Includes voltmeter, electric water temperature and electric oil pressure gauges in a 4-1/8" wide by 2" high by 2" deep panel.

Kit Contains:

82459 - Mini Panel

1/8" temperature sender

1/2" and 3/8" adapter nuts

1/8" pressure sender

1/4" adapter

10 mm male female adapters

2-3/4" extension for oil pressure sending unit

If you are looking for our Heavy Duty Plus<sup>™</sup>, World Wide<sup>™</sup>, Comander<sup>™</sup> gauge lines or core & casing, drive joint kits and halogen lighting or other products, check out our website or request our Heavy Duty catalog from Customer Service at 1-800-676-1837.

#### Track Force<sup>™</sup> - Black Bezel



# Our Track Force<sup>™</sup> Line will be offered for those restoring race cars.

Keep watching for a new line of products.

Please note that our distributors may not have the full Track Force  $^{\text{\tiny M}}$  product line in stock.

			3-3/8"		
Туре	Range	Mech	Elec	Note:	Signal:
Speedometer	0-160 MPH	82852-P	-		
Tachometers	10,000 RPM	82851-P	-	.5:1 Adj Ratio/Adj Redline	
	10,000 RPM	-	82850-P	4-, 6-, 8-cylinder/ Telltale Memory	Gas/Ignition
			5″		
Tachometers	10,000 RPM	-	82800-P	4-, 6-, 8-cylinder/ Telltale Memory	Gas/Ignition
	10,000 RPM	-	82803-P	4-, 6-, 8-cylinder	Gas/Ignition
	12,000 RPM	-	82802-P	4-, 6-, 8-cylinder/ Telltale Memory	Gas/Ignition

Kits include: Mounting hardware, light kit (bulb & socket), installation instructions.



82850-P (Electric)



82851-P (Mechanical)

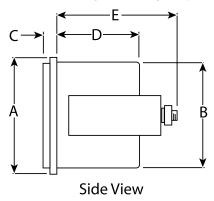
### Track Force™ - Black Bezel



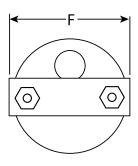
		2-1/16"		2-5/8	В"		Additional Kit
Туре	Range	Mech	Elec	Mech	Elec	Note:	Needed:
Ammeter	60-0-60	-	82855-P	-	82805-P	Internal Shunt	
Boost (Turbo)	0-30/0-15	82864-P	-	82814-P	-		114840 (6 ft. tube) or 114841 (16 ft. tube)
Fuel Level	240 Ohm	-	82863-P	-	82813-P		Senders Page 52
	90 Ohm	-	82869-P	-			Senders Page 52
	73 Ohm	-	82870-P	-			Use OE sender
Fuel Pressure	1-16 psi	82856-P*	-	82806-P*	-	Use SS hose*	
	1-15 psi	-	82868-P	-	-		114874
Oil Pressure	5-100 psi	82857-P	-	82807-P			114840 (6 ft. tube) or 114841 (16 ft. tube)
	10-200 psi	82858-P	-	82808-P	-		
	0-100 psi	-	82865-P	-	-		114875
Oil	140-325°F	82860-36P	-	-	-	Capillary 36"	
Temperature	140-325°F	82860-72P	-	82810-72P	-	Capillary 72"	
	140-325°F	82860-144P	-	82810-144P	-	Capillary 144"	
Water	100-265°F	82859-36P	-	-	-	Capillary 36"	
Temperature	100-265°F	82859-72P	-	82809-72P	-	Capillary 72"	
	100-265°F	82859-144P	-	82809-144P	-	Capillary 144"	
	100-280°F	-	82866-P	-	-		280ED-F
Vacuum	0-30 Hg	82861-P	-	82811-P	-		114842
Voltmeter	10-16V	-	82862-P	-	82812-P		

<sup>\*</sup> Mechanical Fuel Pressure gauges must be mounted outside the passenger compartment for safetly and braided stainless steel hose must be used for connection.

Kits include: Mounting hardware, light kit (bulb & socket), installation instructions. Purchase senders, tubing or shunts separately.



Gauges						
Dimension	2-1/16" G	auges	2-5/8" Gauges			
	in.	cm	in.	cm		
А	2.28	5.79	2.80	7.11		
В	2.06	5.23	2.60	6.60		
С	.188	.476	.188	.476		
D	1.38	3.51	1.76	4.47		
Е	2.26	5.74	2.46	6.25		
F	2.25	5.72	2.88	7.32		



**Back View** 

Tachometer/Speedometer						
Dimension	3-3/8" Me	chanical	3-3/8" Electric			
	in.	cm	in.	cm		
А	3.81	9.68	3.69	9.37		
В	3.34	8.48	3.34	8.48		
С	.49	1.24	.49	1.24		
D	2.31	5.87	2.61	6.63		
Е	3.56	9.04	4.12	10.46		
F	3.59	9.12	3.59	9.12		

#### **Track Force<sup>™</sup> - Stainless Steel Bezel**



		3-3/8"				
Туре	Range	Mech	Elec	Note:	Signal:	
Speedometer	0-160 MPH	82872-P	-			
Tachometers	10,000 RPM	82871-P	-	.5:1 Adj Ratio/Adj Redline		
	10,000 RPM	-	82873-P	4-, 6-, 8-cylinder/ Telltale Memory	(Gas/Ignition)	
	5"					
Tachometers	10,000 RPM	-	82820-P	4-, 6-, 8-cylinder/ Telltale Memory	(Gas/Ignition)	
	10,000 RPM	-	82823-P	4-, 6-, 8-cylinder	(Gas/Ignition)	
	12,000 RPM	-	82822-P	4-, 6-, 8-cylinder	(Gas/Ignition)	

Kits include: Mounting hardware, light kit (bulb & socket), installation instructions.

TACK FORCE - CHROME PANEL KITS						
Panel/Type	Range(s)	Kit Number:	Notes:	Also Included in Kit:		
Triple Panel						
Elec Tachometer/ Oil Pressure/ Water Pressure	12,000 RPM/ 5-100 psi/ 100-265°F	82219	Tach is 5" electric/ Gauges are 2-5/8" Mechanicals	6ft. tubing kit		
Fuel Pressure/ Oil Pressure/ Water Temperature	1-15psi/ 5-100 psi/ 100-265°F	82220	2-5/8" Mechanical Gauges	2 ea. of 6 ft. tubing kit 72" cap. on Water Temp ga.		

Kits includes: Mounting panel and hardware, light kit installation instructions and additional accessories as indicated above.





### **Track Force<sup>™</sup> - Stainless Steel Bezel**



		2-1/1	6"	2-5/8	B"		Additional Kit
Туре	Range	Mech	Elec	Mech	Elec	Note:	Needed:
Ammeter	60-0-60	-	82875-P	-	82825-P	Internal Shunt	
Boost (Turbo)	0-30/0-15	82884-P	-	82834-P	-		114840 (6 ft. tube) or 114841 (16 ft. tube)
Fuel Level	240 Ohm	-	82883-P	-	82883-P		Senders Page 52
	90 Ohm	-	82889-P	-			Senders Page 52
	73 Ohm	-	82890-P	-			Use OE sender
Fuel Pressure	1-16 psi	82876-P*	-	82826-P*	-	Use SS hose*	
	1-15 psi	-	82888-P	-	-		114874
Oil Pressure	5-100 psi	82877-P	-	82827-P			114840 (6 ft. tube) or
	10-200 psi	82878-P	-	82828-P	-		114841 (16 ft. tube)
	0-100 psi	-	82885-P	-	-		114875
Oil	140-325°F	82880-36P	-	-	-	Capillary 36"	
Temperature	140-325°F	82880-72P	-	82830-72P	-	Capillary 72"	
	140-325°F	82880-144P	-	82830-144P	-	Capillary 144"	
Water	100-265°F	82879-36P	-	-	-	Capillary 36"	
Temperature	100-265°F	82879-72P	-	82829-72P		Capillary 72"	
	100-265°F	82879-144P	-	82829-144P		Capillary 144"	
	100-280°F	-	82886-P	-	-		280ED-F
Vacuum	0-30 Hg	82881-P	-	82831-P	-		114842
Voltmeter	10-16V	-	82882-P	-	82832-P		

<sup>\*</sup> Mechanical Fuel Pressure gauges must be mounted outside the passenger compartment for safetly and braided stainless steel hose must be used for connection.

Kits include: Mounting hardware, light kit (bulb & socket), installation instructions. Purchase senders, tubing or shunts separately.







82862



82875



82884

#### SENDERS/SHUNTS

NOTE: We have indicated which temperature or pressure sender is required next to each gauge in the product line section. Please ensure you use the correct sender for proper operation of your gauge.

Temperati	ure Senders
114873	1/8" NPT; For Imact & Competition Tachs & Gauges Lines
280EC	100-230°F; 1/8" NPT, 5/8" Hex, adapters: 1/4" 3/8" 1/2"
280EA	100-240°F; 1/8" NPT, 5/8" Hex, adapters: 1/4" 3/8" 1/2"
280ED-F	100-280°F; 1/8" NPT, 5/8" Hex, adapters: 1/4" 3/8" 1/2"
280EE-F	140-320°F; 1/8" NPT, 5/8" Hex, adapters: 1/4" 3/8" 1/2"
Pressure S	Senders Senders
114874	15 psi; 1/8" NPT; fuel and oil
114875	100 psi; 1/8" NPT; fuel and oil
279A	80 psi; 1/8" NPT; fuel and oil
279C	150 psi; 1/8" NPT; fuel and oil
Fuel Level	Senders
Fue	el senders fit standard SAE 5-hole mounting, include mounting kit
114876	240-33.5 Ohms; adjustable from 4-1/2" to 24"; right hand
439361-F	0-90 Ohm 10-15" tank depth; left hand
439362-F	0-90 Ohm 10-15" tank depth, right hand
439363-D	0-90 Ohm 15.5-24" tank depth, left hand
439364-D	0-90 Ohm 15.5-24" tank depth, right hand
366LP-F	Fuel sender install kit-convert fuel sender opening in tank to standard SAE 5-hole size, includes: flange, gasket, 5 washers, 5 screws
Speed Ser	isors & Accessories
114877	Self-powered AC output, two wire with 0.104" tip
114878	Hall-effect, 8 pulse, requires 12V, with 0.104" tip
82527	Hall-effect, 16 pulse, requires 12V, with 0.104" tip
82646	Magnetic sender; Tach: flywheel application; Speed: tone wheel
114879	Ford quick-disconnect adapter for 114878 Hall-effect sender (sender not included)
114880	0.104" square drive tip
114882	0.187" drive tang
114883	0.203" drive tang
407010-F	Right angle adapter for flexshafts; 1:1; 5/8"; 0.104 square; clockwise
411335-D	Right angle adapter for flexshafts; 1:1; 5/8"; 0.104 square; counter- clockwise
114623	Odo-Reset button for Competition Tachs & Gauges speedometers
Shunts for	r Ammeters
407616	Shunt for 100A ammeters not internally shunted













413717



Shunt for 150A ammeters not internally shunted





407010-F



366LP-F

#### Probes/Switches/Warning Lights

Exhaust To	Exhaust Temperature Probes/Thermocouples (Type K)				
114653	1/4" Street Probe kit with 10' wire & kit				
114654	3/16" Street Performance Probe with 10' wire & kit				
114655	3/16" High Performance Probe with 10' wire - no fittings				
114656	1/4" High Performance Probe with 10' wire - no fittings				
114657	1/4" x 1/8" NPT Probe Installation Kit				
114658	3/16" x 1/8" NPT Probe Installation Kit				
114659	3/16" Probe Band Kit				
114660	1/4" Probe Band Clamp Kit				

See Tech Info page 92 to determine whigh probe is best for your application.

NOTE: Use only the supplied extension wire. Do not alter the length or use other types of wiring to connect to the Type-K probe or your gauge will not read accurately.

Temperature Switches				
114884	200°F, 1/4" NPT, spade terminal			
114885	225°F, 1/4" NPT, spade terminal			
114886	225°F, 1/4" NPT, screw terminal			
114887	240°F, 1/4" NPT, screw terminal			

Solid brass body, gold-plated contacts; normally open contact; voltage independent; 2/85" in length, bulb .815", 1.00 Hex

Use with Ultra-Alert Light™warning lights.

Pressure S	Pressure Switches			
114888	10 psi; 1/8-27 NPT male			
114889	15 psi; 1/8-27 NPT male			
114890	35 psi; 1/8-27 NPT male			
114891	60 psi; 1/8-27 NPT male			
114892	100 psi; 1/8-27 NPT male			
79380	Boot for pressure/vacuum switches			

These pressure switches are designed to operate with air, motor oils, transmission oils, jet fuels and other similar hydrocarbon media.

Contacts are silver alloy, gold plated; direct action blade contact

Feature Kapton diaphragms for compatibility with a wide variety of fluids

Use with Ultra-Alert Light™ warning lights.

Vacuum Switches				
77342-4	4" Hg; normally open; 1/8-27 NPT male			
77343-4	4" Hg; normally closed; 1/8-27 NPT male			
79380	Boot for pressure/vacuum switches			

Contacts are silver alloy, gold plated; direct action blade contact

Feature fluorisilicone rubber for compatibility with a wide variety of fluids.

	Warning Lights - Ultra-Alert Lights™		
114907 5" long by 1-5/8" dia, amber LED, gray case			
114908 5" long by 1-5/8" dia, red LED, gray case 114909 5" long by 1-5/8" dia, blue LED, gray case		5" long by 1-5/8" dia, red LED, gray case	
		5" long by 1-5/8" dia, blue LED, gray case	

Night cover, mounting hardware and instructions included.

Warning Lights/Buzzers		
420125-F Warning Light, 12VDC		
825104-D	Warning Light/Buzzer	
Warning Light Kit: includes 825104-D and 6psi pressure switch(1/2 PT) and 200°F temperature switch(1/2 PT)		











### TUBING/ADAPTERS/ETC...

Tubing/Hoses				
114840	Pressure, 6 ft. nylon, male/female comp. fittings			
114841	Pressure, 16 ft. nylon, male/female comp. fittings			
114842	Vacuum, 6 ft. hose w/T fitting & 1/8" NPT barbed adapter			
114843				
114844	4 ft4-AN braided stainless steel over nylon with fittings			
114845	6 ft4-AN braided stainless steel over nylon with fittings			
Adapters	for Electric Temperature Senders			
114846	Std. 1/8" NPT ID X 3/8" NPT OD			
114847	Std. 1/8" NPT ID X 1/4" NPT OD			
114848	Std. 1/8" NPT ID X 1/2" NPT OD			
114850	Metric 1/8" NPT ID - M14X1.5 OD			
114851	Metric 1/8" NPT ID - M16X1.5 OD			
114852	Metric 1/8" NPT ID - M18X1.5 OD			
Adapters	for Electric Pressure Senders			
114849	Std. 1/8" NPT ID X 1/4" NPT OD			
114853	Metric 1/8" NPT ID - M10X1.5 OD			
114854	Metric 1/8" NPT ID - M12X1.5 OD			
114855	Metric 1/8" NPT ID - M14X1.5 OD			
114856	PT 1/8"-28 JIS Male (Empirical Metric)			
Adapters	for Mechanical Temperature Gauges			
114858	Steel 5/8"-18 ID to 1/4" NPT OD			
114859	Steel 5/8"-18 ID to 3/8" NPT OD			
114860	Brass 5/8"-18 ID to 3/8" NPT OD			
114861	Steel 5/8"-18 ID to 1/2" NPT OD, SAE Short OD			
114862	Brass 5/8"-18 ID to 1/2" NPT OD			
114863	Brass 5/8"-18 ID to 5/8" NPT OD			
114864	Metric 5/8"-18 ID to M14X1.5 OD			
114865	Metric 5/8"-18 ID to M16X1.5 OD			
114866	Metric 5/8"-18 ID to M18X1.5 OD			
114601	Right Angle Adapter, 1/8" NPT Female by -4AN Male			
Extension	ns for Mechanical Temperature Gauges			
	Extra clearance for narrow water passages			
114867	1/2" NPT temperature bulb extension			
114868 3/8" NPT temperature bulb extension				
Fuel Rail	Adapters for Mechanical Fuel Pressure Gauges			
114869	1/16" NPT Male by -4AN Male			
114870	1/16" NPT Male by 1/8" NPT Female			
		$\neg$		
114871	-4AN Male by -4AN Female 45 Deg. with swivel on Female	- 1		



### LIGHTING/SHIFT LIGHTS

Replacement Bulbs for Impact and Competition Tachs & Gauges Lines				
114896	Lamp, WGB, 1 candle power			
114897 Lamp, WGB, 2 candle power				
Replacem	ent Bulbs for Remaining Product Lines			
82551	1/2", 12V, 1" long metal socket, one wire			
82550	1/2", 12V, 1" long metal socket, two wire			
366FK-F	5/8", 12V, 1" long metal socket, one wire			
366CH	5/8", 12V, 1" long metal socket, one wire, mounting bracket			
366SZ	5/8", 12V, 1" long plastic socket, one wire			
366SX	5/8", 12V, 1" long plastic socket, two wire			
Light Boo	ts for Incandescent Bulbs			
114910	Red Lamp Filter (3 boots per kit)			
114911	Green Lamp Filter (3 boots per kit)			
114912	Blue (Lunar White) Lamp Filter (3 boots per kit)			
114913	Yellow Lamp Filter (3 boots per kit)			
LED Light	Kits for Impact & Competition Tachs & Gauges Lines			
Change the color not the gauge! Replace the 194 incandescnet bulb with the LED circuit boards for longer life and brighter colors.				
114920	Red LED Kit for tachs and speedometers			
114921	Red LED Kit for gauges			
114922	Green LED Kit for tachs and speedometers			
114923	Green LED Kit for gauges			
114924 Blue LED Kit for tachs and speedometers				
114925 Blue LED Kit for gauges				
114953 Red/Orange LED Kit for tachs and speedometers				
114952 Red/Orange LED Kit for gauges				
114957	White LED Kit for tachs and speedometers			
114956 White LED Kit for gauges				







Change the color not the gauge!
Our LED light kits plug in to the light socket. You can change the lighting color anytime.

Shift Light Kits				
For use with 5" or 3-3/8" memory tachometers - not for Ultra-Shift Lights™				
	Plug into the connector on the tachometer to receive.			
114914	5" x 1-5/8", amber LED, gray case			
114915	5" x 1-5/8", red LED, gray case			
114916	114916 5" x 1-5/8", blue LED, gray case			
Replacem	Replacement Shift Light LED Kits			
1	For external shift lights included with 5" tachometers - not for Ultra-Shift Lights™  Provided for those who wish to change the LED color of the shift light.			
114898	Amber Shift Lamp LED kit, 1-5/8" w/night cover			
114899	Red Shift Lamp LED kit, 1-5/8" w/night cover			
114600	00 Blue Shift Lamp LED kit, 1-5/8" w/night cover			



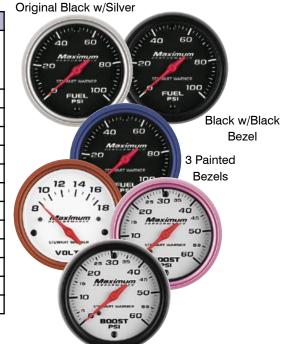
### BEZELS/FUEL PUMPS

#### Replacement Bezels for Competition Tachs & Gauges Line

The bezel on the Competition Tachs & Gauges line can be removed without interfering with the inner workings of the instruments. We have provided the following replacement bezels for those who want to customize their instruments or if a bezel

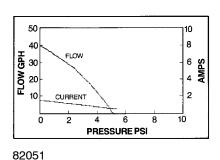
	gets damaged			
114615 2-1/16" Silver replacement bezel				
114616 2-5/8" Silver replacement bezel				
114617 3-3/8" Silver replacement bezel				
114618 5" Silver replacement bezel				
114603 2-1/16" Black replacement bezel				
114604	2-5/8" Black replacement bezel			
114605	3-3/8" Black replacement bezel			
114606	5" Black replacement bezel			
114611 2-1/16" Paintable replacement bezel				
114612 2-5/8" Paintable replacement bezel				
114613 3-3/8" Paintable replacement bezel				
114614 5" Paintable replacement bezel				

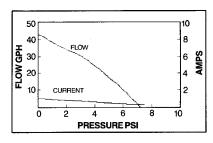
NOTE: These replacement bezels ONLY fit the Competition Tachs & Gauges line of products.



Silver w/Black Bezel





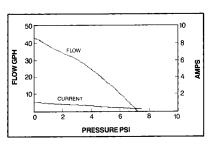


82050, -52, -54

Electric Fu	Electric Fuel Pumps - Gasoline			
82050 Series (below) is a powerful piston type pump with solid state reliability. Buil in filters, microcarbon filter dissipates water, magnetic filter traps metallic particles				
82051 12V Neg Ground, 5 psi, 1/4" internal PT				
82050 12V Neg Ground, 7 psi, 1/4" internal PT				
82052 12V Pos/Neg Ground, 7 psi, 1/4" internal PT, double insullated				
82504 12V Pos/Neg Ground, 7 psi, 1/4" internal PT				
82053	82053 Gasoline Fuel Pump Service Kit, Gasket, Filter Element			
Electric Fu	Electric Fuel Pumps - Marine(Diesel)			

Corrosion resistant to prevent leakage. No possibility for accidental grounding. Approved by Underwriters Laboratories and U.S. Coast Guard regulations for diesel applications.

82055	12V Pos/Neg Ground, 7 psi, 1/4" internal PT	
82057 12V Pos/Neg Ground, 4 psi, 1/4" internal PT		
82058	Diesel Fuel Pump Service Kit, Gaskket, Filter Element	
76579-4 Recommended safety switch		



82055



82055

### Mounting Options: Cups/Panels/Brackets

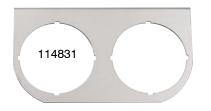
Cup Kits				
The first four cups below fit the Competition Tachs & Gauges product line				
114835 2-1/16" Chrome plated, for electric and mechanical gauges				
114836	2-5/8" Chrome plated, for electric and mechanical gauges			
114837	2-1/16" Gray, for electric and mechanical gauges			
114838	2-5/8"Gray, for electric and mechanical gauges			
	The cup below fits the Deluxe line 2-5/8" gauges			
366MP-F	2-5/8", black w/strap and mounting hardware			
Panels				
The pa	nels below fit all the Stewart Warner instruments for the specified size			
114829 2-1/16" Chrome plated, one-hole				
114830 2-5/8" Chrome plated, one-hole				
114831	2-1/16" Chrome plated, two-hole			
114833 2-1/16" Chrome, three-hole				
114834 2-5/8" Chrome, three-hole				
5-gauge panel w/engine turned insert-available in Spring 2006-see www.StewartWarner.com for part number.				
Strap & In-Dash Mounting Kit				
The strap and in-dash kit below fit the Competition Tachs & Gauges product line				
114839	Strap and base for 5" and 3-3/8" tachs			
114624 In-dash mounting kit for 5" and 3-3/8" tachs				



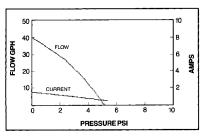












82057

# Gauge Pods for the Competition Tachs & Gauges & Impact™ Product Lines

Today's cars & trucks offer sculpted interiors that present a real challenge for mounting performance gauges. Stewart Warner Gauge Pods provide the solution—they can be installed easily and safely (no obstructions), with a look, fit & finish that complements your vehicle's interior! And, they can be easily painted to ensure a good color match.

- Made from UV-resistant thermoformed ABS-tough & good-looking
- Easy-to-install & maintain
- Easily painted to match vehicle interior
- Each pod specially designed to ensure a great fit
- Great looking with Competition Tachs & Gauges installed!



Specialty Dash Pod (Kit#116000)

#### Single/Dual Gauge Pods

Thermoformed, sculpted housings that contain either one gauge (single) or two gauges (dual), that mount to the "A" pillar of your truck or car. Single or Dual Gauge Pods are shorter than the "A" pillar.

#### **Full-Pillar Gauge Pods**

Cover either the entire "A" pillar, or in some cases replace it entirely. They typically contain two to three gauges & may be painted to match your car or truck interior.

#### **Cluster Bezels**

Special thermoformed inserts that fit over your stock instrument cluster. They can be used in conjuction with single, Dual or Full-Pillar Gauge Pods to further accessorize your vehicle.

#### **Specialty Pods**

Designed for unique locations such as on top of the dash, steering column or vents, these units contain gauges and even tachometers for special applications.

NOTE: These gauge pods have beed designed to fit the Competition Tachs & Gauges and Impact $^{\text{TM}}$  series of instruments.





Cluster Bezel (Kit#114822)

(Note: Gauges not included with pods.)

#### **Truck Pods: Chevrolet**









CHEVROLET				
Kit	Years	Truck/SUV/Van	Pod Type & Gauge Size	
116082	94-98	Blazer	Dual Full Pillar (2-1/16")	
116053	95-98	Blazer	Dual Pod (2-1/16")	
116054	95-98	Blazer	Single Pod (2-1/16")	
114917	99	C/K	Dual Full Pillar (2-1/16")	
116048	99	C/K	Single Pod (2-1/16")	
116049	99	C/K	Single Pod (2-5/8")	
116079	99	C/K	Triple Full Pillar (2-1/16")	
116077	88-94	Full Size Truck	Dual Full Pillar (2-1/16")	
116047	88-94	Full Size Truck	Dual Pod (2-1/16")	
116078	88-94	Full Size Truck	Triple Full Pillar (2-1/16")	
116048	88-98	Full Size Truck	Single Pod (2-1/16")	
116049	88-98	Full Size Truck	Single Pod (2-5/8")	
114823	00-03	Full Size Truck	Dual Full Pillar (2-1/16")	
114917	95-98	Full Size Truck	Dual Full Pillar (2-1/16")	
116079	95-98	Full Size Truck	Triple Full Pillar (2-1/16")	
116042	00-03	Full Size Truck & 00+ SUV	Single Steering Pod (Automatic) (2-1/16")	
116050	95-98	Full Size Truck/Duramax	Dual Pod (2-1/16")	
116081	00-03	Full Size Truck/Duramax	Triple Full Pillar (2-1/16")	
116051	00-03	Full Size Truck	Dual Pod (2-1/16")	
116052	00-03	Full Size Truck	Single Pod (2-1/16")	
116083	86-93	S-10	Dual Full Pillar (2-1/16")	
116055	86-93	S-10	Dual Pod (2-1/16")	
116084	86-93	S-10	Triple Full Pillar (2-1/16")	
116053	94-03	S-10	Dual Pod (2-1/16")	
116054	94-03	S-10	Single Pod (2-1/16")	
116082	94-98	S-10	Dual Full Pillar (2-1/16")	
116051	00	Suburban	Dual Pod (2-1/16")	
116052	00	Suburban	Single Pod (2-1/16")	





## **Truck Pods: Dodge**

DODGE			
Kit	Years	Truck/SUV/Van	Pod Type & Gauge Size
116046	02	1500	Dual Steering Pod (2-1/16")
116062	97-02	Durango	Dual Pod (2-1/16")
116056	86-93	Ram	Dual Pod (2-1/16")
116057	86-93	Ram	Single Pod (2-1/16")
116085	94-97	Ram	Dual Full Pillar (2-1/16")
116058	94-97	Ram	Dual Pod (2-1/16")
116059	94-97	Ram	Single Pod (2-1/16")
114816	94-97	Ram	Triple Full Pillar (2-1/16")
116045	94-02	Ram (not 02 1500)	Single Steering Pod (2-1/16")
116088	98-02	Ram (Infinity Speaker) (not 02 1500)	Dual Full Pillar (2-1/16")
116086	98-02	Ram (not 02 1500)	Dual Full Pillar (2-1/16")
114817	98-02	Ram (not 02 1500)	Dual Pod (2-1/16")
116061	98-02	Ram (not 02 1500)	Single Pod (2-1/16")
116087	98-02	Ram (not 02 1500)	Triple Full Pillar (2-1/16")
114811	98-02	Ram with speaker (not 02 1500)	Triple Full Pillar (2-1/16")
116196	02-UP	Ram	Triple Dash Pod (2-1/16")
116046	03	Ram	Dual Steering Pod (2-1/16")
116194	03-04	Ram	Dual Full Pillar (2-1/16") (Color Matched)
116195	03-04	Ram	Triple Full Pillar (2-1/16") (Color Matched)















### **Truck Pods: Ford/Toyota**









116072



FORD				
Kit	Years	Truck/SUV/Van	Pod Type & Gauge Size	
116067	98-03	Expedition	Dual Pod (2-1/16")	
116068	98-03	Expedition	Single Pod (2-1/16")	
116072	95-99	Explorer	Dual Pod (2-1/16")	
116090	97-02	F-150	Dual Full Pillar (2-1/16")	
116091	97-02	F-150	Triple Full Pillar (2-1/16")	
116067	97-03	F-150	Dual Pod (2-1/16")	
116068	97-03	F-150	Dual Pod (2-1/16")	
116064	87-97	F-Series (not 97 F-150)	Dual Pod (2-1/16")	
116065	87-97	F-Series (not 97 F-150)	Single Pod (2-1/16")	
116066	87-97	F-Series (not 97 F-150)	Single Pod (2-5/8")	
116089	92-97	F-Series (not 97 F-150)	Dual Full Pillar (2-1/16")	
114818	92-97	F-Series (not 97 F-150)	Triple Full Pillar (2-1/16")	
116067	98-03	F-Series	Dual Pod (2-1/16")	
116068	98-03	F-Series	Single Pod (2-1/16")	
116072	93-00	Ranger	Dual Pod (2-1/16")	
114808	99-03	Super Duty	Dual Full Pillar (2-1/16")	
114822	99-03	Super Duty	Dual Gauge Bezel (2-1/16")	
116070	99-03	Super Duty	Dual Pod (2-1/16")	
116071	99-03	Super Duty	Single Pod (2-1/16")	
116043	99-03	Super Duty	Single Steering Pod (Automatic) (2-1/16")	
114800	99-03	Super Duty	Triple Full Pillar (2-1/16")	
116074	92-00	Van	Dual Pod (2-1/16")	

тоуота				
Kit	Years	Truck/SUV/Van	Pod Type & Gauge Size	
114813	96-01	4Runner	Single Pod (2-1/16")	
116076	01-02	Tacoma	Single Pod (2-1/16")	
114813	95-00	Tacoma	Single Pod (2-1/16")	





# Car Pods: Acura/Audi/BMW/Buick/Oldsmobile



	ACURA			
Kit	Years	Car	Pod Type/Gauge Size	
116096	90-93	Integra (2 door)	Single Pod (2-1/16")	
114814	90-93	Integra (2 Door)	Dual Pod (2-1/16")	
116094	94-01	Integra	Dual Gauge Bezel (2-1/16")	
116097	94-01	Integra (2 Door)	Dual Pod (2-1/16")	
116099	94-01	Integra (2 door)	Single Pod (2-1/16")	
116149	94-01	Integra (2 door)	Dual Full Pillar (2-1/16")	
116151	94-01	Integra (2 door)	Triple Full Pillar (2-1/16")	
114807	94-01	Integra (2 Door)	Dual Pod (2-1/16")	







AUDI			
Kit	Years	Car	Pod Type/Gauge Size
116101	96-98	A4	Dual Pod (2-1/16")
116102	96-98	A4	Single Pod (2-1/16")

вмш				
Kit	Years	Car	Pod Type/Gauge Size	
116104	93-98	3 Series (2 Door)	Dual Pod (2-1/16")	
116103	93-98	3 Series (4 Door)	Dual Pod (2-1/16")	

BUICK/OLDSMOBILE				
Kit	Years	Car	Pod Type/Gauge Size	
116028	78-87	Cutlass	Dual Pod (2-1/16")	
116029	78-87	Cutlass	Single Pod (2-1/16")	
114819	78-87	Cutlass	Dual Pod (2-1/16")	
114819	78-87	Regal	Dual Pod (2-1/16")	
116014	70-72	Skylark	Dual Pod (2-1/16")	









### Car Pods: Chevrolet/Chrysler/ **Dodge/DSM**















		CHEVROLET	
Kit	Years	Car	Pod Type/Gauge Size
116001	68-69	Camaro	4-Gauge Console (2-1/16")
114821	82-92	Camaro	Dual Pod (2-1/16")
116037	82-92	Camaro T-Top	Triple Full Pillar (2-1/16")
116021	93-02	Camaro	Single Pod (2-1/16")
114820	93-02	Camaro	Dual Pod (2-1/16")
116038	97-02	Camaro T-Top	Dual Full Pillar (2-1/16")
116039	97-02	Camaro T-Top	Triple Full Pillar (2-1/16")
116019	95-02	Cavalier	Dual Pod (2-1/16")
116014	68-72	Chevelle	Dual Pod (2-1/16")
116036	97-02	Corvette	Dual Full Pillar (2-1/16")
116040	92-96	Impala SS/Caprice	Triple Full Pillar (2-1/16")
116014	70-72	Monte Carlo	Dual Pod (2-1/16")
116028	78-87	Monte Carlo	Dual Pod (2-1/16")
116029	78-87	Monte Carlo	Single Pod (2-1/16")
114819	78-87	Monte Carlo	Dual Pod (2-1/16")
116001	68-74	Nova	4-Gauge Console (2-1/16")
116019	95-02	Z24	Dual Pod (2-1/16")

	CHRYSLER/DODGE			
Kit	Years	Car	Pod Type/Gauge Size	
114801	94-99	Neon (2&4 Door)	Dual Pod (2-1/16")	
116025	00-03	Neon	Dual Pod (2-1/16")	
114802	01-02	PT Cruiser	Dual Full Pillar (2-1/16")	
114805	01-02	PT Cruiser	Triple Full Pillar (2-1/16")	
116126	91-98	Stealth	Dual Pod (2-1/16")	
116127	91-98	Stealth	Single Pod (2-1/16")	

	DSM				
Kit	Years	Car	Pod Type/Gauge Size		
114806	90-94	Eclipse/Laser/Talon	Dual Pod (2-1/16")		
114825	90-94	Eclipse/Laser/Talon	Dual Full Pillar (2-1/16")		
116122	90-94	Eclipse/Laser/Talon	Single Pod (2-1/16")		
116095	95-99	Eclipse	Dual Gauge Bezel (2-1/16")		
114824	95-99	Eclipse/Talon	Dual Pod (2-1/16")		
114828	95-99	Eclipse/Talon	Triple Full Pillar (2-1/16")		
116123	95-99	Eclipse/Talon	Single Pod (2-1/16")		
116167	95-99	Eclipse/Talon (not convertible)	Dual Full Pillar (2-1/16")		



#### **MOUNTING OPTIONS: Pods**

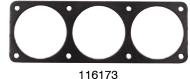
### Car Pods: Eagle/Ford

	EAGLE				
Kit	Years	Car	Pod Type/Gauge Size		
116122	90-94	Talon	Single Pod (2-1/16")		
114806	90-94	Talon	Dual Pod (2-1/16")		
114825	90-94	Talon	Dual Full Pillar (2-1/16")		
114824	95-99	Talon	Dual Pod (2-1/16")		
114828	95-99	Talon	Triple Full Pillar (2-1/16")		
116123	95-99	Talon	Single Pod (2-1/16")		
116167	95-99	Talon (not convertible)	Dual Full Pillar (2-1/16")		















116003

116011

116034

116035

114812

94-02

94-02

94-02

94-02

94-02

Mustang

Mustang Hard Top

Mustang Hard Top

Mustang Hard Top

Mustang Hard Top

Single Steering Pod (2-1/16")

Single Pod (2-1/16")

Dual Pod (2-1/16")

Dual Full Pillar (2-1/16")

Triple Full Pillar (2-1/16")

# Car Pods: Honda/Hyundai/Mazda











		HONDA	
Kit	Years	Car	Pod Type/Gauge Size
116110	98-02	Accord (2 Door)	Dual Pod (2-1/16")
116108	94-97	Accord (2&3 Door)	Dual Pod (2-1/16")
116109	94-97	Accord (2&3 door)	Single Pod (2-1/16")
116154	88-91	Civic (2 door)	Dual Full Pillar (2-1/16")
116155	88-91	Civic (2 door)	Triple Full Pillar (2-1/16")
116107	88-91	Civic/CRX (2&3 door)	Single Pod (2-1/16")
114826	88-91	Civic/CRX (2&3 Door)	Dual Pod (2-1/16")
116112	92-95	Civic (2&3 door)	Single Pod (2-5/8")
116156	92-95	Civic (2&3 door)	Dual Full Pillar (2-1/16")
116158	92-95	Civic (2&3 door)	Triple Full Pillar (2-1/16")
114810	92-95	Civic (2&3 Door)	Dual Pod (2-1/16")
114827	92-95	Civic (2&3 Door)	Single Pod (2-1/16")
116093	96-00	Civic	Dual Gauge Bezel (2-1/16")
116161	96-00	Civic (2 door)	Dual Full Pillar (2-1/16")
116163	96-00	Civic (2 door)	Triple Full Pillar (2-1/16")
116113	96-00	Civic (2&3 Door)	Dual Pod (2-1/16")
116115	96-00	Civic (2&3 door)	Single Pod (2-1/16")
116119	92-96	Prelude	Dual Pod (2-1/16")
116118	97-01	Prelude	Single Pod (2-1/16")
116117	97-01	Prelude	Dual Pod (2-1/16")

HYUNDAI			
Kit	Years	Car	Pod Type/Gauge Size
116186	03-UP	Tiburon	Dual Full Pillar (2-1/16")
116187	03-UP	Tiburon	Triple Full Pillar (2-1/16")



MAZDA			
Kit	Years	Car	Pod Type/Gauge Size
114809	90-98	Miata	Dual Pod (2-1/16")
116179	02-UP	Protege	Dual Full Pillar (2-1/16")
116180	02-UP	Protege	Triple Full Pillar (2-1/16")
116129	86-89	RX7	Single Pod (2-1/16")
114815	86-89	RX7	Dual Pod (2-1/16")
116130	93-95	RX7	Single Pod (2-1/16")
114804	93-95	RX7	Dual Pod (2-1/16")

### Car Pods: Mitsubishi/Nissan/ Plymouth



	MITSUBISHI					
Kit	Years	Car	Pod Type/Gauge Size			
116126	91-98	3000 GT	Dual Pod (2-1/16")			
116127	91-98	3000 GT	Single Pod (2-1/16")			
116122	90-94	Eclipse	Single Pod (2-1/16")			
114806	90-94	Eclipse	Dual Pod (2-1/16")			
114825	90-94	Eclipse	Dual Full Pillar (2-1/16")			
116095	95-99	Eclipse	Dual Gauge Bezel (2-1/16")			
116123	95-99	Eclipse	Single Pod (2-1/16")			
114824	95-99	Eclipse	Dual Pod (2-1/16")			
114828	95-99	Eclipse	Triple Full Pillar (2-1/16")			
116167	95-99	Eclipse (not convertible)	Dual Full Pillar (2-1/16")			
116184	03-04	EVO (Lancer Evolution)	Dual Full Pillar (2-1/16")			
116185	03-04	EVO (Lancer Evolution)	Triple Full Pillar (2-1/16")			





J	116138

	NISSAN						
Kit	Years	Car	Pod Type/Gauge Size				
116140	89-94	240SX	Dual Pod (2-1/16")				
116141	95-98	240SX	Dual Pod (2-1/16")				
116137	90-96	300ZX	Dual Pod (2-1/16")				
116138	90-96	300ZX	Single Pod (2-1/16")				
116181	03-UP	350Z	Dual Full Pillar (2-1/16")				
116139	95-99	Maxima	Dual Pod (2-1/16")				
116182	01-UP	Sentra Spec V	Dual Full Pillar (2-1/16")				



PLYMOUTH					
Kit	Years	Car	Pod Type/Gauge Size		
116122	90-94	Laser	Single Pod (2-1/16")		
114806	90-94	Laser	Dual Pod (2-1/16")		
114825	90-94	Laser	Dual Full Pillar (2-1/16")		

Sentra Spec V





01-UP



Triple Full Pillar (2-1/16")



# Car Pods: Pontiac/Subaru/Toyota/



Volkswagen





	PONTIAC						
Kit	Years	Car	Pod Type/Gauge Size				
114821	82-92	Firebird	Dual Pod (2-1/16")				
116037	82-92	Firebird T-Top	Triple Full Pillar (2-1/16")				
116021	93-02	Firebird	Single Pod (2-1/16")				
114820	93-02	Firebird	Dual Pod (2-1/16")				
116038	93-02	Firebird T-Top	Dual Full Pillar (2-1/16")				
116039	93-02	Firebird T-Top	Triple Full Pillar (2-1/16")				
116028	78-87	Grand Prix	Dual Pod (2-1/16")				
116029	78-87	Grand Prix	Single Pod (2-1/16")				
116014	68-72	GTO	Dual Pod (2-1/16")				
116014	68-72	LeMans	Dual Pod (2-1/16")				

	SUBARU					
Kit	Years	Car	Pod Type/Gauge Size			
116120	93-00	Impreza	Dual Pod (2-1/16")			
116165	02+	Impreza (not wagon)	Dual Full Pillar (2-1/16")			
116166	02+	Impreza (not wagon)	Triple Full Pillar (2-1/16")			
116165	02+	WRX	Dual Full Pillar (2-1/16")			
116166	02+	WRX	Triple Full Pillar (2-1/16")			
116191	02-04	WRX	Dual Gauge Bezel (2-1/16")			



	тоуота						
Kit	Years	Car	Pod Type/Gauge Size				
116135	00-03	Celica	Dual Pod (2-1/16")				
116131	90-95	MR2	Dual Pod (2-1/16")				
116132	90-95	MR2	Single Pod (2-1/16")				
116188	ALL	Scion xB	Dual Full Pillar (2-1/16")				
116189	ALL	Scion xB	Triple Full Pillar (2-1/16")				
116190	ALL	Scion xB	Quad Full Pillar (2-1/16")				
116133	93-97	Supra	Dual Pod (2-1/16")				

	VOLKSWAGEN						
Kit	Years	Car	Pod Type/Gauge Size				
116092	98-02	Beetle	Triple Dash Pod (2-1/16")				
116143	93-98	Golf	Dual Pod (2-1/16")				
116144	93-98	Golf	Single Pod (2-1/16")				
116145	99-00	Golf	Dual Pod (2-1/16")				
116146	99-00	Golf	Single Pod (2-1/16")				
116143	93-98	Jetta	Dual Pod (2-1/16")				
116144	93-98	Jetta	Single Pod (2-1/16")				
116147	99-00	Jetta	Dual Pod (2-1/16")				
116148	99-00	Jetta	Single Pod (2-1/16")				

### MECHANICAL TEMPERATURE

Competition Tachs & Gauges Pg 10; Deluxe™ Pg 24; Impact™Pg 30; Wings Pg 32; Power Series™ Pg 36; Standard™ Pg 40; Heavy Duty™ Pg 42

40-130°C Me	chanical Temp	erature				
Model #	Line	Size	Dial	Bezel	Notes	Sender*
114343	Competition	2-1/16"	Silver	Silver	Water Temp1.8m capillary	N/A
114342	Competition	2-1/16"	Black	Silver	Water Temp1.8m capillary	N/A
114344	Competition	2-1/16"	White	Black	Water Temp 1.8m capillary	N/A
82394-72	Deluxe	2-1/16"	Black	Stainless	Water Temp 1.8m capillary	N/A
82394-96	Deluxe	2-1/16"	Black	Stainless	Water Temp 2.4m capillary	N/A
82394-144	Deluxe	2-1/16"	Black	Stainless	Water Temp 3.6m capillary	N/A
	chanical Temp					. 4
Model #	Line	Size	Dial	Bezel	Notes	Sender*
114346	Competition	2-1/16"	Silver	Silver	Oil Temp 1.8m capillary	N/A
114345	Competition	2-1/16"	Black	Silver	Oil Temp 1.8m capillary	N/A
114347	Competition	2-1/16"	White	Black	Oil Temp 1.8m capillary	N/A
82395-72	Deluxe	2-1/16"	Black	Stainless	Oil Temp 1.8m capillary	N/A
82395-96	Deluxe	2-1/16"	Black	Stainless	Oil Temp 2.4m capillary	N/A
82395-144	Deluxe	2-1/16"	Black	Stainless	Oil Temp 3.6m capillary	N/A
100-250°F M	echanical Tem	perature				
Model #	Line	Size	Dial	Bezel	Notes	Sender*
82210-36	Standard	2-1/32"	Black	Flat/Stainless	Temperature 36" capillary (No Light)	N/A
82210-48	Standard	2-1/32"	Black	Flat/Stainless	Temperature 48" capillary (No Light)	N/A
82210-60	Standard	2-1/32"	Black	Flat/Stainless	Temperature 60" capillary (No Light)	N/A
82210-72	Standard	2-1/32"	Black	Flat/Stainless	Temperature 72" capillary (No Light)	N/A
82210-144	Standard	2-1/32"	Black	Flat/Stainless	Temperature 144" capillary (No Light)	N/A
100-260°F M	echanical Tem	perature				
Model #	Line	Size	Dial	Bezel	Notes	Sender*
114555	Competition	2-1/16"	Silver	Silver	Water Temp 100-260°F/6′ cap	N/A
114554	Competition	2-1/16"	Black	Silver	Water Temp 100-260°F/6′ cap	N/A
114556	Competition	2-1/16"	White	White	Water Temp 100-260°F/6′ cap	N/A
114395	Competition	2-1/16"	Silver	Silver	Water Temp 100-260°F/8′ cap	N/A
114394	Competition	2-1/16"	Black	Silver	Water Temp 100-260°F/8′ cap	N/A
114396	Competition	2-1/16"	White	Black	Water Temp 100-260°F/8′ cap	N/A
114561	Competition	2-1/16"	Silver	Silver	Water Temp 100-260°F/12′ cap	N/A
114560	Competition	2-1/16"	Black	Silver	Water Temp 100-260°F/12′ cap	N/A
114562	Competition	2-1/16"	White	Black	Water Temp 100-260°F/12′ cap	N/A
114558	Competition	2-5/8"	Silver	Silver	Water Temp 100-260°F/6′ cap	N/A
114557	Competition	2-5/8"	Black	Silver	Water Temp 100-260°F/6′ cap	N/A
114559	Competition	2-5/8"	White	Black	Water Temp 100-260°F/6′ cap	N/A
114398	Competition	2-5/8"	Silver	Silver	Water Temp 100-260°F/8′ cap	N/A
114397	Competition	2-5/8"	Black	Silver	Water Temp 100-260°F/8′ cap	N/A
114399	Competition	2-5/8"	White	Black	Water Temp 100-260°F/8′ cap	N/A
114564	Competition	2-5/8"	Silver	Silver	Water Temp 100-260°F/12′ cap	N/A
114563	Competition	2-5/8"	Black	Silver	Water Temp 100-260°F/12′ cap	N/A
114565	Competition	2-5/8"	White	Black	Water Temp 100-260°F/12′ cap	N/A
100-265°F M	lechanical Tem	perature				
Model #	Line	Size	Dial	Bezel	Notes	Sender*
82326-60	Deluxe	2-1/16"	Black	Stainless	Water Temp 60" capillary	N/A
82409-60	Deluxe	2-5/8"	Black	Stainless	Water Temp 60" capillary	N/A
82326-72	Deluxe	2-1/16"	Black	Stainless	Water Temp 72" capillary	N/A
				+	1 1	
82409-72	Deluxe	2-5/8"	Black	Stainless	Water Temp 72" capillary	N/A
82326-96	Deluxe	2-1/16"	Black	Stainless	Water Temp 96" capillary	N/A
82326-120	Deluxe	2-1/16"	Black	Stainless	Water Temp 120" capillary	N/A
82326-144	Deluxe	2-1/16"	Black	Stainless	Water Temp 144" capillary	N/A
82409-144	Deluxe	2-5/8"	Black	Stainless	Water Temp 144" capillary	N/A
02 10 7-177	Delaye	2-3/0	DIGCK	אניוו וובא	water remp itt capillary	19/71

 $<sup>\</sup>ensuremath{^{\star}}$  See page 54 for adapters and bulb extensions for mechanical temperature gauges.

#### MECHANICAL TEMPERATURE

Competition Tachs & Gauges Pg 10; Deluxe™ Pg 24; Impact™Pg 30; Wings Pg 32; Power Series™ Pg 36; Standard™ Pg 40; Heavy Duty™ Pg 42

100-265°F M	echanical Tem <sub>l</sub>	perature (C	ontinued)			
Model #	Line	Size	Dial	Bezel	Notes	Sender*
82480-72	Wings	2-1/16"	Black	Chrome	Water Temp 72" capillary	N/A
82479-72	Wings	2-1/16"	White	Chrome	Water Temp 72" capillary	N/A
82480-96	Wings	2-1/16"	Black	Chrome	Water Temp 96" capillary	N/A
82479-96	Wings	2-1/16"	White	Chrome	Water Temp 96" capillary	N/A
82480-144	Wings	2-1/16"	Black	Chrome	Water Temp 144" capillary	N/A
82479-144	Wings	2-1/16"	White	Chrome	Water Temp 144" capillary	N/A
82844	Power Series	2-1/16"	Blue/Gray Ring	Chrome	Water Temp 72" capillary	N/A
82842	Power Series	2-1/16"	Burgundy Ring	Chrome	Water Temp 72" capillary	N/A
82843	Power Series	2-1/16"	Titanium Ring	Chrome	Water Temp 72" capillary	N/A
284B36	Heavy Duty	2-1/16"	Black	Black/Brushed Ring	Water Temp 36" capillary	N/A
284B72	Heavy Duty	2-1/16"	Black	Black/Brushed Ring	Water Temp 72" capillary	N/A
284B144	Heavy Duty	2-1/16"	Black	Black/Brushed Ring	Water Temp 144" capillary	N/A
	echanical Temp					
Model #	Line	Size	Dial	Bezel	Notes	Sender*
116306	Competition	2-1/16"	Silver	Silver	Oil Temp 2' capillary	N/A
114567	Competition	2-1/16"	Silver	Silver	Oil Temp 6' capillary	N/A
114566	Competition	2-1/16"	Black	Silver	Oil Temp 6' capillary	N/A
114568	Competition	2-1/16"	White	Black	Oil Temp 6' capillary	N/A
114570	Competition	2-1/10	Silver	Silver	Oil Temp 6' capillary	N/A
114569	Competition	2-5/8"	Black	Silver	Oil Temp 6' capillary	N/A
114571	Competition	2-5/8"	White	Black	Oil Temp 6' capillary	N/A
116301	Competition	2-3/8	Silver	Silver	Oil Temp 8' capillary	N/A
		2-1/16"	Black	Silver		N/A
116300 116302	Competition		White	Black	Oil Temp 8' capillary	
	Competition	2-1/16"			Oil Temp 8' capillary	N/A
116304	Competition	2-5/8"	Silver	Silver	Oil Temp 8' capillary	N/A
116303	Competition	2-5/8"	Black	Silver	Oil Temp 8' capillary	N/A
116305	Competition	2-5/8"	White	Black	Oil Temp 8' capillary	N/A
114573	Competition	2-1/16"	Silver	Silver	Oil Temp 12' capillary	N/A
114572	Competition	2-1/16"	Black	Silver	Oil Temp 12' capillary	N/A
114574	Competition	2-1/16"	White	Black	Oil Temp 12' capillary	N/A
114576	Competition	2-5/8"	Silver	Silver	Oil Temp 12' capillary	N/A
114575	Competition	2-5/8"	Black	Silver	Oil Temp 12' capillary	N/A
114577	Competition	2-5/8"	White	Black	Oil Temp 12' capillary	N/A
114579	Competition	2-1/16"	Silver	Silver	Trans Temp 9' capillary	N/A
114578	Competition	2-1/16"	Black	Silver	Trans Temp 9' capillary	N/A
114580	Competition	2-1/16"	White	Black	Trans Temp 9' capillary	N/A
114582	Competition	2-5/8"	Silver	Silver	Trans Temp 9' capillary	N/A
114581	Competition	2-5/8"	Black	Silver	Trans Temp 9' capillary	N/A
114583	Competition	2-5/8"	White	Black	Trans Temp 9' capillary	N/A
	echanical Temp					
Model #	Line	Size	Dial	Bezel	Notes	Sender*
82327-60	Deluxe	2-1/16"	Black	Stainless	Oil Temp 60" capillary	N/A
82410-60	Deluxe	2-5/8"	Black	Stainless	Oil Temp 60" capillary	N/A
82327-72	Deluxe	2-1/16"	Black	Stainless	Oil Temp 72" capillary	N/A
82410-72	Deluxe	2-5/8"	Black	Stainless	Oil Temp 72" capillary	N/A
82327-96	Deluxe	2-1/16"	Black	Stainless	Oil Temp 96" capillary	N/A
82410-96	Deluxe	2-5/8"	Black	Stainless	Oil Temp 96" capillary	N/A
82327-144	Deluxe	2-1/16"	Black	Stainless	Oil Temp 144" capillary	N/A
284C36	Heavy Duty	2-1/16"	Black	Black/Brushed Ring	Oil Temp 36" capillary	N/A
284C72	Heavy Duty	2-1/16"	Black	Black/Brushed Ring	Oil Temp 72" capillary	N/A
284C144	Heavy Duty	2-1/16"	Black	Black/Brushed Ring	Oil Temp 144" capillary	N/A

<sup>\*</sup> See page 54 for adapters and bulb extensions for mechanical temperature gauges.

CAUTION: The capillary tube on mechanical temperature gauges MUST NOT be cut, pinched or altered in any way or the gauge will not function. Purchase the length you need and ensure that it is long enough that you will not need to stretched tight.

#### **ELECTRIC TEMPERATURE**

Competition Tachs & Gauges Pg 10; Deluxe™ Pg 24; Impact™Pg 30; Wings Pg 32; Power Series™ Pg 36; Standard™ Pg 40; Heavy Duty™ Pg 42

	ectric Temperati					_
Model #	Line	Size	Dial	Bezel	Notes	Sender*
82389	Deluxe	2-1/16"	Black	Stainless	Water Temp	280EC
	ectric Temperati		T			
Model #	Line	Size	Dial	Bezel	Notes	Sender*
114279	Competition	2-1/16"	Silver	Silver	Water Temp	Included
114278	Competition	2-1/16"	Black	Silver	Water Temp	Included
114280	Competition	2-1/16"	White	Black	Water Temp	Included
	ectric Temperat					
Model #	Line	Size	Dial	Bezel	Notes	Sender*
114264	Competition	2-1/16"	Silver	Silver	Oil Temp	Included
114263	Competition	2-1/16"	Black	Silver	Oil Temp	Included
114265	Competition	2-1/16"	White	Black	Oil Temp	Included
114282	Competition	2-1/16"	Silver	Silver	Transmission Temp	Included
114281	Competition	2-1/16"	Black	Silver	Transmission Temp	Included
114283	Competition	2-1/16"	White	Black	Transmission Temp	Included
82390	Deluxe	2-1/16"	Black	Stainless	Oil Temp	280EE-F
	lectric Tempera		1			
Model #	Line	Size	Dial	Bezel	Notes	Sender*
284AF	Heavy Duty	2-1/16"	Black	Black/Brushed Ring	Water Temp	280EA
	lectric Tempera		1		1	1
Model #	Line	Size	Dial	Bezel	Notes	Sender*
82306	Deluxe	2-1/16"	Black	Stainless	Water Temp	280EA
82478	Wings	2-1/16"	Black	Chrome	Water Temp	280EC
82477	Wings	2-1/16"	White	Chrome	Water Temp	280EC
82531	Wings	2-1/16"	Beige	Chrome	Water Temp	280EC
82521	Wings	2-1/16"	Beige	Gold	Water Temp	280EC
82498	Wings	2-1/16"	Silver	Chrome	Water Temp	280EC
82761	Power Series	2-1/16"	Blue/Gray Ring	Chrome	Water Temp	280EC
82753	Power Series	2-1/16"	Burgundy Ring	Chrome	Water Temp	280EC
82757	Power Series	2-1/16"	Titanium Ring	Chrome	Water Temp	280EC
100-260°F E	lectric Tempera	ture				
Model #	Line	Size	Dial	Bezel	Notes	Sender*
114273	Competition	2-1/16"	Silver	Silver	Water Temp	Included
114272	Competition	2-1/16"	Black	Silver	Water Temp	Included
114274	Competition	2-1/16"	White	Black	Water Temp	Included
114276	Competition	2-5/8"	Silver	Silver	Water Temp	Included
	·	-			· ·	
114275	Competition	2-5/8"	Black	Silver	Water Temp	Included
114277	Competition	2-5/8"	White	Black	Water Temp	Included
116200	Competition	1-1/2"	Black	Silver	Water Temp Amber LED Lighting	Included
116202	Competition	1-1/2"	Black	Silver	Water Temp Blue LED Lighting	Included
116201	Competition	1-1/2"	Black	Silver	Water Temp Red LED Lighting	Included
	lectric Tempera		D.C.C.		Lighting	c.aaca
			Dist.	B	N	
Model #	Line	Size	Dial	Bezel	Notes	Sender*
116206	Competition	1-1/2″	Black	Silver	Trans Temp Amber LED Lighting	Included
116208	Competition	1-1/2"	Black	Silver	Trans Temp Blue LED Lighting	Included
116207	Competition	1-1/2"	Black	Silver	Trans Temp Red LED Lighting	Included
82307	Deluxe	2-1/16"	Black	Stainless	Water Temp	280ED-F
02301		•	-		· ·	
02115	Delinie			Stainless Oil Temp		
82115 284J	Deluxe Heavy Duty	2-1/16" 2-1/16"	Black Black	Stainless  Black/Brushed Ring	Water Temp	280ED-F 280ED-F

<sup>\*</sup> See page 52 for adapters for electric temperature senders.

### ELECTRIC TEMPERATURE

Competition Tachs & Gauges Pg 10; Deluxe™ Pg 24; Impact™Pg 30; Wings Pg 32; Power Series™ Pg 36; Standard™ Pg 40; Heavy Duty™ Pg 42

140-320°F E	lectric Tempera	ture				
Model #	Line	Size	Dial	Bezel	Notes	Sender*
114267	Competition	2-1/16"	Silver	Silver	Oil Temp	Included
114266	Competition	2-1/16"	Black	Silver	Oil Temp	Included
114268	Competition	2-1/16"	White	Black	Oil Temp	Included
114270	Competition	2-5/8"	Silver	Silver	Oil Temp	Included
114269	Competition	2-5/8"	Black	Silver	Oil Temp	Included
114271	Competition	2-5/8"	White	Black	Oil Temp	Included
116203	Competition	1-1/2"	Black	Silver	Oil Temp	Included
116205	Competition	1-1/2"	Black	Silver	Oil Temp	Included
116204	Competition	1-1/2"	Black	Silver	Oil Temp	Included
114285	Competition	2-1/16"	Silver	Silver	Trans Temp	Included
114284	Competition	2-1/16"	Black	Silver	Trans Temp	Included
114286	Competition	2-1/16"	White	Black	Trans Temp	Included
114288	Competition	2-5/8"	Silver	Silver	Trans Temp	Included
114287	Competition	2-5/8"	Black	Silver	Trans Temp	Included
114289	Competition	2-5/8"	White	Black	Trans Temp	Included
119910	Impact	2-1/16"	Black	Stainless	Trans Temp	Included
119816	Impact	2-1/16"	White	Stainless	Trans Temp	Included
82308	Deluxe	2-1/16"	Black	Stainless	Oil Temp	280EE-F
82490	Wings	2-1/16"	Black	Chrome	Oil Temp	280EE-F
82489	Wings	2-1/16"	White	Chrome	Oil Temp	280EE-F
284K	Heavy Duty	2-1/16"	Black	Black/Brushed Ring	Water Temp	280EE-F
150-325°F E	lectric Tempera	ture				
Model #	Line	Size	Dial	Bezel	Notes	Sender*
82344	Deluxe	2-1/16"	Black	Chrome	Trans Temp	280EE-F
200-1600°F	Electric Temper	rature	•	<b>'</b>	•	<b>'</b>
Model #	Line	Size	Dial	Bezel	Notes	Sender*
114401	Competition	2-1/16"	Silver	Silver	Exhaust Temp	(See Temp Probes)
114400	Competition	2-1/16"	Black	Silver	Exhaust Temp	(See Temp Probes)
114402	Competition	2-1/16"	White	Black	Exhaust Temp	(See Temp Probes)
119909	Impact	2-1/16"	Black	Stainless	Exhaust Temp	(See Temp Probes)
119815	Impact	2-1/16"	White	Stainless	Exhaust Temp	(See Temp Probes)
300-1200°C	Electric Temper	rature	•	<u>'</u>	,	•
Model #	Line	Size	Dial	Bezel	Notes	Sender*
114404	Competition	2-1/16"	Silver	Silver	Exhaust Temp	(See Temp Probes)
114403	Competition	2-1/16"	Black	Silver	Exhaust Temp	(See Temp Probes)
114405	Competition	2-1/16"	White	Black	Exhaust Temp	(See Temp Probes)
82334	Heavy Duty	2-1/16"	Black	Black/Brushed Ring	Pyrometer (Exhaust Temp)	(See Temp Probes)
300-1500°F	Electric Temper	rature	1		<u>'</u>	
Model #	Line	Size	Dial	Bezel	Notes	Sender*
82335	Deluxe	2-1/16"	Black	Stainless	Pyrometer (Exhaust Temp)	(See Temp Probes)
82486	Wings	2-1/16"	Black	Chrome	Pyrometer (Exhaust Temp)	(See Temp Probes)
82485	Wings	2-1/16"	White	Chrome	Pyrometer (Exhaust Temp)	(See Temp Probes)
	Electric Temper				17	<u>,                                     </u>
	Line	Size	Dial	Bezel	Notes	Sender*
Model #						
114407	Competition	2-1/16"	Silver	Silver	Exhaust Temp	(See Temp Probes)
	Competition Competition	2-1/16" 2-1/16"	Silver Black	Silver Silver	Exhaust Temp Exhaust Temp	(See Temp Probes)

<sup>\*</sup> See page 52 for adapters for electric temperature senders.

TIP: You can use braided stainless steel hose to remote mount electric pressure and temperature senders if clearance is a problem when installing an electric sender.

# MECHANICAL PRESSURE

1 Rar Mecha	nical Pressure					
Model #	Line	Size	Dial	Bezel	Notes	Tubing Kit
114319	Competition	2-1/16"	Silver	Silver	Fuel Pressure*	See Accessories
114318	Competition	2-1/16"	Black	Silver	Fuel Pressure*	See Accessories
114320	Competition	2-1/16"	White	Black	Fuel Pressure*	See Accessories
	nical Pressure	2 1/ 10	Winec	Bidek	racificasare	See 7 (ceessories
Model #	Line	Size	Dial	Bezel	Notes	Tubing Kit
114322	Competition	2-1/16"	Silver	Silver	Fuel Pressure*	See Accessories
114321	Competition	2-1/16"	Black	Silver	Fuel Pressure*	See Accessories
114323	Competition	2-1/16"	White	Black	Fuel Pressure*	See Accessories
	nical Pressure	2 1, 10	T T T T T T T T T T T T T T T T T T T	Dicterr	. de essa. e	300710003301103
Model #	Line	Size	Dial	Bezel	Notes	Tubing Kit
114325	Competition	2-1/16"	Silver	Silver	Fuel Pressure*	See Accessories
114324	Competition	2-1/16"	Black	Silver	Fuel Pressure*	See Accessories
114326	Competition	2-1/16"	White	Black	Fuel Pressure*	See Accessories
114328	Competition	2-1/16"	Silver	Silver	Oil Pressure	Included
114327	Competition	2-1/16"	Black	Silver	Oil Pressure	Included
114329	Competition	2-1/16"	White	Black	Oil Pressure	Included
	nanical Pressure	· · · · · · · · · · · · · · · · · · ·	VVIIICE	Bidek	On Tressare	iriciadea
Model #	Line	Size	Dial	Bezel	Notes	Tubing Kit
114340	Competition	2-1/16"	Silver	Silver	Air Pressure	Included
114339	Competition	2-1/16"	Black	Silver	Air Pressure	Included
114341	Competition	2-1/16"	White	Black	Air Pressure	Included
	anical Pressure	· '	Winec	Bidek	7 th Fressare	iriciaaca
Model #	Line	Size	Dial	Bezel	Notes	Tubing Kit
82319	Deluxe	2-1/16"	Black	Stainless	Fuel Pressure*	114840/11484
	anical Pressure		Dietek	Stelli liess	racificasare	111010/11101
Model #	Line	Size	Dial	Bezel	Notes	Tubing Kit
114501	Competition	2-1/16"	Silver	Silver	Fuel Pressure*	See Accessories
114500	Competition	2-1/16"	Black	Silver	Fuel Pressure*	See Accessories
114502	Competition	2-1/16"	White	Black	Fuel Pressure*	See Accessories
114504	Competition	2-5/8"	Silver	Silver	Fuel Pressure*	See Accessories
114503	Competition	2-5/8"	Black	Silver	Fuel Pressure*	See Accessories
114505	Competition	2-5/8"	White	Black	Fuel Pressure*	See Accessories
114585	Competition	2-1/16"	Silver	Silver	Water Pressure (No fittings/Adapters)	See Accessories
114584	Competition	2-1/16"	Black	Silver	Water Pressure (No fittings/Adapters)	See Accessories
114586	Competition	2-1/16"	White	Black	Water Pressure (No fittings/Adapters)	See Accessories
114588	Competition	2-5/8"	Silver	Silver	Water Pressure (No fittings/Adapters)	See Accessories
	<b>-</b>				, , , , ,	
114587	Competition	2-5/8"	Black	Silver	Water Pressure (No fittings/Adapters)	See Accessories
114589	Competition	2-5/8"	White	Black	Water Pressure (No fittings/Adapters)	See Accessories
82405	Deluxe	2-5/8"	Black	Stainless	Fuel Pressure*	See Accessories
15 PSI Mech	anical Pressure		`	<u> </u>		
Model #	Line	Size	Dial	Bezel	Notes	Tubing Kit
284E	Heavy Duty	2-1/16"	Black	Black/Brushed Ring	Fuel Pressure*	See Accessories
30 PSI Mech	anical Pressure					
Model #	Line	Size	Dial	Bezel	Notes	Tubing Kit
114383	Competition	2-1/16"	Silver	Silver	Fuel Pressure*	See Accessories
114382	Competition	2-1/16"	Black	Silver	Fuel Pressure*	See Accessories
114384	Competition	2-1/16"	White	Black	Fuel Pressure*	See Accessories
	<u> </u>					
82320	Deluxe	2-1/16"	Black	Stainless	Fuel Pressure*	See Accessories
30 PSI Mech	anical Pressure					
Model #	Line	Size	Dial	Bezel	Notes	Tubing Kit
114591	Competition	2-1/16"	Silver	Silver	Water Pressure (No fittings/Adapters)	See Accessories
	<del>                                     </del>					
114590	Competition	2-1/16"	Black	Silver	Water Pressure (No fittings/Adapters)	See Accessories
114592	Competition	2-1/16"	White	Black	Water Pressure (No fittings/Adapters)	See Accessories

<sup>\*</sup> Mechanical fuel pressure gauges must NOT be mounted in the passenger compartement of a vehicle. See our accessories section for braided stainless hose and mounting cups for mounting this gauge outside the cockpit.

### MECHANICAL PRESSURE

Competition Tachs & Gauges Pg 10; Deluxe™ Pg 24; Impact™Pg 30; Wings Pg 32; Power Series™ Pg 36; Standard™ Pg 40; Heavy Duty™ Pg 42

30 PSI Mechanical Pressure (Continued)									
Model #	Line	Size	Dial	Bezel	Notes	Tubing Kit			
114594	Competition	2-5/8"	Silver	Silver	Water Press (No fittings/Adapters)	See Accessories			
114593	Competition	2-5/8"	Black	Silver	Water Press (No fittings/Adapters)	See Accessories			
114595	Competition	2-5/8"	White	Black	Water Press (No fittings/Adapters)	See Accessories			
119913	Impact	2-1/16"	Black	Stainless	Fuel Pressure*	See Accessories			
119919	Impact	2-1/16"	White	Stainless	Fuel Pressure*	See Accessories			
50 PSI Mech	nanical Pressur	e							
Model #	Line	Size	Dial	Bezel	Notes	Tubing Kit			
82207	Standard	2-1/32"	Black	Flat/Stainless	Pressure	114840/11484			
60 PSI Mech	nanical Pressur	e							
Model #	Line	Size	Dial	Bezel	Notes	Tubing Kit			
114507	Competition	2-1/16"	Silver	Silver	Fuel Pressure*	See Accessories			
114506	Competition	2-1/16"	Black	Silver	Fuel Pressure*	See Accessories			
114508	Competition	2-1/16"	White	Black	Fuel Pressure*	See Accessories			
114510	Competition	2-5/8"	Silver	Silver	Fuel Pressure*	See Accessories			
114509	Competition	2-5/8"	Black	Silver	Fuel Pressure*	See Accessories			
114511	Competition	2-5/8"	White	Black	Fuel Pressure*	See Accessories			
80 PSI Mech	nanical Pressur	e				<u> </u>			
Model #	Line	Size	Dial	Bezel	Notes	Tubing Kit			
82322	Deluxe	2-1/16"	Black	Stainless	Oil Pressure	114840/11484			
82406	Deluxe	2-5/8"	Black	Stainless	Oil Pressure	114840/11484			
82476	Wings	2-1/16"	Black	Chrome	Oil Pressure	114840/11484			
82475	Wings	2-1/16"	White	Chrome	Oil Pressure	114840/11484			
82763	Power Series	2-1/16"	Blue/Gray Ring	Chrome	Oil Pressure	114840/11484			
82755	Power Series	2-1/16"	Burgundy Ring	Chrome	Oil Pressure	114840/11484			
82759	Power Series	2-1/16"	Titanium Ring	Chrome	Oil Pressure	114840/11484			
82208	Standard	2-1/32"	Black	Flat/Stainless	Pressure (No light)	114840/11484			
100 PSI Med	chanical Pressu	re							
Model #	Line	Size	Dial	Bezel	Notes	Tubing Kit			
114513	Competition	2-1/16"	Silver	Silver	Fuel Pressure*	See Accessories			
114512	Competition	2-1/16"	Black	Silver	Fuel Pressure*	See Accessories			
114514	Competition	2-1/16"	White	Black	Fuel Pressure*	See Accessories			
114516	Competition	2-5/8"	Silver	Silver	Fuel Pressure*	See Accessories			
114515	Competition	2-5/8"	Black	Silver	Fuel Pressure*	See Accessories			
114517	Competition	2-5/8"	White	Black	Fuel Pressure*	See Accessories			
114519	Competition	2-1/16"	Silver	Silver	Oil Pressure	Included			
114518	Competition	2-1/16"	Black	Silver	Oil Pressure	Included			
114520	Competition	2-1/16"	White	Black	Oil Pressure	Included			
114522	Competition	2-5/8"	Silver	Silver	Oil Pressure	Included			
114521	Competition	2-5/8"	Black	Silver	Oil Pressure	Included			
114523	Competition	2-5/8"	White	Black	Oil Pressure	Included			
	'	·				+			
	ı ımpact	1 1/16"	Black	Stainless	Fuel Pressure*	See Accessories			
119914	Impact	2-1/16"							
119914	Impact	2-1/16"	Black	Stainless	Fuel Pressure*	See Accessories			
	·			Stainless Stainless	Fuel Pressure* Oil Pressure	See Accessories 114840/11484			
119920	Impact	2-1/16" 2-1/16"	Black			1			
119920 82323 82407	Impact Deluxe Deluxe	2-1/16" 2-1/16" 2-5/8"	Black Black Black	Stainless Stainless	Oil Pressure Oil Pressure	114840/11484 114840/11484			
119920 82323 82407 82408	Impact Deluxe Deluxe Deluxe	2-1/16" 2-1/16" 2-5/8" 2-5/8"	Black Black Black Black	Stainless Stainless Stainless	Oil Pressure Oil Pressure Air Pressure	114840/11484 114840/11484 114840/11484			
119920 82323 82407 82408 82484	Impact Deluxe Deluxe Deluxe Wings	2-1/16" 2-1/16" 2-5/8" 2-5/8" 2-1/16"	Black Black Black Black Black	Stainless Stainless Stainless Chrome	Oil Pressure Oil Pressure Air Pressure Air Suspension	114840/11484 114840/11484 114840/11484 114840/11484			
119920 82323 82407 82408	Impact Deluxe Deluxe Deluxe	2-1/16" 2-1/16" 2-5/8" 2-5/8"	Black Black Black Black	Stainless Stainless Stainless	Oil Pressure Oil Pressure Air Pressure	114840/11484 114840/11484 114840/11484 114840/11484			
119920 82323 82407 82408 82484	Impact Deluxe Deluxe Deluxe Wings	2-1/16" 2-1/16" 2-5/8" 2-5/8" 2-1/16"	Black Black Black Black Black	Stainless Stainless Stainless Chrome	Oil Pressure Oil Pressure Air Pressure Air Suspension	114840/11484 114840/11484 114840/11484 114840/11484			
119920 82323 82407 82408 82484 82483	Impact Deluxe Deluxe Deluxe Wings Wings	2-1/16" 2-1/16" 2-5/8" 2-5/8" 2-1/16" 2-1/16"	Black Black Black Black Black White	Stainless Stainless Stainless Chrome Chrome	Oil Pressure Oil Pressure Air Pressure Air Suspension Air Suspension	114840/11484			

<sup>\*</sup> Mechanical fuel pressure gauges must NOT be mounted in the passenger compartement of a vehicle. See our accessories section for braided stainless hose and mounting cups for mounting this gauge outside the cockpit.

Mechanical pressure gauges continued on next page

# MECHANICAL PRESSURE

150 PSI Meci	hanical Pressur	e				
Model #	Line	Size	Dial	Bezel	Notes	Tubing Kit
114389	Competition	2-1/16"	Silver	Silver	Oil Pressure	Included
114388	Competition	2-1/16"	Black	Silver	Oil Pressure	Included
114390	Competition	2-1/16"	White	Black	Oil Pressure	Included
114392	Competition	2-5/8"	Silver	Silver	Oil Pressure	Included
114391	Competition	2-5/8"	Black	Silver	Oil Pressure	Included
114393	Competition	2-5/8"	White	Black	Oil Pressure	Included
114549	Competition	2-1/16"	Silver	Silver	Air Pressure	Included
114548	Competition	2-1/16"	Black	Silver	Air Pressure	Included
114550	Competition	2-1/16"	White	Black	Air Pressure	Included
114552	Competition	2-5/8"	Silver	Silver	Oil Pressure	Included
114551	Competition	2-5/8"	Black	Silver	Oil Pressure	Included
114553	Competition	2-5/8"	White	Black	Oil Pressure	Included
82329	Deluxe	2-1/16"	Black	Stainless	Air Pressure	114840/114841
82488	Wings	2-1/16"	Black	Chrome	Air Pressure	114840/114841
82487	Wings	2-1/16"	White	Chrome	Air Pressure	114840/114841
200 PSI Meci	hanical Pressur	· ·				·
Model #	Line	Size	Dial	Bezel	Notes	Tubing Kit
114307	Competition	2-1/16"	Silver	Silver	Pressure	Included
114306	Competition	2-1/16"	Black	Silver	Pressure	Included
114308	Competition	2-1/16"	White	Black	Pressure	Included
114310	Competition	2-5/8"	Silver	Silver	Pressure	Included
114309	Competition	2-5/8"	Black	Silver	Pressure	Included
114311	Competition	2-5/8"	White	Black	Pressure	Included
82325	Deluxe	2-1/16"	Black	Stainless	Fuel Pressure*	See Accessories
82324	Deluxe	2-1/16"	Black	Stainless	Oil Pressure	114840/114841
284P	Heavy Duty	2-1/16"	Black	Black/Brushed Ring	Oil Pressure	114840/114841
300 PSI Meci	hanical Pressur	·		, ,		,
Model #	Line	Size	Dial	Bezel	Notes	Tubing Kit
114313	Competition	2-1/16"	Silver	Silver	Pressure	Included
114312	Competition	2-1/16"	Black	Silver	Pressure	Included
114314	Competition	2-1/16"	White	Black	Pressure	Included
114316	Competition	2-5/8"	Silver	Silver	Pressure	Included
114315	Competition	2-5/8"	Black	Silver	Pressure	Included
114317	Competition	2-5/8"	White	Black	Pressure	Included
284R	Heavy Duty	2-1/16"	Black	Black/Brushed Ring	Trans Oil Pressure	114840/114841
400 PSI Meci	hanical Pressur			, ,		·
Model #	Line	Size	Dial	Bezel	Notes	Tubing Kit
2845	Heavy Duty	2-1/16"	Black	Black/Brushed Ring	Trans Oil Pressure	114840/114841
	echanical Pressi					,
Model #	Line	Size	Dial	Bezel	Notes	Tubing Kit
82393	Deluxe	2-1/16"	Black	Stainless	Air Pressure	114840/114841
1500 PSI Me	chanical Pressu	ire				,
Model #	Line	Size	Dial	Bezel	Notes	Tubing Kit
119384	Competition	2-1/16"	Silver	Silver	Nitrous Pressure	See Accessories
119383	Competition	2-1/16"	Black	Silver	Nitrous Pressure	See Accessories
		,	184 :			
119385	Competition	2-1/16"	White	Black	Nitrous Pressure	See Accessories
119385	Competition Competition		Silver	Silver	Nitrous Pressure	See Accessories
	· · · · · · · · · · · · · · · · · · ·	2-1/16" 2-5/8" 2-5/8"				

<sup>\*</sup> Mechanical fuel pressure gauges must NOT be mounted in the passenger compartement of a vehicle. See our accessories section for braided stainless hose and mounting cups for mounting this gauge outside the cockpit.

### **ELECTRIC PRESSURE**

Competition Tachs & Gauges Pg 10; Deluxe™ Pg 24; Impact™Pg 30; Wings Pg 32; Power Series™ Pg 36; Standard™ Pg 40; Heavy Duty™ Pg 42

1 Bar Electri	c Pressure					
Model #	Line	Size	Dial	Bezel	Notes	Sender
114207	Competition	2-1/16"	Silver	Silver	Fuel Pressure	Included
114206	Competition	2-1/16"	Black	Silver	Fuel Pressure	Included
114208	Competition	2-1/16"	White	Black	Fuel Pressure	Included
7 Bar Electri	c Pressure		1			
Model #	Line	Size	Dial	Bezel	Notes	Sender
114210	Competition	2-1/16"	Silver	Silver	Fuel Pressure	Included
114209	Competition	2-1/16"	Black	Silver	Fuel Pressure	Included
114211	Competition	2-1/16"	White	Black	Fuel Pressure	Included
114261	Competition	2-1/16"	Silver	Silver	Oil Pressure	Included
114260	Competition	2-1/16"	Black	Silver	Oil Pressure	Included
114262	Competition	2-1/16"	White	Black	Oil Pressure	Included
15 PSI Electi	ic Pressure	·	1			
Model #	Line	Size	Dial	Bezel	Notes	Sender
114213	Competition	2-1/16"	Silver	Silver	Fuel Pressure	Included
114212	Competition	2-1/16"	Black	Silver	Fuel Pressure	Included
114214	Competition	2-1/16"	White	Black	Fuel Pressure	Included
114216	Competition	2-5/8"	Silver	Silver	Fuel Pressure	Included
114215	Competition	2-5/8"	Black	Silver	Fuel Pressure	Included
114217	Competition	2-5/8"	White	Black	Fuel Pressure	Included
116212	Competition	1-1/2"	Black	Silver	Fuel Pressure Amber LED Lighting	Included
116214	Competition	1-1/2"	Black	Silver	Fuel Pressure Blue LED Lighting	Included
116213	Competition	1-1/2"	Black	Silver	Fuel Pressure Red LED Lighting	Included
119911	Impact	2-1/16"	Black	Stainless	Fuel Pressure	Included
119817	Impact	2-1/16"	White	Stainless	Fuel Pressure	Included
16 PSI Electi	ic Pressure		!			
Model #	Line	Size	Dial	Bezel	Notes	Sender
82333	Deluxe	2-1/16"	Black	Stainless	Fuel Pressure	114874
284AM	Heavy Duty	2-1/16"	Black	Black/Brushed Ring	Fuel Pressure	114874
80 PSI Electi	ic Pressure					
Model #	Line	Size	Dial	Bezel	Notes	Sender
82304	Deluxe	2-1/16"	Black	Stainless	Oil Pressure	279A
82474	Wings	2-1/16"	Black	Chrome	Oil Pressure	279A
82473	Wings	2-1/16"	White	Chrome	Oil Pressure	279A
82530	Wings	2-1/16"	Beige	Chrome	Oil Pressure	279A
82520	Wings	2-1/16"	Beige	Gold	Oil Pressure	279A
82497	Wings	2-1/16"	Silver	Chrome	Oil Pressure	279A
82760	Power Series	2-1/16"	Blue/Gray Ring	Chrome	Oil Pressure	279A
82752	Power Series	2-1/16"	Burgundy Ring	Chrome	Oil Pressure	279A
82756	Power Series	2-1/16"	Titanium Ring	Chrome	Oil Pressure	279A
284AE	Heavy Duty	2-1/16"	Black	Black/Brushed Ring	Oil Pressure	279A
	tric Pressure	,		, ,		
	1	C:_a	Diel	Powel	Notes	Comdo
Model #	Line	Size	Dial	Bezel	Notes	Sender
114219	Competition	2-1/16"	Silver	Silver	Fuel Pressure	Included
114218	Competition	2-1/16"	Black	Silver	Fuel Pressure	Included
114220	Competition	2-1/16"	White	Black	Fuel Pressure	Included
114222	Competition	2-5/8"	Silver	Silver	Fuel Pressure	Included
	'					
11/221	Competition	2-5/8"	Black	Silver	Fuel Pressure	Included
114221	-				Fuel Pressure	Included
114223	Competition	2-5/8"	White	Black	Tuerriessure	meraace
	-	2-5/8" 2-1/16"	White Silver	Silver	Oil Pressure	
114223	Competition	-	-			Included
114223 114255 114254	Competition Competition Competition	2-1/16" 2-1/16"	Silver Black	Silver Silver	Oil Pressure Oil Pressure	Included
114223 114255	Competition Competition	2-1/16"	Silver	Silver	Oil Pressure	Included Included Included Included

<sup>\*</sup> See page 54 for electric pressure sender adapters if needed.

Electric pressure gauges continued on next page

# ELECTRIC PRESSURE/FUEL LEVEL

Competition Tachs & Gauges Pg 10; Deluxe™ Pg 24; Impact™Pg 30; Wings Pg 32; Power Series™ Pg 36; Standard™ Pg 40; Heavy Duty™ Pg 42

100 PSI Electric Pressure (Continued)								
Model #	Line	Size	Dial	Bezel	Notes	Sender		
114257	Competition	2-5/8"	Black	Silver	Oil Pressure	Included		
114259	Competition	2-5/8"	White	Black	Oil Pressure	Included		
116209	Competition	1-1/2"	Black	Silver	Oil Pressure Amber LED Lighting	Included		
116211	Competition	1-1/2"	Black	Silver	Oil Pressure Blue LED Lighting	Included		
116210	Competition	1-1/2"	Black	Silver	Oil Pressure Red LED Lighting	Included		
116215	Competition	1-1/2"	Black	Silver	Fuel Pressure Amber LED Lighting	Included		
116217	Competition	1-1/2"	Black	Silver	Fuel Pressure Blue LED Lighting	Included		
116216	Competition	1-1/2"	Black	Silver	Fuel Pressure Red LED Lighting	Included		
119912	Impact	2-1/16"	Black	Stainless	Fuel Pressure	Included		
119918	Impact	2-1/16"	White	Stainless	Fuel Pressure	Included		
82305	Deluxe	2-1/16"	Black	Stainless	Air Pressure	114875		
284L	Heavy Duty	2-1/16"	Black	Black/Brushed Ring	Oil Pressure	114875		
150 PSI Elect	tric Pressure			-				
Model #	Line	Size	Dial	Bezel	Notes	Sender		
82346	Deluxe	2-1/16"	Black	Stainless	Air Pressure	279C		
284T	Heavy Duty	2-1/16"	Black	Black/Brushed Ring	Air Pressure	279C		
700 kPa Elec	tric Pressure		•					
Model #	Line	Size	Dial	Bezel	Notes	Sender		
82387	Deluxe	2-1/16"	Black	Stainless	Oil Pressure	114875		
700 kPa Elec	tric Pressure		-1	<b>'</b>		-		
Model #	Line	Size	Dial	Bezel	Notes	Sender		
82388	Deluxe	2-1/16"	Black	Stainless	Air Pressure	279C		

<sup>\*</sup> See page 54 for electric pressure sender adapters if needed.

### **Fuel Level**

73-10 Ohm Fuel Level								
Model #	Line	Size	Dial	Bezel	Notes	Sender		
114231	Competition	2-1/16"	Silver	Silver	Fuel Level	Not available		
114230	Competition	2-1/16"	Black	Silver	Fuel Level	Not available		
114232	Competition	2-1/16"	White	Black	Fuel Level	Not available		
114234	Competition	2-5/8"	Silver	Silver	Fuel Level	Not available		
114233	Competition	2-5/8"	Black	Silver	Fuel Level	Not available		
114235	Competition	2-5/8"	White	Black	Fuel Level	Not available		
82342	Deluxe	2-1/16"	Black	Stainless	Fuel Level	Not available		
82496	Wings	2-1/16"	Black	Chrome	Fuel Level	Not available		
82495	Wings	2-1/16"	White	Chrome	Fuel Level	Not available		
284BR	Heavy Duty	2-1/16"	Black	Black/Brushed Ring	Fuel Level	Not available		
16-158 Ohm	Fuel Level							
Model #	Line	Size	Dial	Bezel	Notes	Sender		
114249	Competition	2-1/16"	Silver	Silver	Fuel Level	Not available		
114248	Competition	2-1/16"	Black	Silver	Fuel Level	Not available		
114250	Competition	2-1/16"	White	Black	Fuel Level	Not available		
114252	Competition	2-5/8"	Silver	Silver	Fuel Level	Not available		
114251	Competition	2-5/8"	Black	Silver	Fuel Level	Not available		
114253	Competition	2-5/8"	White	Black	Fuel Level	Not available		

Fuel level gauges continued on next page

### FUEL LEVEL

240-33.5 Of	nm Fuel Level					
Model #	Line	Size	Dial	Bezel	Notes	Sender
114237	Competition	2-1/16"	Silver	Silver	Fuel Level	114876
114236	Competition	2-1/16"	Black	Silver	Fuel Level	114876
114238	Competition	2-1/16"	White	Black	Fuel Level	114876
114240	Competition	2-5/8"	Silver	Silver	Fuel Level	114876
114239	Competition	2-5/8"	Black	Silver	Fuel Level	114876
114241	Competition	2-5/8"	White	Black	Fuel Level	114876
116218	Competition	1-1/2"	Black	Silver	Fuel Level	114876
116220	Competition	1-1/2"	Black	Silver	Fuel Level	114876
116219	Competition	1-1/2"	Black	Silver	Fuel Level	114876
82303	Deluxe	2-1/16"	Black	Stainless	Fuel Level	114876
82413	Deluxe	2-5/8"	Black	Stainless	Fuel Level	114876
82472	Wings	2-1/16"	Black	Chrome	Fuel Level	114876
82471	Wings	2-1/16"	White	Chrome	Fuel Level	114876
82532	Wings	2-1/16"	Beige	Chrome	Fuel Level	114876
82522	Wings	2-1/16"	Beige	Chrome	Fuel Level	114876
82499	Wings	2-1/16"	Silver	Chrome	Fuel Level	114876
82517	Power Series	2-1/16"	Blue/Gray Ring	Chrome	Fuel Level	114876
82515	Power Series	2-1/16"	Burgundy Ring	Chrome	Fuel Level	114876
82516	Power Series	2-1/16"	Titanium Ring	Chrome	Fuel Level	114876
82211	Standard	2-1/32"	Black	Flat/Stainless	Fuel Level (No light)	114876
284M	Heavy Duty	2-1/16"	Black	Black/Brushed Ring	Fuel Level	114876
0-90 Ohm F	uel Level					
Model #	Line	Size	Dial	Bezel	Notes	Sender
114225	Competition	2-1/16"	Silver	Silver	Fuel Level	See note
114224	Competition	2-1/16"	Black	Silver	Fuel Level	See note
114226	Competition	2-1/16"	White	Black	Fuel Level	See note
114228	Competition	2-5/8"	Silver	Silver	Fuel Level	See note
114227	Competition	2-5/8"	Black	Silver	Fuel Level	See note
114229	Competition	2-5/8"	White	Black	Fuel Level	See note
82341	Deluxe	2-1/16"	Black	Stainless	Fuel Level	See note
82494	Wings	2-1/16"	Black	Chrome	Fuel Level	See note
82493	Wings	2-1/16"	White	Chrome	Fuel Level	See note
284BS	Heavy Duty	2-1/16"	Black	Black/Brushed Ring	Fuel Level	See note

<sup>\*</sup> Stewart Warner offers four 0-900hm fuel level senders. See page 52 to select the proper length and orientation for your tank.

# VOLTMETERS/AIR FUEL RATIO

Competition Tachs & Gauges Pg 10; Deluxe™ Pg 24; Impact™Pg 30; Wings Pg 32; Power Series™ Pg 36; Standard™ Pg 40; Heavy Duty™ Pg 42

8-18V Voltmeter								
Model #	Line	Size	Dial	Bezel	Notes	Sender		
114201	Competition	2-1/16"	Silver	Silver	Voltmeter	N/A		
114200	Competition	2-1/16"	Black	Silver	Voltmeter	N/A		
114202	Competition	2-1/16"	White	Black	Voltmeter	N/A		
114204	Competition	2-5/8"	Silver	Silver	Voltmeter	N/A		
114203	Competition	2-5/8"	Black	Silver	Voltmeter	N/A		
114205	Competition	2-5/8"	White	Black	Voltmeter	N/A		
116221	Competition	1-1/2"	Black	Silver	Voltmeter Amber LED Lighting	N/A		
116223	Competition	1-1/2"	Black	Silver	Voltmeter Blue LED Lighting	N/A		
116222	Competition	1-1/2"	Black	Silver	Voltmeter Red LED Lighting	N/A		
10-16V Volt	meter							
Model #	Line	Size	Dial	Bezel	Notes	Sender		
82309	Deluxe	2-1/16"	Black	Stainless	Voltmeter (color band)	N/A		
82391	Deluxe	2-1/16"	Black	Stainless	Voltmeter (color band)	N/A		
82482	Wings	2-1/16"	Black	Chrome	Voltmeter	N/A		
82481	Wings	2-1/16"	White	Chrome	Voltmeter	N/A		
82533	Wings	2-1/16"	Beige	Chrome	Voltmeter	N/A		
82523	Wings	2-1/16"	Beige	Gold	Voltmeter	N/A		
82610	Wings	2-1/16"	Silver	Chrome	Voltmeter	N/A		
82762	Power Series	2-1/16"	Blue/Gray Ring	Chrome	Voltmeter	N/A		
82754	Power Series	2-1/16"	Burgundy Ring	Chrome	Voltmeter	N/A		
82758	Power Series	2-1/16"	Titanium Ring	Chrome	Voltmeter	N/A		
284H	Heavy Duty	2-1/16"	Black	Black/Brushed Ring	Voltmeter (color band)	N/A		
20-32V Volt	meter							
Model #	Line	Size	Dial	Bezel	Notes	Sender		
82347	Deluxe	2-5/8"	Black	Stainless	Voltmeter (color band)	N/A		
284AJ	Heavy Duty	2-1/16"	Black	Black/Brushed Ring	Voltmeter (color band)	N/A		
	•							

### **Air/Fuel Ratio**

Air/Fuel Ratio	Air/Fuel Ratio								
Model #	Line	Size	Dial	Bezel	Notes	Sender			
114901	Competition	2-1/16"	Silver	Silver	Air/Fuel Ratio 20 LED band	Use OE 0-1V sensor			
114900	Competition	2-1/16"	Black	Silver	Air/Fuel Ratio 20 LED band	Use OE 0-1V sensor			
114902	Competition	2-1/16"	White	Black	Air/Fuel Ratio 20 LED band	Use OE 0-1V sensor			
114904	Competition	2-5/8"	Silver	Silver	Air/Fuel Ratio 20 LED band	Use OE 0-1V sensor			
114903	Competition	2-5/8"	Black	Silver	Air/Fuel Ratio 20 LED band	Use OE 0-1V sensor			
114905	Competition	2-5/8"	White	Black	Air/Fuel Ratio 20 LED band	Use OE 0-1V sensor			

# Ammeters

20-0-20 Am	meter					
Model #	Line	Size	Dial	Bezel	Notes	Sender
82201	Standard	2-1/32"	Black	Flat Stainless	Ammeter Internally shunted	N/A
30-0-30 Am	meter					
Model #	Line	Size	Dial	Bezel	Notes	Sender
82310	Deluxe	2-1/16"	Black	Stainless	Ammeter internally shunted	N/A
82200	Standard	2-1/32"	Black	Flat Stainless	Ammeter Internally shunted	N/A
82311	Deluxe	2-1/16"	Black	Stainless	Ammeter internally shunted	N/A
82404	Deluxe	2-5/8"	Black	Stainless	Ammeter internally shunted	N/A
60-0-60 Am	meter	,				
Model #	Line	Size	Dial	Bezel	Notes	Sender
82202	Standard	2-1/32"	Black	Flat Stainless	Ammeter Internally shunted	N/A
284A	Heavy Duty	2-1/16"	Black	Black/Brushed Ring	Ammeter Internally shunted	N/A
100-0-100 A	Ammeter	·				
Model #	Line	Size	Dial	Bezel	Notes	Sender
82313	Deluxe	2-1/16"	Black	Stainless	Ammeter internally shunted	N/A
82343	Deluxe	2-1/16"	Black	Stainless	Ammeter	407616
284AA	Heavy Duty	2-1/16"	Black	Black/Brushed Ring	Ammeter	407616
150-0-150 A	Ammeter					
Model #	Line	Size	Dial	Bezel	Notes	Sender
284AD	Heavy Duty	2-1/16"	Black	Black/Brushed Ring	Ammeter	413717

# BOOST/BLOWER/MANIFOLD PRESSURE

4 Bar Boost	Pressure					
Model #	Line	Size	Dial	Bezel	Notes	Tubing Kit
114331	Competition	2-1/16"	Silver	Silver	Boost Pressure (Mechanical)	Included
114330	Competition	2-1/16"	Black	Silver	Boost Pressure (Mechanical)	Included
114332	Competition	2-1/16"	White	Black	Boost Pressure (Mechanical)	Included
15 PSI Boost	Pressure					
Model #	Line	Size	Dial	Bezel	Notes	Tubing Kit
114374	Competition	2-1/16"	Silver	Silver	Boost Pressure (Mechanical)	Included
114373	Competition	2-1/16"	Black	Silver	Boost Pressure (Mechanical)	Included
114375	Competition	2-1/16"	White	Black	Boost Pressure (Mechanical)	Included
284BF	Heavy Duty	2-1/16"	Black	Black/Brushed Ring	Boost Pressure (Mechanical)	114840/114841
30 PSI Boost	Pressure					
Model #	Line	Size	Dial	Bezel	Notes	Tubing Kit
114377	Competition	2-1/16"	Silver	Silver	Boost Pressure (Mechanical)	Included
114376	Competition	2-1/16"	Black	Silver	Boost Pressure (Mechanical)	Included
114378	Competition	2-1/16"	White	Black	Boost Pressure (Mechanical)	Included
119916	Impact	2-1/16"	Black	Polished Stainless	Boost (Mechanical)	Included
119820	Impact	2-1/16"	White	Polished Stainless	Boost (Mechanical)	Included
82321	Deluxe	2-1/16"	Black	Stainless	Manifold Pressure (Mechanical)	114840/114841
60 PSI Boost	Pressure					
Model #	Line	Size	Dial	Bezel	Notes	Tubing Kit
114525	Competition	2-1/16"	Silver	Silver	Boost Pressure (Mechanical)	Included
114524	Competition	2-1/16"	Black	Silver	Boost Pressure (Mechanical)	Included
114526	Competition	2-1/16"	White	Black	Boost Pressure (Mechanical)	Included
114528	Competition	2-5/8"	Silver	Silver	Boost Pressure (Mechanical)	Included
114527	Competition	2-5/8"	Black	Silver	Boost Pressure (Mechanical)	Included
114529	Competition	2-5/8"	White	Black	Boost Pressure (Mechanical)	Included
119917	Impact	2-1/16"	Black	Polished Stainless	Boost (Mechanical)	Included
119821	Impact	2-1/16"	White	Polished Stainless	Boost (Mechanical)	Included
100 PSI Boos	st Pressure		-			
Model #	Line	Size	Dial	Bezel	Notes	Tubing Kit
114386	Competition	2-1/16"	Silver	Silver	Boost Pressure (Mechanical)	Included
114385	Competition	2-1/16"	Black	Silver	Boost Pressure (Mechanical)	Included
114387	Competition	2-1/16"	White	Black	Boost Pressure (Mechanical)	Included
114531	Competition	2-1/16"	Silver	Silver	Blower Pressure (Mechanical)	Included
114530	Competition	2-1/16"	Black	Silver	Blower Pressure (Mechanical)	Included
114532	Competition	2-1/16"	White	Black	Blower Pressure (Mechanical)	Included
114534	Competition	2-5/8"	Silver	Silver	Blower Pressure (Mechanical)	Included
114533	Competition	2-5/8"	Black	Silver	Blower Pressure (Mechanical)	Included
114535	Competition	2-5/8"	White	Black	Blower Pressure (Mechanical)	Included
119918	Impact	2-1/16"	Black	Polished Stainless	Boost (Mechanical)	Included
119822	Impact	2-1/16"	White	Polished Stainless	Boost (Mechanical)	Included

# Vac/Boost / Vacuum

Competition Tachs & Gauges Pg 10; Deluxe™ Pg 24; Impact™Pg 30; Wings Pg 32; Power Series™ Pg 36; Standard™ Pg 40; Heavy Duty™ Pg 42

Model #	Line	Size	Dial	Bezel	Notes	Tubing Kit
114537	Competition	2-1/16"	Silver	Silver	Vac/Boost (Mechanical)	Included
114536	Competition	2-1/16"	Black	Silver	Vac/Boost (Mechanical)	Included
114538	Competition	2-1/16"	White	Black	Vac/Boost (Mechanical)	Included
114540	Competition	2-5/8"	Silver	Silver	Vac/Boost (Mechanical)	Included
114539	Competition	2-5/8"	Black	Silver	Vac/Boost (Mechanical)	Included
114541	Competition	2-5/8"	White	Black	Vac/Boost (Mechanical)	Included
119915	Impact	2-1/16"	Black	Stainless	Vac/Boost (Mechanical)	Included
119819	Impact	2-1/16"	White	Stainless	Vac/Boost (Mechanical)	Included
82340	Deluxe	2-1/16"	Black	Stainless	Vac/Boost (Mechanical)	114840/114841
30Hg/25 PS	Vac/Boost Pres	sure				
Model #	Line	Size	Dial	Bezel	Notes	Tubing Kit
114380	Competition	2-1/16"	Silver	Silver	Vac/Boost (Mechanical)	Included
114379	Competition	2-1/16"	Black	Silver	Vac/Boost (Mechanical)	Included
114381	Competition	2-1/16"	White	Black	Vac/Boost (Mechanical)	Included
30Hg/40 PS	Vac/Boost Pres	sure	•			
Model #	Line	Size	Dial	Bezel	Notes	Tubing Kit
114543	Competition	2-1/16"	Silver	Silver	Vac/Boost (Mechanical)	Included
114542	Competition	2-1/16"	Black	Silver	Vac/Boost (Mechanical)	Included
114544	Competition	2-1/16"	White	Black	Vac/Boost (Mechanical)	Included
114546	Competition	2-5/8"	Silver	Silver	Vac/Boost (Mechanical)	Included
114545	Competition	2-5/8"	Black	Silver	Vac/Boost (Mechanical)	Included
114547	Competition	2-5/8"	White	Black	Vac/Boost (Mechanical)	Included
82492	Wings	2-1/16"	Black	Chrome	Vac/Boost (Mechanical)	114840/114841
82491	Wings	2-1/16"	White	Chrome	Vac/Boost (Mechanical)	114840/114841
80cmHg/1 B	ar Vac/Boost Pr	essure				
Model #	Line	Size	Dial	Bezel	Notes	Tubing Kit
114334	Competition	2-1/16"	Silver	Silver	Vac/Boost (Mechanical)	Included
114333	Competition	2-1/16"	Black	Silver	Vac/Boost (Mechanical)	Included
114335	Competition	2-1/16"	White	Black	Vac/Boost (Mechanical)	Included
80cmHg/3 B	ar Vac/Boost Pr	essure				
Model #	Line	Size	Dial	Bezel	Notes	Tubing Kit
114337	Competition	2-1/16"	Silver	Silver	Vac/Boost (Mechanical)	Included
114336	Competition	2-1/16"	Black	Silver	Vac/Boost (Mechanical)	Included
114338	Competition	2-1/16"	White	Black	Vac/Boost (Mechanical)	Included

### **Vacuum**

30Hg Vacuu	30Hg Vacuum						
Model #	Line	Size	Dial	Bezel	Notes	Tubing Kit	
114301	Competition	2-1/16"	Silver	Silver	Vacuum	Included	
114300	Competition	2-1/16"	Black	Silver	Vacuum	Included	
114302	Competition	2-1/16"	White	Black	Vacuum	Included	
114304	Competition	2-5/8"	Silver	Silver	Vacuum	Included	
114303	Competition	2-5/8"	Black	Silver	Vacuum	Included	
114305	Competition	2-5/8"	White	Black	Vacuum	Included	
82328	Deluxe	2-1/16"	Black	Stainless	Vacuum	114842	
82411	Deluxe	2-5/8"	Black	Stainless	Vacuum	114842	
284AH	Heavy Duty	2-1/16"	Black	Black/Brushed Ring	Vacuum	114842	
82301	Heavy Duty	2-1/16"	Black	Black/Brushed Ring	Motor Minder	Includes T-Fitting & hose	

# **TACHOMETERS**

	ights™ - Digital		1			
lodel #	Line	Size	LED	Bezel	Notes	Includes
114906	Competition	Tube	Amber	N/A	13,000 RPM	
114919	Competition	Tube	Blue	N/A	13,000 RPM	
114918	Competition	Tube	Red	N/A	13,000 RPM	
114946	Competition	Tube	Amber	N/A	13,000 RPM Paintable	
114948	Competition	Tube	Blue	N/A	13,000 RPM Paintable	
114947	Competition	Tube	Red	N/A	13,000 RPM Paintable	
114958	Competition	Tube	Amber	N/A	18,000 RPM; Window Switch	30A relay
114960	Competition	Tube	Blue	N/A	18,000 RPM; Window Switch	30A relay
114959	Competition	Tube	Red	N/A	18,000 RPM; Window Switch	30A relay
114926	Competition	Tube	Amber	N/A	18,000 RPM; 4-Shift Points	
114928	Competition	Tube	Blue	N/A	18,000 RPM; 4-Shift Points	
114927	Competition	Tube	Red	N/A	18,000 RPM; 4-Shift Points	
114929	Competition	2-1/16"	Amber	Black	18,000 RPM	
114931	Competition	2-1/16"	Blue	Black	18,000 RPM	
114930	Competition	2-1/16"	Red	Black	18,000 RPM	
114949	Competition	2-1/16"	Amber	Silver	18,000 RPM	
114951	Competition	2-1/16"	Blue	Silver	18,000 RPM	
114950	Competition	2-1/16"	Red	Silver	18,000 RPM	
Memory Tac	hometers - 11,0	OOO RPM				
Model #	Line	Size	Dial	Bezel	Notes	
114013	Competition	5″	Silver	Silver	Exterma; Shift Light	
114012	Competition	5″	Black	Silver	Exterma; Shift Light	
114014	Competition	5″	White	Black	Exterma; Shift Light	
Memory Tac	hometers - 10,0	000 RPM				
Model #	Line	Size	Dial	Bezel	Notes	
114110	Competition	3-3/8"	Silver	Silver	Shift Light in dial	
114109	Competition	3-3/8"	Black	Silver	Shift Light in dial	
114111	Competition	3-3/8"	White	Black	Shift Light in dial	
114019	Competition	5″	Silver	Silver	Shift Light optional	
114018	Competition	5″	Black	Silver	Shift Light optional	
					,	
114020	Competition	5″	White	Black	Shift Light optional	
114020 114113	Competition Competition	5" 3-3/8"	White Silver	Black Silver	Shift Light optional Shift Light in dial	
114113	Competition	3-3/8"	Silver	Silver	Shift Light in dial	
	Competition Competition				Shift Light in dial Shift Light in dial	
114113 114112	Competition	3-3/8" 3-3/8"	Silver Black	Silver Silver	Shift Light in dial	
114113 114112 114114 114025	Competition Competition Competition Competition	3-3/8" 3-3/8" 3-3/8"	Silver Black White Silver	Silver Silver Black	Shift Light in dial Shift Light in dial Shift Light in dial No microprocessor	
114113 114112 114114 114025 114024	Competition Competition Competition Competition Competition	3-3/8" 3-3/8" 3-3/8" 5"	Silver Black White Silver Black	Silver Silver Black Silver Silver	Shift Light in dial Shift Light in dial Shift Light in dial No microprocessor No microprocessor	
114113 114112 114114 114025 114024 114026	Competition Competition Competition Competition Competition Competition	3-3/8" 3-3/8" 3-3/8" 5" 5"	Silver Black White Silver	Silver Silver Black Silver	Shift Light in dial Shift Light in dial Shift Light in dial No microprocessor	
114113 114112 114114 114025 114024 114026 Memory Tack	Competition Competition Competition Competition Competition Competition Competition	3-3/8" 3-3/8" 3-3/8" 5" 5" 00 RPM	Silver Black White Silver Black White	Silver Silver Black Silver Silver Black	Shift Light in dial Shift Light in dial Shift Light in dial No microprocessor No microprocessor No microprocessor	
114113 114112 114114 114025 114024 114026 Memory Tac Model #	Competition Competition Competition Competition Competition Competition Competition Competition	3-3/8" 3-3/8" 5" 5" 5" 5 ST ST SIZE	Silver Black White Silver Black White	Silver Silver Black Silver Silver Black Black	Shift Light in dial Shift Light in dial Shift Light in dial No microprocessor No microprocessor No microprocessor No microprocessor	
114113 114112 114114 114025 114024 114026 Memory Tac Model # 114016	Competition Competition Competition Competition Competition Competition hometers - 9,00 Line Competition	3-3/8" 3-3/8" 5" 5" 5" 5" 5 Size 5"	Silver Black White Silver Black White  Dial Silver	Silver Silver Black Silver Silver Black Black	Shift Light in dial Shift Light in dial Shift Light in dial No microprocessor No microprocessor No microprocessor  No microprocessor  Exterma; Shift Light	
114113 114112 114114 114025 114024 114026 Memory Tack Model # 114016 114015	Competition Competition Competition Competition Competition Competition Competition Line Competition Competition	3-3/8" 3-3/8" 5" 5" 5" OO RPM Size 5"	Silver Black White Silver Black White  Dial Silver Black	Silver Silver Black Silver Silver Black  Black  Silver Silver Silver	Shift Light in dial Shift Light in dial Shift Light in dial Shift Light in dial No microprocessor No microprocessor No microprocessor  Notes Exterma; Shift Light Exterma; Shift Light	
114113 114112 114114 114025 114024 114026 Memory Tac Model # 114016 114015 114017	Competition	3-3/8" 3-3/8" 5" 5" 5" <b>50 RPM Size</b> 5" 5"	Silver Black White Silver Black White  Dial Silver	Silver Silver Black Silver Silver Black Black	Shift Light in dial Shift Light in dial Shift Light in dial No microprocessor No microprocessor No microprocessor  No microprocessor  Exterma; Shift Light	
114113 114112 114114 114025 114024 114026 Memory Tack Model # 114016 114015 114017	Competition Competition Competition Competition Competition Competition hometers - 9,00 Line Competition Competition Competition Competition Competition	3-3/8" 3-3/8" 5" 5" 5" 00 RPM Size 5" 5" 5"	Silver Black White Silver Black White  Dial Silver Black White	Silver Silver Black Silver Silver Black  Black  Black	Shift Light in dial Shift Light in dial Shift Light in dial No microprocessor No microprocessor No microprocessor  Notes Exterma; Shift Light Exterma; Shift Light Exterma; Shift Light	
114113 114112 114114 114025 114024 114026 Memory Tack Model # 114016 114015 114017 Standard Tack Model #	Competition Chometers - 10,	3-3/8" 3-3/8" 5" 5" 5" 00 RPM Size 5" 5" 5" 5" 5" 5" 5" 5" 5" 5" 5" 5" 5"	Silver Black White Silver Black White  Dial Silver Black White	Silver Silver Black Silver Silver Black  Black  Bezel Silver Silver Black  Black	Shift Light in dial Shift Light in dial Shift Light in dial No microprocessor No microprocessor No microprocessor  Notes Exterma; Shift Light Exterma; Shift Light Exterma; Shift Light Notes	
114113 114112 114114 114025 114024 114026 Memory Tack Model # 114016 114015 114017	Competition Competition Competition Competition Competition Competition hometers - 9,00 Line Competition Competition Competition Competition Competition	3-3/8" 3-3/8" 5" 5" 5" 00 RPM Size 5" 5" 5"	Silver Black White Silver Black White  Dial Silver Black White	Silver Silver Black Silver Silver Black  Black  Black	Shift Light in dial Shift Light in dial Shift Light in dial No microprocessor No microprocessor No microprocessor  Notes Exterma; Shift Light Exterma; Shift Light Exterma; Shift Light	

# **TACHOMETERS**

Standard Tac	:hometers - 10,	000 RPM				
Model #	Line	Size	Dial	Bezel	Notes	
114101	Competition	3-3/8"	Silver	Silver	Vertical Dial	
114100	Competition	3-3/8"	Black	Silver	Vertical Dial	
114102	Competition	3-3/8"	White	Black	Vertical Dial	
114007	Competition	5″	Silver	Silver	Horizontal Dial	
114006	Competition	5″	Black	Silver	Horizontal Dial	
114008	Competition	5″	White	Black	Horizontal Dial	
114107	Competition	3-3/8"	Silver	Silver	Horizontal Dial	
114106	Competition	3-3/8"	Black	Silver	Horizontal Dial	
114108	Competition	3-3/8"	White	Black	Horizontal Dial	
82699	Deluxe	5″	Black	Stainless	Ignition Coil	
82849	5″ Line	5″	Black	Stainless	Wings Logo (Ignition)	
82847	5″ Line	5″	White	Stainless	Wings Logo (Ignition)	
Standard Tag	:hometers - 9,0	00 RPM			3 3 13 7	
Model #	Line	Size	Dial	Bezel	Notes	
535AH-D	Deluxe	3-3/8"	Black	Stainless	Mechanical; .5:1 Ratio	
Standard Tac	:hometers - 8,0	00 RPM				
Model #	Line	Size	Dial	Bezel	Notes	
114004	Competition	5″	Silver	Silver	Vertical Dial	
114003	Competition	5″	Black	Silver	Vertical Dial	
114005	Competition	5″	White	Black	Vertical Dial	
114104	Competition	3-3/8"	Silver	Silver	Vertical Dial	
114103	Competition	3-3/8"	Black	Silver	Vertical Dial	
114105	Competition	3-3/8"	White	Black	Vertical Dial	
114010	Competition	5″	Silver	Silver	Horizontal Dial	
114009	Competition	5″	Black	Silver	Horizontal Dial	
114011	Competition	5″	White	Black	Horizontal Dial	
114116	Competition	3-3/8"	Silver	Silver	Horizontal Dial	
114115	Competition	3-3/8"	Black	Silver	Horizontal Dial	
114117	Competition	3-3/8"	White	Black	Horizontal Dial	
82170	Deluxe	3-3/8"	Black	Stainless	4-, 6-, 8-Cyl; 12 Pole	
82163	Deluxe	3-3/8"	Black	Stainless	4-, 8-, 12-Cyl; 20 Pole	
82660	Wings	3-3/8"	Black	Chrome	4, 6, 8-cylinder	
82659	Wings	3-3/8"	White	Chrome	4, 6, 8-cylinder	
82613	Wings	3-3/8"	Beige	Chrome	4, 6, 8-cylinder	
82608	Wings	3-3/8"	Beige	Gold	4, 6, 8-cylinder	
82614	Wings	3-3/8"	Silver	Chrome	4, 6, 8-cylinder	
82838	Power Series	3-3/8"	Blue/Gray Ring	Chrome	4, 6, 8-cylinder	
82845	Power Series	3-3/8"	Burgundy Ring	Chrome	4, 6, 8-cylinder	
82837	Power Series	3-3/8"	Titanium Ring	Chrome	4, 6, 8-cylinder	
82165	Heavy Duty	3-3/8"	Black	Black/Brushed Ring	4-, 8-, 12-Cyl (Ignition)	
82171B	Heavy Duty	3-3/8"	Black	Black/Brushed Ring	4-, 6-, 8-Cyl (Ignition)	

# **TACHOMETERS**

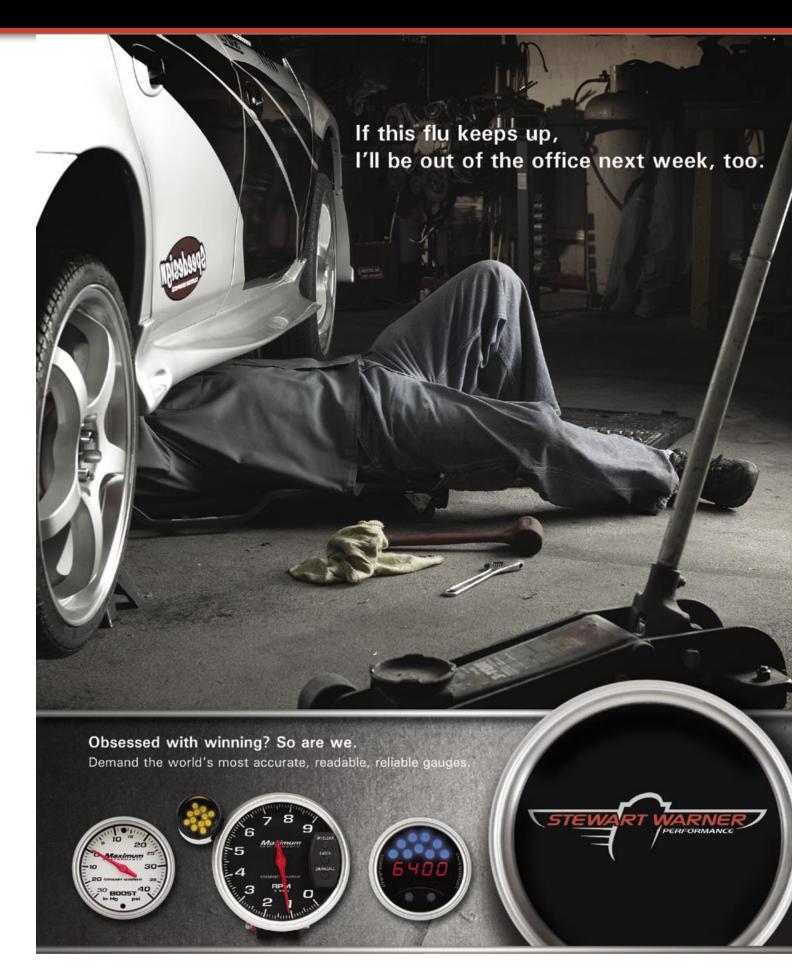
Diesel Tacho	meters - 6,000	RPM				
Model #	Line	Size	Dial	Bezel	Notes	
114028	Competition	5″	Silver	Silver	Diesel applications	
114027	Competition	5″	Black	Silver	Diesel applications	
114129	Competition	5″	White	Black	Diesel applications	
114031	Competition	3-3/8"	Silver	Silver	Diesel applications	
114030	Competition	3-3/8"	Black	Silver	Diesel applications	
114032	Competition	3-3/8"	White	Black	Diesel applications	
Standard Tac	chometers - 6,0	00 RPM				
Model #	Line	Size	Dial	Bezel	Notes	
82162B	Deluxe	3-3/8"	Black	Stainless	4-, 6-, 8-Cyl	
82162	Deluxe	3-3/8"	Black	Stainless	4-, 6-, 8-Cyl; 12 Pole	
535AK-D	Heavy Duty	3-3/8"	Black	Black/Brushed Ring	Mechanical; .5:1 Ratio	
82164B		3-3/8"	Black	Black/Brushed Ring	4-, 6-, 8-Cyl (Ignition)	
Standard Tac	hometers - 5,0	00 RPM				
Model #	Line	Size	Dial	Bezel	Notes	
551AKM-D	Deluxe	5″	Black	Stainless	Mechanical; .5:1 Ratio	
Diesel Tacho	meters - 3,500	RPM				
Model #	Line	Size	Dial	Bezel	Notes	
82672	Wings	3-3/8"	Black	Chrome	alternator or order sender 114878	
82671	Wings	3-3/8"	White	Chrome	alternator or order sender 114878	
82674	Wings	3-3/8"	Black	Chrome	tone/flywheel applications and requires sender 82646	
82673	Wings	3-3/8"	White	Chrome	tone/flywheel applications and requires sender 82646	

# **S**PEEDOMETERS

80 MPH						
Model #	Line	Size	Dial	Bezel	Notes	Sender
82666	Wings	3-3/8"	Black	Chrome	Mechanical	
82665	Wings	3-3/8"	White	Chrome	Mechanical	
550HF-D	Heavy Duty	3-3/8"	Black	Black/Brushed Ring	Mechanical	
85 MPH						
Model #	Line	Size	Dial	Bezel	Notes	Sender
82642	Heavy Duty	3-3/8"	Black	Black/Brushed Ring	Dip Switches	114878 or 82646
82604	Heavy Duty	3-3/8"	Black	Black/Brushed Ring		Square Wave
120 MPH		•		_		-
Model #	Line	Size	Dial	Bezel	Notes	Sender
114701	Competition	3-3/8"	Silver	Silver	Calibration Button	
114700	Competition	3-3/8"	Black	Silver	Calibration Button	
114702	Competition	3-3/8"	White	Black	Calibration Button	
82896	Deluxe	3-3/8"	Black	Stainless	Dip Switches	82527 or 82646
82670	Wings	3-3/8"	Black	Chrome	Dip Switches	82527 or 82646
82669	Wings	3-3/8"	White	Chrome	Dip Switches	82527 or 82646
160 MPH		·			·	
Model #	Line	Size	Dial	Bezel	Notes	Sender
114710	Competition	5″	Silver	Silver	Calibration Button	
114709	Competition	5″	Black	Silver	Calibration Button	
114711	Competition	5″	White	Black	Calibration Button	
114704	Competition	3-3/8"	Silver	Silver	Calibration Button	
114703	Competition	3-3/8"	Black	Silver	Calibration Button	
114705	Competition	3-3/8"	White	Black	Calibration Button	
550BP-D	Deluxe	3-3/8"	Black	Stainless	Mechanical	
82698	Deluxe	5″	Black	Stainless	Dip Switches	114878 or 82646
82898	Deluxe	5″	White	Stainless	Dip Switches	114878 or 82646
82664	Wings	3-3/8"	Black	Chrome	Mechanical	
82663	Wings	3-3/8"	White	Chrome	Mechanical	
82662	Wings	3-3/8"	Black	Chrome	Dip Switches	114878 or 82646
82661	Wings	3-3/8"	White	Chrome	Dip Switches	114878 or 82646
82612	Wings	3-3/8"	Beige	Chrome	Dip Switches	114878 or 82646
82607	Wings	3-3/8"	Beige	Gold	Dip Switches	114878 or 82646
82611	Wings	3-3/8"	Silver	Chrome	Dip Switches	114878 or 82646
82848	5″	5″	Black	Stainless	Wings Logo; Dip Switches	114878 or 82646
82846	5″	5″	White	Stainless	Wings Logo; Dip Switches	114878 or 82646
82841	Power Series	3-3/8"	Blue/Gray Ring	Chrome	Dip Switches	114878 or 82846
82839	Power Series	3-3/8"	Burgundy Ring	Chrome	Dip Switches	114878 or 82846
82840	Power Series	3-3/8"	Titanium Ring	Chrome	Dip Switches	114878 or 82846
550HH-D	Heavy Duty	3-3/8"	Black	Black/Brushed Ring	Mechanical	

# **S**PEEDOMETERS

180 MPH						
Model #	Line	Size	Dial	Bezel	Notes	Sender
550ABE	Deluxe	3-3/8"	Black	Stainless	Mechanical-Reverse	411335-D (counter clockwise adapter)
200 MPH						
Model #	Line	Size	Dial	Bezel	Notes	Sender
114707	Competition	3-3/8"	Silver	Silver	Calibration Button	
114706	Competition	3-3/8"	Black	Silver	Calibration Button	
114708	Competition	3-3/8"	White	Black	Calibration Button	
200 MPH				•		
Model #	Line	Size	Dial	Bezel	Notes	Sender
114707	Competition	3-3/8"	Silver	Silver	Calibration Button	
114706	Competition	3-3/8"	Black	Silver	Calibration Button	
114708	Competition	3-3/8"	White	Black	Calibration Button	
140 KPH						
Model #	Line	Size	Dial	Bezel	Notes	Sender
82697	Deluxe	3-3/8"	Black	Stainless	Mechanical	
82656	Deluxe	3-3/8"	Black	Stainless	Dip Switches	114878 or 82646
260 KPH						
Model #	Line	Size	Dial	Bezel	Notes	
114716	Competition	5″	Silver	Silver	Calibration Button	
114715	Competition	5″	Black	Silver	Calibration Button	
114717	Competition	5″	White	Black	Calibration Button	
114716	Competition	3-3/8"	Silver	Silver	Calibration Button	
114712	Competition	3-3/8"	Black	Silver	Calibration Button	
114714	Competition	3-3/8"	White	Black	Calibration Button	



# **TECHNICAL INFO**

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### WARRANTY

### Warranty

### **Distributor Warranty Policy**

Maxima Technologies warrants its Stewart Warner brand products against defects in workmanship and materials for a period of twenty-four (24) months from the date of purchase. These products must be installed and operated according to the purpose for which they were intended, designed, and specified. This warranty excludes items that are incorrectly installed, misused or abused by the customer as would be uncovered upon examination. If a suspect product is returned to Maxima for inspection, upon which it is determined that the product is in fact defective, Maxima will replace the product free-of-charge or issue credit to the customer. Maxima will not assume responsibility for labor costs associated with the removal of suspect product or the cost of equipment downtime, or any other costs associated with the concerns that are not specifically related to workmanship or materials.

If proof-of-purchase is not available, the warranty period defaults to two (2) years from the date of manufacture of the product (as referenced by the date code on the product label).

Hobbs products shall be warranted for a period of one (1) year in accordance with the terms and conditions stated above.

### **Returned Materials Policy**

ANY PRODUCT TO BE RETURNED TO MAXIMA FOR ANY REASON MUST INCLUDE A RETURNED MATERIALS AUTHORIZATION (RMA). The RMA must be obtained in advance from a Maxima quality representative who will determine whether to process the request. Maxima's quality personnel will assign an RMA number and the customer must identify this information on the package(s) to be returned to Maxima. All returns must be shipped pre-paid with traceability to Maxima. Upon receipt of suspect material, Maxima's quality personnel will provide appropriate disposition, in which case our warranty policy may or may not apply.

### TECHNICAL INFO - Q&A

### **Tech Support: PPR**

### **DO I NEED A TACH ADAPTER?**

In most cases a tach adapter is not required with the Competition Tachs & Gauges line of tachometers.

The exception is if your ECU "multi-sparks" the plugs. If so, the RPM display may be erratic or read high. In this case the signal/control wire can not be used for the tachometer signal. You will need to connect to the signal wire from the ECU/Ignition Module that feeds the factory tachometer. If this signal wire is not available then you will need to use a tach adapter.

If you're not sure if your system "multi-sparks" we suggest you try our tachs without a tach adapter before spending the extra money.

### WHAT PPR DO I SET MY TACH TO?

This depends on your ignition system. See the question "What is PPR?" at left if you want more details. Below is a quick reference.

#### **Distributor Ignition Systems:**

Your PPR setting is half the number of cylinders Example: for an 8-cylinder vehicle the PPR setting would be 4

### Coil Pack/Distributorless/Wasted Spark Ignition Systems:

Your PPR setting is always 1

### Coil On Plug/Coil Near Plug Ignition Systems:

Your PPR setting is always .5

NOTE: If your ECU "multi-sparks" the plugs, the RPM display may be erratic or read high. In this case you either must connect the tach to the signal wire from the ECU/Ignition Module that feeds the factory tach or if that is not available you will need to use a tach adapter.

#### WHAT IS PPR?

PPR stands for Pulses Per Revolution. The "Revolution" refers to one full turn of the crankshaft. The "Pulses" refer to an electrical pulse created on the coil signal/control wire every time the coil fires the plug. The number of pulses created on the signal/control wire for each revolution depends on the ignition system. Determining the PPR required for you system is simple if you follow the rules below.

CAUTION: In most cases a tach adapter is not required for the Competition Tachs & Gauges line of tachometers BUT if your ignition system "multi-sparks" you might need a tach adapter - see the NOTE below to help determine if you need one.

### **Distributor Ignition Systems:**

1 coil for all plugs

On a Distributor Ignition System the rotor turns at half the speed of the crank shaft. With this type of system you would divide the number of cylinders by two to determine the PPR setting for a Competition Tachs & Gauges tachometer. Example: a tach on 4-cylinder engine would be set to 2 PPR.

More detailed explanation using a 4-cylinder engine:

As the distributor rotates there are four positions where the coil fires and as the rotor reaches each point in turn, the spark plug for that position is fired. Since the rotor is turning at half the speed of the crankshaft, only two plugs are fired (creating two pulses), during on full revolution of the crankshaft. Thus, 2 pulses per revolution on a 4-cylinder (2 PPR).

A 6-cylinder would have 3 pulses per revolution; an 8-cylinder would have 4 pulses, etc.

### **Vehicles with factory ECUs:**

Although not always available, it's most desirable to connect to the tach signal wire from the ECU to the factory instrument cluster. The PPR setting for this connection is usually the number of cylinders divided by 2. A 4-cylinder engine would be set to 2 PPR, a 6-cylinder engine to 3 PPR, etc.

### **Coil Packs/Distributorless/Wasted Spark Ignition Systems:**

1 coil for each pair of plugs

On these systems one coil ignites two spark plugs at the same time. Your PPR setting will always be 1 PPR when connecting to one of the coil trigger wires.

### **Coil On Plug/Coil Near Plug Ignition Systems:**

1 coil for each plug

There is one signal/control wire for each coil/spark plug. When connecting to any one of these signal/control wires, your PPR setting will always be .5.

NOTE: Some manufacturers "multi-spark" the plugs for better emissions control.

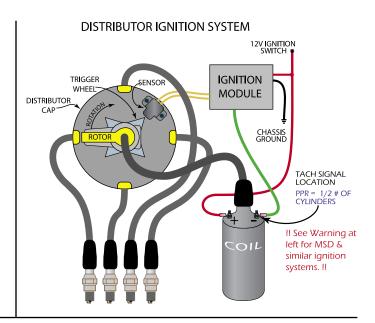
If your ECU multi-sparks, the RPM display on the tach may be erratic or high. In this case the signal/control wire can not be used for the tachometer signal.

You will need to connect to the signal wire from the ECU/Ignition Module that feeds the factory tachometer (if available). The PPR setting is generally half the number of cylinders.

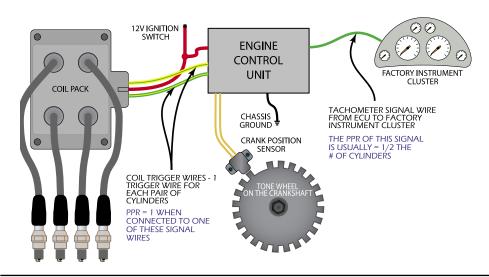
Not all vehicles have a factory tachometer wire and in this case, the use of a tach adapter is required. Refer to the adapter instructions for the PPR setting.

### **Tech Support: PPR**

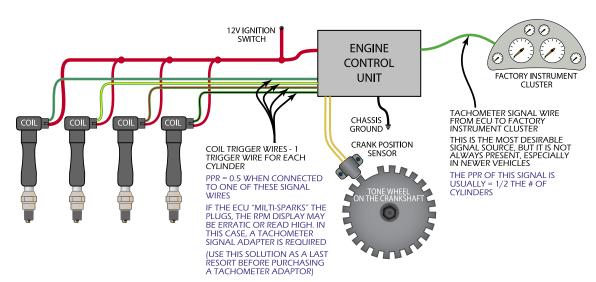
Warning! Never connect green wire to the coil when using an MSD or similar high output capacitive discharge style ignition system. Damage to the tachometer will occur - in this case connect GREEN tach wire to the tachometer terminal only.



### COIL PACK, DISTRIBUTORLESS, OR WASTED SPARK IGNITION SYSTEM



### COIL NEAR PLUG OR COIL ON PLUG IGNITION SYSTEM



### **Tech Support:**

### WHICH PROBE FOR EXHAUST TEMPERATURE GAUGE?

Stewart Warner lists three types of probes for use with our Exhaust Temperature Gauges (also known as pyrometers).

### **Street Probe:**

Someone who drives their vehicle daily and races occasionally, or not at all should use the street probe. - This probe has more shielding and will last longer than the high performance probe but will not respond as quickly to temperature changes.

### **Street Performance Probe:**

Someone that races often and does not drive the vehicle on the street daily should use the street performance probe. - This probe has less shielding than the street probe so it will react to temperature changes quicker but may not last as long.

#### **High Performance Probe:**

The hard core racer that has a vehicle that is raced often and is rarely or never street driven will want the high performance probe. - This probe has an exposed thermocouple junction (no shielding) which gives the ultimate reaction time to temperature change but has no protection and it's life will be short.

### Life Span of a Probe:

We can not give the expected life of a probe since this depends on usage and driving style. You must periodically inspect the probe for wear and replace when needed.

CAUTION: Only use the supplied thermocouple extension wire to connect the probe to the gauge. Do not alter the length of the thermocouple extension wire. Using any other wire or altering the length of the extension wire can cause severely inaccurate temperature readings.

### **MEASURING FUEL LEVEL SENDER RESISTANCE**

Fuel-level gauges, like electric gauges, are designed to work with specific fuel-level senders. Each sender is designed with a specific resistive input range so you must first measure the resistance of your existing sender - measured in Ohms.

On the top of your sender, you'll find a couple of wires. Since there are thousands of combinations for different vehicles, refer to your Owner's Manual or Shop Manual to determine which wire is linked from the sender directly to the gauge.

To measure the resistance, disconnect the plug at the sender and use a digital multi meter set for Ohms.

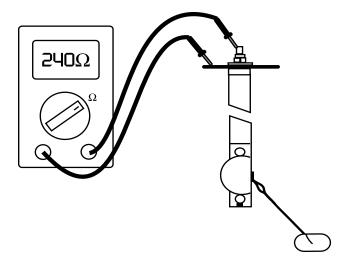
Depending on how your sender is grounded, do one of the following:

- a) If the sender is grounded through the fuel tank connect one lead of the multi meter to the sender wire and the other lead to the body of the sender, as shown in the table below.
- b) When the sender is not grounded through the fuel tank connect one lead of the multi meter to the sender wire and the other lead to the ground wire of the sender.

Measure the resistance when the tank is empty, and then again when the tank is full. Once you know the resistance range of your sender, refer to the chart below to select the right fuel gauge.

Ohms/Resistance	
(Empty/Full)	Popular Models
0-90 Ohms	Works on most GM cars, 1965 to present
73-10 Ohms	Works on Fords prior to 1989 & most Chryslers
240-33.5	Industry standard, works on many popular cars
0-30 Ohms	Works on most GM cars prior to 1965
16-158 Ohms	Works on most Fords, 1989 & newer

Note: Vehicle manufacturers may use a different match than that shown above depending on vehicle model.



### **Tech Support:**

### **MIXING DIFFERENT BRANDS OF SENDERS & GAUGES**

Mixing different brand electric gauges and senders is not recommended although the seriousness depends on the type of gauge/sender combination - fuel level, pressure or temperature. Generally, each manufacturer designs a gauge and sender to work as a set, the set has an electrical match". The electrical match of the sender can be shown as a curve. The matching gauge is designed so that the needle responds with the correct reading based on this curve.

The 240-33.5 Ohm resistance is called the Stewart Warner match; the 10-180 Ohm resistance is usually called the VDO match; etc.

If a sender with the incorrect electrical match is used, the gauge will not display the correct data. The gauge may not function at all, the needle may fluctuate or even appear to be close to the correct reading at certain points in the curve but not at other points and may even work backwards.

Other manufacturers will specify that their gauges will work with Stewart Warner senders. We don't sanction the mixing and matching due to the possible damage to your vehicle if the curve between the sender and gauge do not truly match all along the curve. Please refer to the details below for which systems may be able to use mixed combinations.

### **Fuel Level Systems:**

Both the fuel level gauge and sender must have the same resistance to function correctly and both should be at the same ground potential.

Fuel level is probably the one gauge/sender combination that mixing of brands will generally work as long as the correct electrical match is used. So, if you already have a fuel sender in your vehicle, you can measure the senders resistance and usually find a compatible fuel level gauge.

#### **Pressure Systems:**

Both gauge and sender must have the same resistance to be a perfect match so that the gauge displays the proper readings. If absolutely required, a different brand pressure gauge or sender with the same stated match could be used until the proper sender is obtained but do not rely on this set up for any critical system on your vehicle.

### **Temperature Systems:**

This is the most difficult system to match between manufacturers and Stewart Warner strongly recommends that you do not mix different brands in a temperature gauge/sender set-up.

Most temperature gauges are designed to work with one particular sender. Each sender has an electrical element with its own characteristics. It is very difficult to find another manufacturer whose gauge dial angles will match the senders resistance/temperature curve.

### **ELECTRIC VS MECHANICAL**

Stewart Warner provides many instruments in both an electric version and a mechanical version. People then wonder which one they should use, which is better. There are in fact no significant performance-related differences between electrical and mechanical gauges. Both types of gauges provide features and benefits which may be useful depending on your application.

One thing you may want to consider if replacing/upgrading your instruments would be what type the current instruments are and what would be required to switch from mechanical to electric or electric to mechanical.

The chart below will help determine which type of gauge would be more appropriate.

ELECTRIC GAUGES	MECHANICAL GAUGES
Clean design—No tubing or bulky connectors and no danger of fluids entering the passenger compartment.	Can operate without any voltage source; not just limited to 12V (Lighting is the only part that requires 12V).
Easy installation in cramped or unusual areas, or if located farther away from the point of sensing.	Convenient tubing allows for installation directly to the point of sensing.
Most are 90° sweep some are 270° sweep.	Full 270° sweep for better resolution (readability").
Safe remote mounting of sender.	Pressure tubing routed from cockpit to sensing port.
Small temperature sender (e.g. 1/8" NPT).	Large Temperature sensing bulb (e.g. 1/2" NPT).



114254

Electric Pressure
Gauge (Also called 90°
sweep)



114512

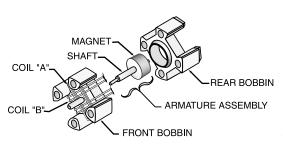
Mechanical Pressure
Gauge (Also called 270°
sweep)

### TECHNICAL INFO - Q&A

### **Tech Support:**

### **HOW ELECTRIC GAUGES WORK**

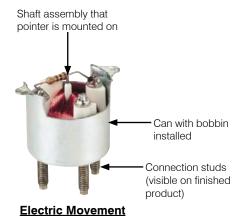
At the heart of every Stewart Warner Electrical Gauge is our high-performance, patented air-core movement—the gauge's motor. Looking inside the motor reveals two coils (A" and B") comprised of copper wire wrapped around the front bobbin, and a rear bobbin assembly that contains a magnetized armature assembly (magnet & shaft), surrounded by damping fluid which acts to minimize pointer flutter and ensure smooth response.



The bobbin assembly is packaged in a metal isolation can" that supports the gauge's dial (and light pipe where appropriate).

and the can is mounted inside a housing (case). The armature assembly freely rotates within the coils, aligning with the varying magnetic fields produced by the amount of current flowing through the coils. (Current variance is triggered by signals provided by the sender.) The pointer—attached to the shaft on the armature assembly—once calibrated, will provide a directional indication regarding the amount of pressure, temperature, appropriate level of fuel, or voltage being measured.

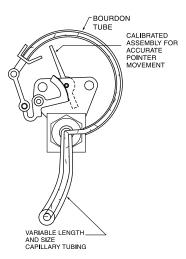
Senders that drive Stewart Warner Electric Gauges are based on variable resistance technology. The three basic variable resistance senders are temperature, pressure and fuel level. Each sender possesses a different rate of resistance change, or MATCH", for the specific gauge's electrical design. The sender's resistance change results in current changes within the sender-gauge circuit. These changes cause an increase or decrease in the gauge's magnetic field. The variance in the magnetic field causes pointer movement.

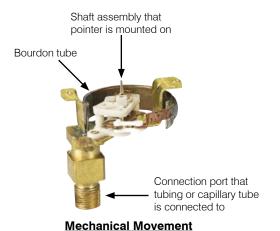


### **HOW MECHANICAL GAUGES WORK**

Stewart Warner Mechanical Gauges include integral Bourdon" tubes which have one free-floating end that is linked to a gear and shaft assembly, with pressure pulsation and vibration dampening to reduce pointer fluctuations. The Bourdon tube can be fine-tuned by varying its strength and stiffness. It works by being deflected (moved) by the pressure of the liquid/gas that is being measured, and it then moves the gear and shaft assembly which, in turn, moves the pointer to produce an accurate reading on your dial.

Mechanical pressure gauges have a port on the back to make a direct connection, either through hose or tubing, with the fluid or gas being measured. Mechanical temperature gauges have a sealed capillary tube and bulb assembly, which is filled with temperature sensitive liquid. This liquid produces a proportional vapor pressure when it is exposed to temperature variation. The vapor pressure is the acting force on the Bourdon tube and is calibrated to provide accurate pointer movement in relation to the temperature.





### **Tech Support:**

### MY POINTER DOESN'T GO TO ZERO. IS IT BROKEN

### (RETURN TO ZERO FUNCTION)

Whether the pointer returns to zero depends on if your instrument is mechanical or electric. Note that some electric gauges do have a return to zero function.

#### **Electric:**

The pointer not returning to zero on electric gauges, tachometers and speedometers is NOT a malfunction! As soon as power is supplied to the instrument the pointer will move to the correct reading for that instrument.

The pointer not returning to zero is a normal property of the aircore movement inside the gauge. When the electric current is shut off, due to engine shut down, there is no longer a signal for the gauge to read and the pointer just finds a random place to rest" on the dial.

### **Mechanical:**

Pointers on mechanical gauges should always return to zero or move to the lowest reading on the dial after the engine has been shut off and settles.

Since Stewart Warner mechanical gauges have Bourdon tubes that are physically manipulated by the pressure or temperature each is monitoring, the pointer returning to zero could take time as the temperature or pressure dissipates.

### **HOW TO PICK A DIAL RANGE**

The dial range you choose should be based on your vehicles normal operating characteristics. During normal operation your gauge should be at or close to the center of this range.

### Range too narrow

You do not want to use a gauge that has a maximum reading that is the same as or close to your normal operating range. This will not allow you to see if what you are monitoring goes above its intended range of operations.

### Example:

If your vehicle is set to run at 15lbs boost you do not want to use a 15 psi boost gauge. It will not allow you to monitor the high range in case of overboost.

#### Range too broad

You also do not want to select a gauge that has to large of a range. In this case you may loose resolution (readability) for the range that you wish to monitor.

### Example:

If your oil pressure should be at 30 psi, a 5 psi drop in pressure may be critical. If you were to use a 150 psi gauge, that 5 psi drop may go unnoticed. However, if you were to use a 100 psi gauge you would have greater resolution and would notice the drop in pressure.





### TECHNICAL INFO - Q&A

### **Tech Support:**

#### **RF**

A tachometer counts how many times your ignition fires for each revolution of the crankshaft and. Sounds fairly simple and bullet-proof, right? NOT REALLY! Radio Frequency Interference (RFI), also referred to as "electrical noise", can force your tachometer to give you false readings. False readings will skew the accuracy of memory tachometer functions. Stewart Warner Performance Tachometers are protected from RFI related to racing, although electrical noise could reach such an excessive level that the tachometer may see it as legitimate ignition signal and react accordingly, thus causing an inaccurate readout. So the question is, "How can I prevent RFI?" Here are some "rules of thumb":

- Be sure there are good electrical grounds throughout your car, and check to see that: a) your tachometer AND ignition system both have a good grounds, preferably at the battery ground post. (The battery acts as a huge capacitor, sucking up excessive amounts or noise.);
   b) the engine block is appropriately grounded to the battery.
- 2) Route all tachometer wires as far from ignition system wires as possible.
- 3) Use high-quality plug wires, as poor plug wires are a large source for RFI.
- 4) Make certain that the spark plug gap is properly set.
- 5) Check to make sure there is no mismatch of ignition system and coil—this can also cause excessive RFI.

### **TACHOMETERS—HOW THEY WORK:**

Until recently, tachometers were calibrated based on the number of cylinders in the engine. Now, there are all types of engine control modules (ECMs) (on-board computers) and distributorless ignitions, and the old standard rule—"half the number of cylinders equals the pulses per revolution (PPR)"—no longer applies. "Pulses per revolution" relates to how many times the ignition fires per crankshaft revolution. The tachometer outputs from the ECMs can range from 1-PPR to 4-PPR for a V-8 engine. So, the new standard is to refer to PPR instead of the number of cylinders. Stewart Warner Performance Tachometers work with most 2-, 3-, 4-, 5-, and 6-PPR, and our memory tachometers with shift-lights work with 1-PPR as well. This range of pulses per revolution will cover most 1-, 2-, 4-, 6-, 8-, 10-, and 12-cylinder engines.

Stewart Warner Performance Tachometers are designed to work with a wide variety of ignition types, including standard inductive [coil (-) connection] and any ignition system with a clean tachometer output signal. The input level can range from TTL 5V (outputs from newer engine control modules) and 300-400 volt pulses from coil (-) on most inductive ignition systems. Tachometers will operate on most traditional capacitive discharge (CD) ignitions when connected to the ignition primary circuit. However, for high-output CDs (such as MSD) only connect to the tach output terminal, never the coil primary. It's best to consult our tech support team if you're unsure, rather than risk damage to the tach or ignition system.

Our Stewart Warner Performance Team is prepared to help you with tachometer installations! Call us a call 1-866-SWP-RACE. Be prepared to provide information about your ignition system.





### TECHNICAL INFO - Q&A

### **Tech Support:**

### **VOLTMETER VS. AMMETER**

A voltmeter measures electrical potential (pressure) in units called volts that is necessary for current measured in amps (a quantity) to flow through your electrical system. If there is NO pressure (volts), there can be NO current flow (amps). This is analogous to having no oil pressure and, therefore, no oil flow. You must have one to get the other!

Ammeters were popular when generators and alternators typically averaged 35-40 amps of output, and vehicle electrical systems were much less complex. Today, alternators commonly have output capacities of 100-110 amps with more complex wiring and higher accessory loads. This makes it more difficult to install an ammeter. Just as we measure oil pressure rather than oil flow, we prefer to measure volts rather than amps, so, the overwhelming choice for performance applications today is the voltmeter.

Contact our tech support team if you have additional questions about ammeters or voltmeters.

The bottom-line...an ammeter is NOT an effective solution for racing applications!

Restorers often prefer to use ammeters if that was the type of gauge originally in the vehicle.

### **CONTACT TECH SUPPORT**

If you have further questions on Stewart Warner instruments, please contact our tech support at the following:

Competition Tachs & Gauges and Impact™: 866-797-7223 or e-mail techsupp@SW-Performance.com

Other Street Performance Products: 800-676-1837 or e-mail techsupport@StewartWarner.com





### TECHNICAL INFO - INSTRUMENT SPECIFICS

# **Tech Support:**

### **Instrument Specific Introduction**

The next few pages go into detail on each major type of instrument.

We have provided this information to help new and long-time customers. Long-time customers may find a new use for an instrument they are already familiar with.

Customers who may be new to gauges can determine which instruments may be useful in their application. We also hope this information will help our customers get the best use out of the instruments that they install.

Information provided includes most of the following:

**General**: Specifies the general uses of the instrument and why it is used

**Can Be Used On**: Gives a general listing of applications that can use the instrument. Note that individuals may find other uses for instruments, the applications listed may not be all-inclusive.

**Good For**: Indicates ways that the instrument can provide you with valuable information.

**What You Need To Know**: Provides you with questions you may need to answer before purchasing an instrument to ensure you will have the correct product for your needs.

**What You See**: Indicates what different readings on the instrument may mean to your vehicles operation.

**When You Should Be Concerned**: Provides information on determining when the instrument is telling you you may have a problem with your vehicle. Please note that this listing is general and may not include every possible scenario

**How It Works**: Gives a brief description of how the instrument is connected and/or reads the parameters it is designed to watch.

If you have additional input for this section, please let us know by calling our Tech Support Line at 866-797-7223 or e-mailing techsuportp@sw-performance.com

# TECHNICAL INFO - INSTRUMENT SPECIFICS

# **Tech Support: Instrument Specifics**

INSTRUMENT TYPE DETAILS	
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Water (Coolant) Temperature	115

























### TACHOMETERS IN GENERAL

### **Tachometers**

### **GENERAL:**

Indicates engine revolutions per minute (RPM). Stewart Warner tachometers range from basic, displaying only RPM, to units with peak RPM recall functions and shift indicator light options in either analog or digital platforms as well as other functions.

Engine RPM is the most critical parameter to monitor. Accurate engine speed is required for optimum track performance, consistency and engine durability.

For drag racing it's all about consistency and peak performance.

# Dial layout RPM Vertical Horizontal

### **CAN BE USED ON:**

Most applications

Applications where modifications have exceeded factory tachometer limits for range, accuracy, and response time

Automatic transmissions modified for drag racing

#### **GOOD FOR:**

All forms of competition (racing, pulling, rock crawling, etc)

On and off road vehicles

Any application where rotational speed indication is desired

Vehicles without a factory tachometer

Custom dash installations

#### WHAT YOU NEED TO KNOW:

You will need to know the expected RPM range of your engine and the engine type (diesel or spark ignition) and the type of tachometer desired for your application.

Stewart Warner offers several tachometer configurations. The Competition Tachs & Gauges line does not require plug-in pills or modules and in most cases a tach adapter is not required:

- 1) Standard RPM display only, no memory or shift indication. Available in electric and some mechanical versions. The Competition Tachs & Gauges line covers 2 to 6 PPR.
- 2) Memory peak recall with shift indication light or the capability to attach shift indication light (1 to 6 PPR)
- 3) Circle Track peak recall, no microprocessor (complies with NASCAR(r)), no shift indication light (2, 3, 4 & 6 PPR)
- 4) Ultra-Shift Lights<sup>™</sup> digital RPM display with programmable shift indicator
  - a) Standard Ultra-Shift Light<sup>™</sup> tube style, peak recall (1 to 6 PPR)
  - b) G.U.S.  $^{\text{\tiny M}}$  Gauge Ultra-Shift Light  $^{\text{\tiny M}}$  2-1/16" gauge, peak recall (.5 to 6 PPR)
- c) Ultra-Shift Light  $^{\mbox{\tiny M}}$  w/4-Shift Technology staging mode, 4 programmable shift points,
  - 4 peak recalls, staging mode, driver reaction times (.5 to 6 PPR)
- d) Ultra-Shift Light  $^{\text{\tiny M}}$  w/Programmable Controller peak recall, programmable window switch, programmable shift indicator (.5 to 6 PPR)

### WHAT YOU SEE:

The tachometer will indicate the engines current rotational speed (RPM). Tachometers with shift indicators contain bright LED's that illuminate, when the programmed RPM shift point is reached, to alert the driver to shift.

#### WHEN YOU SHOULD BE CONCERNED:

When the tachometer is indicating a RPM higher than the engines rated capability. Severe engine damage can occur if the engine is operated above its designed parameters.

#### **HOW IT WORKS:**

Stewart Warner tachometers are connected to the engine speed signal, which provides a frequency that is proportional to engine speed. The tachometer uses this frequency to indicate engine RPM. The location of this signal varies from vehicle to vehicle. If you have trouble identifying your signal source, contact technical support for your vehicle's specific connection information. Mechanical tachometers are cable driven.

You can find this gauge in the follow- ing product lines:				
Line	Page			
Competition Tachs & Gauges	10			
Deluxe™	24			
Wings™	32			
Power Series™	36			
Heavy Duty™	42			



### STANDARD/MEMORY TACHOMETERS

### Standard Tachometers

### **Competition Tachs & Gauges**

- work with most 2 to 6 PPR (pulses per revolution) vehicles (4- to 12-cylinder).
- no plug-in pills or modules are required.
- 5" tachometers mount in either 3-3/8" or 4-5/8" dash opening or use the supplied mounting strap & stand.
- robust, balanced, fast responding 3-D pointer that also reflects light.
- in most cases a tach adapter is not required.

#### **Other Stewart Warner tachometers**

- electric or mechanical available
- depending on model work with either 4-, 6- and 8-cylinder or 4-, 8- and 12cylinder
- electric tachs programmed via dip-switches on rear

#### **GOOD FOR:**

Vehicles without a factory tachometer

Vehicles where only RPM visibility is desired without shift indicator lights or peak

Custom dash installations

You can find this gauge in the follow- ing product lines:		
Line	Page	
Competition Tachs & Gauges	10	
Deluxe™	24	
Wings™	32	
Power Series™	36	
Heavy Duty™	42	



### Memory Tachometers

Stewart Warner Competition Tachs & Gauges memory tachometers work with most 1 to 6 PPR (pulses per revolution) vehicles (2- to 12-cylinder) and have a peak RPM recall function.

No plug-in pills or modules required. Programming of desired shift indication point is done via the low profile control module recessed below bezel on 5" tachometers and remote mountable for 3-3/8" tachometers.

Vertical scale 5" tachometers include external LED shift light which connects directly to tachometer and can be mounted using the mounting strap or remote mounted as desired.

Horizontal scale 5" tachometers are ready to attach an optional LED shift light if desired.

3-3/8" tachometers have a LED shift light on the dial face.

5" tachometers mount in either 3-3/8" or 4-5/8" dash opening or use the supplied mounting strap & stand.

Robust, balanced, fast responding 3-D pointer that also reflects light.

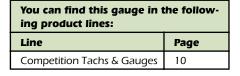
SWP tachometers feature a large dial viewing area and better viewing angles.

Black and silver dials are backlit and perimeter lit, white dials are perimeter lit only.

In most cases a tach adapter is not required.

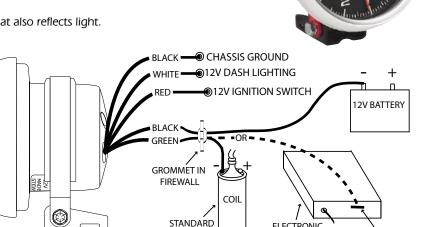
### GOOD FOR:

Vehicles without a factory tachometer Racing applications where shift indication is required and peak RPM recall desired Custom dash installations



**ELECTRONIC** 

IGNITION



IGNITION

TACH TERMINAL

### **CIRCLE TRACK TACHOMETERS**

### Circle Track Tachometers

Stewart Warners' Competition Tachs & Gauges line 10,000 RPM tachometer is NASCAR  $^{\circledR}$  compliant (no microprocessor).

Peak recall and clear via two buttons on control module.

Works with 2, 3, 4, & 6 PPR (pulses per revolution) vehicles.

Built rugged to handle high vibration applications.

Low profile control module recessed below bezel for added protection.

Easy set-up via dip switches on rear of unit.

Mounts in either a 3-3/8" or 4-5/8" dash opening.

Robust, balanced, fast-responding 3-D pointer that also reflects light.

Large dial viewing area and better viewing angles.

Black and silver dials are backlit and perimeter lit, white dials are perimeter lit only.

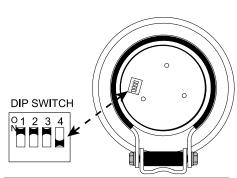
### Check out our other circle track gauges:

Mechanical oil temperature gauges with 8 foot capillary tube

Mechanical oil temperature gauge with 2 foot capillary tube

Mechanical water temperature gauges with 8 foot capillary tube

You can find this gauge in the follow- ing product lines:	
Line	Page
Competition Tachs & Gauges	10

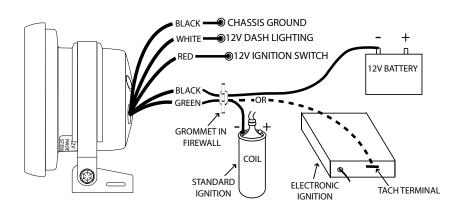


		_		
SWITCH SETTINGS				
	1	2	3	4
4 CYLINDERS / 2 PPR	X	-	-	X
6 CYLINDERS / 3 PPR	X	Х	-	-
8 CYLINDERS / 4 PPR	-	Х	-	Х
12 CYLINDERS / 6 PPR	X	Х	X	_

"X" = ON, "-" = OFF



Dash of Frank Kimmel - 7-time Arca Re/Max Champion



# ULTRA-SHIFT LIGHT ™

# Ultra-Shift Light™

Stewart Warners' combination digital tachometer with shift light and peak recall. Micro-processor driven so it requires no plug-in modules or pills. Simple three-wire hook-up (power, ground, tach signal). Program via two buttons on rear of tube style model and on front of G.U.S.™ model. Set shift alert in 10 RPM increments. Tachometer's RPM display can be turned off. In most cases a tach adapter is not required.

#### **ORIGINAL TUBE STYLE:**

Up to 13,000 RPM

1 to 6 PPR (pulses per revolution); works on most 2- through 12-cylinder vehicles 3 brightness levels for LEDs

5" long by 1-5/8" diameter tube

### G.U.S.™ (Gauge Ultra-Shift™ Light):

2-1/16" size (standard gauge size)

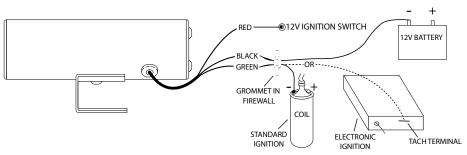
Up to 18,000 RPM

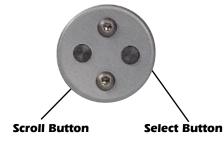
.5 to 6 PPR (pulses per revolution; works on most 1- through 12-cylinder vehicles 4 brightness levels for LEDs

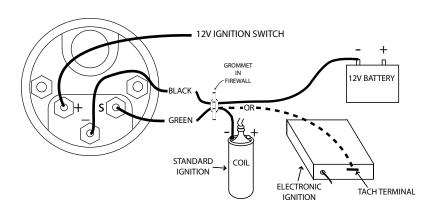
Available in three LED colors and choice of black or silver bezel finish, our replacement bezels can also be used (bezels available in paintable version for custom work)



You can find this gauge in the following product lines:	
Line	Page
Competition Tachs & Gauges	10















### ULTRA-SHIFT LIGHT™ W/4-SHIFT

### Ultra-Shift Light™ w/4-Shift Technology

Program shift points for 4 gears. Recall peak RPM for each gear and trap RPM plus driver reaction time for each shift. Includes staging mode. Works with most 1- to 12-cylinder vehicles. Up to 18,000 RPM (depending on vehicle), settable in 10 RPM increments. Adjustable LED lighting brightness. All programming done via two buttons on rear of unit—no plug-in pills or modules required. In most cases, a tach adapter is not required.

#### SHIFT LIGHT OPERATION DURING A RACE:

STAGING (Launch RPM indication):

- 1) The driver stages the car and depresses the staging button.
  - This clears the memory from previous runs.
  - The LEDs indicate if the RPM is within the preprogrammed range as follows:
  - a) Off if the engine is running within programmed launch RPM range.
  - b) Flash rapidly if the engine is running higher than programmed launch RPM range.
  - c) On solid if the engine is running lower than programmed launch RPM range.

You can find this gauge in the follow- ing product lines:	
Line	Page
Competition Tachs & Gauges	10

#### **RACE STARTS:**

- Driver releases the staging button at launch.
   Staging Mode is exited and Race Mode begins.
- 2) Time delay starts.
  - Prevents wheel spin or other drastic RPM changes from being recorded as a false gear shift. Delay can be set between .1 and 1 second in .1 second increments.
- 3) The shift light LEDs come on at the programmed RPM levels for each of 4 gears (programmable for 1, 2, 3 & 4 shifts) during a race, up to four shifts can be set.
- 4) The driver makes the run down the track shifting as indicated.
  - a) The Ultra-Shift Light<sup>™</sup> records the peak RPM reached in each gear.
  - b) The Ultra-Shift Light<sup>™</sup> records the drivers reaction time for each gear shift the time from when the shift light lights up until the driver shifts to the next gear.

NOTE: If the driver short-shifts (before light comes on), the Ultra-Shift Light™ will recognize the shift and increment to the next gear.

#### **RACE ENDS:**

1) The trap RPM is recorded (peak RPM after last shift).

After the trap RPM is recorded or the RPM drops below 2000 RPM, the Ultra-Shift Light<sup> $\mathrm{M}$ </sup> returns to standard mode (non-recording). In standard mode, the shift light will activate at the 1st shift RPM setting.

### **AFTER THE RACE:**

1) Peak RPM for each gear, as well as the driver reaction time for each shift, can be displayed.

Press the select button to recall the 1st gear peak RPM followed by the driver reaction time for the 1st to 2nd gear shift.

Press the select button again to display the readings for the next gear and reaction time.

Each additional peak RPM & reaction time is displayed by pressing the select button.

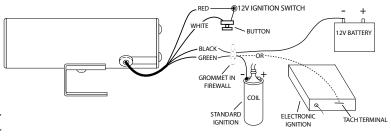
After the last shift information is displayed, the next press of the select button displays the trap RPM - the peak RPM after the last shift.

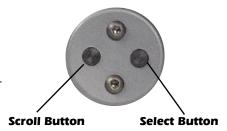
The data can be cleared by holding the select button for at least 3 seconds.

#### WIRING IT UP & PROGRAMMING:

1) 4-wire hook-up (no pills or plug-in modules required). Black wire to ground; red wire to power (example: ignition wire); green wire to tach signal; white wire to momentary contact push-button (second wire on button connects to 12V power). You can also tap into the trans. brake or other similar circuit.

- 2) Set PPR (pulses per revolution) depending on your engine.
- 3) Program the number of shifts, each gears' shift RPM, staging RPM range, and delay for wheel spin.





# ULTRA-SHIFT LIGHT™ W/CONTROLLER

# Ultra-Shift Light<sup>™</sup> w/Programmable Controller

Shift light and digital tachometer with switched output to control RPM dependent devices. Works with most 1- to 12-cylinder vehicles. Up to 18,000 RPM (depending on vehicle) and is settable in 10 RPM increments. Adjustable LED lighting. All programming done via two buttons on rear of unit—no plug-in pills or modules required. In most cases a tach adapter is not required.

### **Controller Functions:**

Besides operating as a shift light & digital tachometer (see Shift Light Operation) the Ultra-Shift Light™ with Window Switch Controller has a switched output that may be used to control devices where engine RPM is a factor in turning a device on or off, such as Nitrous Oxide systems, CO2 and water sprayers for intercoolers, or even automatic shifters.

### **Nitrous Oxide Control:**

The switched output is an ideal way to control nitrous oxide activation/ deactivation. Set the programmable LOW value to the desired engine RPM where the device activates and set the HI value to the desired RPM where the device is to deactivate (usually just before the engine rev limiter triggers to prevent catastrophic engine damage).

#### **Intercooler Sprayer Control:**

The RPM switched output, when used in conjunction with a pressure switch, is very efficient at controlling an intercooler CO2 or water sprayer system during high boost and high engine RPM when the efficiency of the intercooler falls off. This set-up works well to conserve the CO2 or water supply for when it's needed most.

A pressure switch is used to activate the system only when the boost pressure is high. Pressure switches are available (see our accessories section).

The RPM switch is used to control the RPM at which the system is activated so the system does not activate at low RPM when the intercooler can easily cool the lower airflow.

### **Shift Light Operation:**

Ultra-Shift Light™ units are combination shift lights and digital tachometers in one compact and easy-to-program package. No plug-in pills or modules are required. All settings are programmed using the two buttons on the rear of the unit. In addition, the LED brightness and peak RPM readings are also accessed via the two buttons.

Shift light set point

Digital tach display (on or off)

PPR (pulses per revolution) according to engine

RPM window switch activation/deactivation range:

- -LOW activation RPM
- -HIGH deactivation RPM

NOTE: The RPM activated device will only function when the vehicle RPMs are within the range set between the LOW & HIGH setting (the window). Any time the RPMs are outside the range the device is deactivated.

### Wiring It Up:

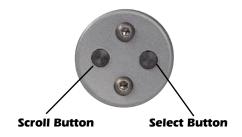
4-wire hook-up (no pills or plug-in modules required).

Black wire to ground; red wire to power (i.e. ignition wire); green wire to tach signal; white wire to RPM activated device. (See installation instructions or web site for more details on set-ups.)

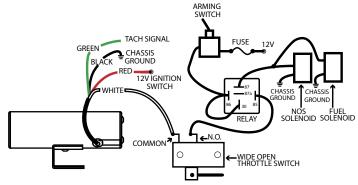
NOTE: 30A/12VDC relay is supplied for use with high-current devices.



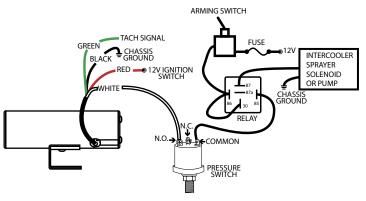
You can find this gauge in the following product lines:	
Line	Page
Competition Tachs & Gauges	10



### Example nitrous set-up



### Example intercooler sprayer set-up



### **SPEEDOMETERS**

### **Speedometers**

#### **GENERAL**

Speedometers indicate vehicle speed along with providing total mileage and often a trip mileage reading.

NOTE: Check your local laws/regulations to determine how to properly document mileage when a speedometer is replaced.

### **CAN BE USED ON:**

Most applications where vehicle speed is desired. Note: in the USA, speedometers are required for all motor vehicles used on public roadways, consult local laws for any exceptions.

### **GOOD FOR:**

Accurate speed indication after modifications have been made such as wheel size or gearing.

_	Line	Page
	Competition Tachs & Gauges	10
	Deluxe™	24
	Wings™	32
or	Power Series™	36
	Heavy Duty™	42

ing product lines:

You can find this gauge in the follow-

### WHAT YOU NEED TO KNOW:

Does your vehicle already have an electric sender or are you replacing a mechanical speedometer. If your system does not already have an electric sender, a sender can be installed where the mechanical cable was previously connected.

different than on other makes.

Stewart Warner does have mechanical speedometers available that take their signal from the mechanical cable connected to the transmission.

### **WHAT YOU SEE:**

Speed indication and odometer reading.

The Competition Tachs & Gauges line speedometers also provide two trip meters. The trip meters are accessed using the included calibration/reset switch which can be mounted where desired.

### **HOW IT WORKS:**

specified distance and

ELECTRIC

The Stewart Warner electric speedometer is connected to a speed sensor via wires. The electric speedometers can be calibrated & recalibrated as needed after gearing or tire size changes by driving a

1) Competition Tachs & Gauges - use the reset button to set calibration

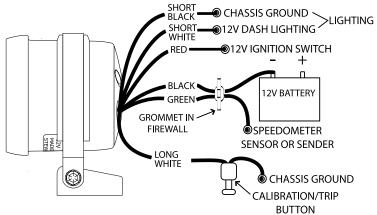
2) On other Stewart Warner electric speedometers - set the dip switches on

the rear of the unit per the installation instructions

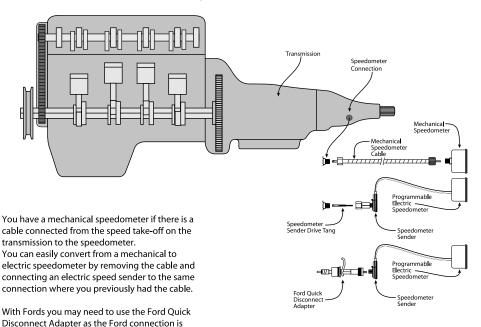
### **MECHANICAL**

Mechanical speedometers are connected via cable to the transmission speed take-off. If you require a new cable contact us to find a distributor near you that makes these cables.

NOTE: If your vehicle currently has a mechanical speedometer, you can convert to an electric speedometer by connecting a one of Stewart Warners speed sensors to the speedometer connection on the transmission.



# SPEEDOMETER CONNECTION And Converting from Mechanical to Electric Speedometer



### AIR/FUEL RATIO

### Air/Fuel Ratio

#### GENERAL:

Monitors the air/fuel ratio (LEAN/STOICH/RICH) of gasoline engines when wired to an O2 sensor (either the factory sensor on a fuel injected vehicle, or an add-on O2 sensor).

The AFR gauge can indicate if your fuel demand is higher than the fuel system capability; or if additional tuning is required; or there is an intake vacuum leak; or if the O2, as well as other sensors fail. This information is extremely important for users with performance add-ons such as exhaust & air intake systems, air/fuel controllers, cams, turbochargers, superchargers, nitrous, fuel injector upgrades, etc.

You can find this gauge in the follow- ing product lines:		
Line	Page	
Competition Tachs & Gauges	10	

#### **CAN BE USED ON:**

Fuel injected vehicles Carbureted vehicles

#### GOOD FOR:

Basic tuning of air/fuel ratio on carbureted vehicles

Indicator of a possible vacuum leak (Lean Reading)

Indicator of a possible drop in fuel pressure (Lean Reading)

Monitoring of PCM (Powertrain Control Module) on fuel injected vehicles Indicator that more tuning is required (especially after modifications are made) Indicator of fuel demand being higher than the fuel system capability

#### WHAT YOU NEED TO KNOW:

Before purchasing an air/fuel ratio gauge you will need to determine if your vehicle has an O2 sensor (0-1 Volt) installed. Fuel injected vehicles will normally have a factory installed O2 sensor. Carbureted vehicles may not have an O2 sensor. If you do not have an O2 sensor, one can be installed.

#### **WHAT YOU SEE:**

LED lights showing LEAN (less fuel vs. air), STOICHIOMETRIC (an equal air/fuel mixture), RICH (more fuel vs. air). The indicated values may change rapidly or not much at all, depending on the type of driving or induction system (fuel injected or carbureted).

#### WHEN YOU SHOULD BE CONCERNED:

If the LEDs are tending to spend most of their time on the LEAN side, there is a chance that your engine may incur damage. There is too much air/not enough fuel in the air/fuel mixture. During wide-open-throttle operation, the reading should never be in the LEAN range.

If the LEDs are tending to spend most of their time on the RICH side, unless you are running at wide-open-throttle, you may not be burning your fuel efficiently thus not obtaining full power and expelling more pollutants in your exhaust.

#### **HOW IT WORKS:**

The Air/Fuel Ratio Gauge is basically a voltmeter that displays the voltage output of an oxygen sensor which measures the available oxygen in the exhaust. More oxygen in the exhaust indicates a LEAN air/fuel mixture while less oxygen indicates a RICH mixture.

From the left side of the gauge (LEAN), the first LED comes on at .05V, the second at .10V and so on, in increments of .05V. The color coded LEDs on Competition Tachs & Gauges Air/Fuel Ratio Gauges are as follows: 4 red LEDs -LEAN (left side of band); 10 amber LEDs indicate STOICH; 6 green LEDs to indicate RICH (right side of band).





### **EXHAUST TEMPERATURE**

### Exhaust Temperature/Pyrometer

#### **GENERAL:**

Exhaust temperature gauges, also known as pyrometers, are designed to measure the temperature of the exhaust gases from a gasoline or diesel engine. The gauge is connected to a probe inserted into the exhaust system. Different probes are available for different applications - see the Tech Notes section "Which probe for exhaust temperature gauge" to determine which probe is best for your use.

#### **CAN BE USED ON:**

Any vehicle where there is a desire to monitor the exhaust temperature

#### **GOOD FOR:**

Indication of dangerous overheat conditions

Can be used for tuning/monitoring the air/fuel mixture

While towing, early indication of overheating is required, especially when towing a heavy load uphill

#### WHAT YOU NEED TO KNOW:

Before selecting an exhaust temperature gauge you will need to know the expected temperature of your exhaust - normally this can be obtained from your vehicle manufacturer or engine builder

#### WHAT YOU SEE:

The exhaust temperature generally rises/falls with the load placed on the engine. Under high loads or acceleration, the exhaust temperature will rise and then, as the load is removed the exhaust temperature will decrease.

#### WHEN YOU SHOULD BE CONCERNED:

If the exhaust temperature is higher than expected limits, engine damage may

#### **HOW IT WORKS:**

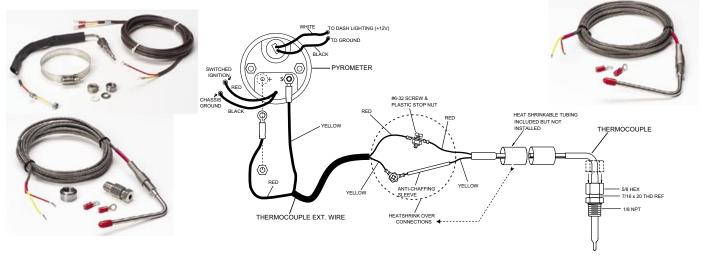
The Stewart Warner exhaust temperature gauge is connected via a special thermocouple extension wire to a Type-K thermocouple probe which is installed in the exhaust system.

**CAUTION:** Only use the supplied thermocouple extension wire to connect the probe to the gauge. Do not alter the length of the thermocouple extension wire. Using any other wire or altering the length of the extension wire can cause severely inaccurate temperature readings.

NOTE: We highly suggest you read the Tech Notes section "Which probe for exhaust temperature gauge" for detailed information on selection, use and life span of probes.

You can find this gauge in the following product lines:		
Line	Page	
Competition Tachs & Gauges	10	
Impact™	30	
Deluxe™	24	
Wings™	32	
Heavy Duty™	42	





### **NITROUS PRESSURE**

### Nitrous Pressure

#### **GENERAL:**

Monitors nitrous bottle pressure and is a must for nitrous oxide system installations.

Nitrous oxide systems are tuned for peak performance at a particular pressure. If the pressure is too low or too high, the air fuel mixture will not be correct and cause poor/inconsistent performance. Generally, the nitrous bottle is heated with a special heater blanket wrap, causing the pressure to rise. If the pressure rises too high, there is also potential for a bottle failure.

#### **CAN BE USED ON:**

Any nitrous oxide system.

#### **GOOD FOR:**

Monitoring nitrous oxide pressure for optimum performance and safety.

#### WHAT YOU NEED TO KNOW:

You will need to be aware of the optimum nitrous pressure for your system.

#### **WHAT YOU SEE:**

The needle will indicate the current nitrous oxide bottle pressure when the valve is opened. The pressure will rise as the special heated blanket wrap heats the bottle. The pressure will drop as the nitrous oxide is consumed and can be used as an indicator for when the bottle requires a re-fill. With experience, the bottle pressure can guide to help set a dial-in time for bracket drag racing competition.

#### WHEN YOU SHOULD BE CONCERNED:

If the nitrous pressure drops below the desired limits, refill the bottle. If the nitrous pressure rises above the safe limits, disconnect the bottle heater wrap.

#### **HOW IT WORKS:**

Stewart Warner mechanical nitrous pressure gauges are connected directly to the supply line from the bottle to the system via braided stainless steel tubing and fittings that are appropriate for the high-pressure system.







### **Boost & Blower Pressure**

#### **GENERAL:**

Boost gauges are mainly used on diesel vehicles with a turbocharger or supercharger. They can also be used on turbo or super charged gasoline vehicles where you are not concerned about measuring the vacuum level. Blower gauges monitor boost for very high boost superchargers.

#### **CAN BE USED ON:**

Diesel vehicles with a turbocharger or supercharger.

Turbocharged vehicles, gasoline powered with no need for vacuum monitoring. Supercharged vehicles, gasoline powered with no need for vacuum monitoring. Top fuel drag cars.

#### **GOOD FOR:**

Monitoring lack of boost - indicating air leaks, blow off valve malfunction, waste gate adjustment required, etc.

Monitoring too much boost (can cause costly total engine failure) indicating blow off valve malfunction, waste gate adjustment required, etc.

#### WHAT YOU NEED TO KNOW:

Before selecting a boost gauge you will need to know the maximum boost out put of your turbocharger or supercharger. When selecting a boost gauge you will want a dial range where your miximum boost level falls in the mid-range of full dial range.

#### **WHAT YOU SEE:**

During normal driving, the gauge will generally rest at zero when there is no boost . As you accelerate, the gauge will indicate the boost pressure as it increases.

#### WHEN YOU SHOULD BE CONCERNED:

Boost levels above your systems recommended maximums can cause catastrophic engine failure caused by excessive cylinder pressure and detonation.

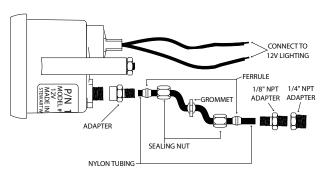
#### **HOW IT WORKS:**

The Stewart Warner mechanical boost & blower gauges are connected directly to the intake manifold via tubing and fittings supplied with the gauge. This allows accurate measurement of the boost level at the source.

#### WHAT BOOST IS:

Boost is pressurized air pumped into the engine from a turbocharger or supercharger.

#### Mechanical Hook-Up



You can find this gauge in the following product lines:		
Line	Page	
Competition Tachs & Gauges	10	
Impact™	30	
Deluxe™	24	
Heavy Duty™	42	





### Vac/Boost Pressure

#### **GENERAL**

Used on non-diesel, turbocharged or supercharged vehicles. Monitors the boost level and is used for tuning waste gates or for pulley sizing (on supercharged). Also used to monitor the manifold boost level. The vacuum portion of the gauge measures manifold vacuum.

#### **CAN BE USED ON:**

Turbocharged vehicles

Supercharged vehicles

Note: Diesels would use a boost only gauge as they do not run with a manifold vacuum.

#### **GOOD FOR:**

Monitoring lack of boost - indicating air leaks, blow off valve malfunction, waste gate adjustment required, etc.

Monitoring too much boost (can cause costly total engine failure) indicating blow off valve malfunction, waste gate adjustment required, etc.

#### WHAT YOU NEED TO KNOW:

Before selecting a vac/boost gauge you will need to know the maximum boost out put of your turbocharger or supercharger. When selecting a vac/boost gauge you will want a dial range where your miximum boost level falls in the mid-range of full dial range.

#### **WHAT YOU SEE:**

During normal driving, the gauge will indicate manifold vacuum. As you accelerate, the gauge will indicate the increase in manifold pressure (boost).

#### WHEN YOU SHOULD BE CONCERNED:

Boost levels above your systems recommended maximums can cause catastrophic engine failure caused by excessive cylinder pressure and detonation.

See "Vacuum Gauge" section for information on using the vacuum portion of the gauge for diagnostics such as leaks, warn parts, etc.

#### **HOW IT WORKS:**

The Stewart Warner mechanical vac/boost gauges are connected directly to the intake manifold via tubing and fittings supplied with the gauge. This allows accurate measurement of the boost and vacuum levels.

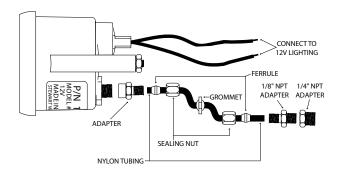
#### WHAT BOOST IS:

Boost is pressurized air pumped into the engine from a turbocharger or supercharger.

#### WHAT VACUUM IS:

Vacuum is created by the engine drawing in air when the throttle is only partially open. Generally, vacuum is highest at idle. The more you are running in vacuum the better the fuel economy is.

#### **Mechanical Hook-Up**



You can find this gauge in the follow- ing product lines:					
Line Page					
Competition Tachs & Gauges	10				
Impact™	30				
Deluxe™	24				
Wings™	32				





### FUEL PRESSURE

### **Fuel Pressure**

#### **GENERAL:**

Fuel pressure gauges indicate the pressure in the fuel system supply. Proper pressure is critical for proper air/fuel mixtures in both carbureted and fuel injected applications.

Loss of fuel pressure can cause an extremely lean air/fuel mixture and costly engine damage.

#### CAN BE USED ON:

Most applications with a fuel supply system.

#### **GOOD FOR:**

Indicating a loss of fuel system pressure or system malfunction.

Indicating when a fuel system upgrade is required on systems where modifications have been made.

Tuning adjustable fuel pressure regulators.

Monitoring fuel system pressure during nitrous oxide activation, as the additional fuel system demand can be substantial.

#### WHAT YOU NEED TO KNOW:

You will need to be aware of the desired fuel pressure range. Generally, carbureted applications operate around 7 psi and require a 15 psi gauge. Most modern fuel injected systems operate over 40 psi. You should check with your engine builder for the operating fuel pressure range of your system.

If using nitrous oxide you will need to ensure you have accounted for the additional fuel required during nitrous activation.

NOTE: If modifications have been made to your engine you need to verify that your fuel pump is capable of producing the required pressure and volume required to maintain the proper air/fuel mixtures.

#### **WHAT YOU SEE:**

The needle will indicate the current fuel pressure on the application being monitored. This reading should remain fairly steady and may vary with engine RPM depending on the particular application. You will need to know what to expect from your system.

#### WHEN YOU SHOULD BE CONCERNED:

If the fuel pressure drops below the desired limits, you should, as quickly as possible, determine and fix whatever has caused the loss of pressure before engine damage occurs.

#### **HOW IT WORKS:**

**MECHANICAL** 

Stewart Warner mechanical fuel pressure gauges are connected directly to a port in the system being monitored. Braided stainless steel tubing must be used for fuel system connection.

**CAUTION:** Mechanical fuel pressure gauges must never be mounted inside the passenger compartment of any vehicle. Stewart Warner provides mounting cups for use outside the vehicle.

#### **ELECTRIC**

Stewart Warner electric fuel pressure gauges are connected, via wires to a pressure sender which is installed in a port in the system being monitored, providing the pressure information to the gauge.

NOTE: In tight areas, stainless steel braided tubing can be used to remote mount the electric sender, providing both an electrical ground and pressure to the sender.

**CAUTION:** Electric gauges that require senders must be "matched" with the correct electrical match. If a sender that does not have the same electrical match is used the gauge will not provide the proper readings and the needle may act erratically.

You can find this gauge in the following product lines:		
Line	Page	
Competition Tachs & Gauges	10	
Impact™	30	
Deluxe™	24	
Heavy Duty™	42	



### Oil Pressure

Monitors engine oil pressure. A must for vehicles that don't come with an OEM oil pressure gauge.

Oil pressure is one of the most crucial parameters to monitor, as loss of oil pressure for just a few seconds could cause major damage.

As you increase the performance of the engine the forces placed upon the metal parts increase as well. The higher you rev the engine, the more centrifugal forces try to expel the oil off of the crankshaft. Higher oil pressure is needed to maintain the proper oil buffer.

#### CAN BE USED ON:

Any application with pressurized oil lubrication.

#### **GOOD FOR:**

Monitoring oil pressure on vehicles that don't come with a factory installed oil pressure gauge.

When modifications have been made that raise the oil pressure beyond the range of the factory gauge.

Indication of loss of oil, system leaks, pump malfunction, clogged filters.

#### WHAT YOU NEED TO KNOW:

You will need to be aware of the oil pressure requirements of your vehicle. If doing modifications you will need to know the pressure ratings of your oil pump.

NOTE: If modifications have been made to your engine you need to verify that your oil pump is capable of producing the required pressure and volume to maintain proper lubrication.

#### **WHAT YOU SEE:**

The needle will indicate the current oil pressure of the application being monitored. This reading should remain fairly steady and may vary with engine RPM.

#### WHEN YOU SHOULD BE CONCERNED:

If the oil pressure drops below the desired limits, you should, as quickly as possible, determine and fix whatever has caused the loss of oil pressure before engine damage occurs.

#### **HOW IT WORKS:**

**MECHANICAL** 

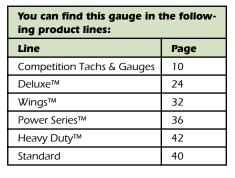
Stewart Warner mechanical oil pressure gauges are connected directly to a port in the system being monitored via tubing and fittings.

#### **ELECTRIC**

Electric oil pressure gauges are connected, via wires, to a pressure sender which is installed in a port in the system being monitored.

NOTE: In tight areas, stainless steel braided tubing can be used to remote mount the electric sender, providing both an electrical ground and pressure to the sender.

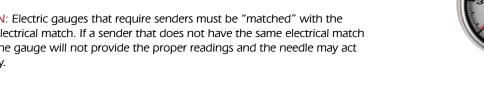
CAUTION: Electric gauges that require senders must be "matched" with the correct electrical match. If a sender that does not have the same electrical match is used the gauge will not provide the proper readings and the needle may act erratically.

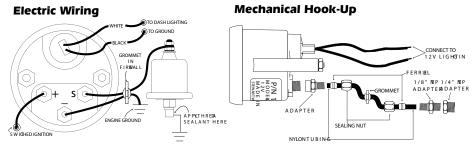












### OIL TEMPERATURE

### Oil & Transmission Oil Temperature

#### GENERAL

Oil temperature gauges are used for monitoring oil temperature. Overheated oil can break down and lose it's lubricating abilities.

#### **CAN BE USED ON:**

Most applications.

#### **GOOD FOR:**

Indicating oil temperature.

#### WHAT YOU NEED TO KNOW:

You will need to know the expected temperature range of your system.

#### **WHAT YOU SEE:**

The needle will indicate the current oil temperature on the application being monitored. This reading should remain fairly steady and may increase under heavy acceleration. You will need to know what to expect from your system.

#### WHEN YOU SHOULD BE CONCERNED:

If the oil temperature rises above the desired limit, you should reduce the load placed on the engine or transmission to help reduce the temperature and then determine what is causing the overheating situation and fix it.

#### **HOW IT WORKS:**

**MECHANICAL** 

Stewart Warner mechanical oil temperature gauges are connected directly to a port in the system being monitored via a capillary tube and bulb. This tube MUST NOT be cut, pinched or altered in any way or the gauge will not function.

#### FI FCTRIC

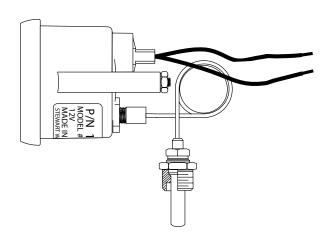
Stewart Warner electric oil temperature gauges are connected, via wires to a temperature sender which is installed in a port in the system being monitored, providing the temperature information to the gauge.

NOTE: In tight areas, stainless steel braided tubing can be used to remote mount the electric sender, providing both an electrical ground and pressure to the sender.

**CAUTION:** Electric gauges that require senders must be "matched" with the correct electrical match. If a sender that does not have the same electrical match is used the gauge will not provide the proper readings and the needle may act erratically.

You can find this gauge in the follow- ing product lines:					
Line Page					
Competition Tachs & Gauges	10				
Impact™	30				
Deluxe™	24				
Wings™	32				
Heavy Duty™	42				
Standard	40				





### Water (Coolant) Temperature

#### **GENERAL:**

Monitors engine coolant temperature to indicate dangerous overheat conditions.

#### **CAN BE USED ON:**

Most engines with a liquid cooling system.

#### **GOOD FOR:**

Indicating coolant temperature.

#### WHAT YOU NEED TO KNOW:

You will need to know the expected temperature range of your system.

#### WHAT YOU SEE:

The needle will indicate the current coolant temperature on the application being monitored. This reading should remain fairly steady. You will need to know what to expect from your system.

#### WHEN YOU SHOULD BE CONCERNED:

If the coolant temperature rises above the desired limit, you should reduce the load placed on the engine to help reduce the temperature and then determine what is causing the overheating situation and fix it.

#### **HOW IT WORKS:**

**MECHANICAL** 

Stewart Warner mechanical water (coolant) temperature gauges are connected directly to a port in the system being monitored via a capillary tube and bulb. This tube MUST NOT be cut, pinched or altered in any way or the gauge will not function.

#### **ELECTRIC**

Stewart Warner electric water (coolant) temperature gauges are connected, via wires to a temperature sender which is installed in a port in the system being monitored, providing the temperature information to the gauge.

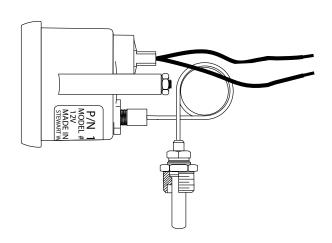
NOTE: In tight areas, stainless steel braided tubing can be used to remote mount the electric sender, providing both an electrical ground and pressure to the sender.

**CAUTION:** Electric gauges that require senders must be "matched" with the correct electrical match. If a sender that does not have the same electrical match is used the gauge will not provide the proper readings and the needle may act erratically.

You can find this gauge in the following product lines:		
Line	Page	
Competition Tachs & Gauges	10	
Deluxe™	24	
Wings™	32	
Power Series™	36	
Heavy Duty™	42	
Standard	40	







### Pressure (No dial designation)

#### **GENERAL**

Pressure gauges that are not designated for a specific use can be used for any type of pressure you want to measure. For example, a 150 PSI pressure gauge could be used for oil pressure, air pressure, fuel pressure\*, etc.

\*Mechanical fuel pressure gauges must never be mounted inside the passenger compartment of any vehicle. Braided Stainless Steel tubing should be used for all fuel pressure applications.

#### **CAN BE USED ON:**

Any vehicle or application requiring a pressure gauge where a designated gauge is not available.

Applications where the designated gauge does not have sufficient range.

#### **GOOD FOR:**

Monitoring pressure levels of the application you are monitoring.

#### WHAT YOU NEED TO KNOW:

Before selecting a pressure gauge you will need to know the operating (high/low) pressure requirements of the application you are monitoring and it's operating parameters.

Knowing the operating parameters of your system will allow you to determine if it is operating correctly by reading the gauge. Example: If your system should build to an optimum pressure range and then remain at that level, you will be able to see if the pressure level is not building to the proper level or if its fluctuating.

#### WHAT YOU SEE:

This will depend on the application you are monitoring and if the pressure reading should stay steady or fluctuate. You will need to know how your system is supposed to operate to determine what you should see on the dial.

#### WHEN YOU SHOULD BE CONCERNED:

When the pressure gauge is not indicating what you are expecting from the system you are monitoring. You will need to know your system to determine when you should take preventative action before damage or injury occurs.

#### **HOW IT WORKS:**

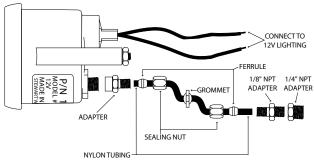
Stewart Warner mechanical pressure gauges are connected directly to a port in the system being monitored via tubing and fittings. This allows the accurate measurement of the pressure directly from the source.

You can find this gauge in the follow- ing product lines:		
Page		
10		
40		





#### **Mechanical Hook-Up**



### VACUUM/MOTOR MINDER

### Vacuum/Motor Minder

#### **GENERAL:**

Measures manifold vacuum or crankcase vacuum. Valuable with nitrous systems to indicate detonation. Useful for indication of leaks, warn parts, and malfunctions. Often used as an engine analyzer and tune-up gauge. Indicates if air is being drawn into the systems from anywhere other than the carburetor, which adversely affects the air/fuel mixture.

#### CAN BE USED ON:

Gasoline powered vehicles.

In conjunction with nitrous systems.

#### **GOOD FOR:**

An economy guide - the higher the manifold vacuum the better the fuel mileage.

An engine analyzer & tune-up gauge.

Monitors crank case vacuum when using vacuum pump to evacuate the crankcase (see "Evacuating the crankcase" bellow).

Tuning an engine in the low RPM range (adjusting carburetor idle circuits).

On nitrous systems for indication of detonation.

#### WHAT YOU SEE:

When used for manifold vacuum, during normal driving the gauge will indicate vacuum. As you accelerate, the vacuum level will decrease - see "At idle" and "At speed" below for trouble shooting.

When used to monitor crank case vacuum in nitrous applications a vacuum gauge can be an excellent indicator of detonation. When detonation occurs, vacuum declines.

At idle: After the engine has warmed up a steady reading of 17-21 indicates engine in good condition. Steady below normal readings indicates a constant leak. The lower the reading the larger the leak. A constant leak could be worn piston rings, leak in manifold gasket, leaky or worn valve guides, hole in manifold or badly seated intake valve. An unsteady pointer indicates poor carburetor function, poor plug condition, or faulty ignition. An abrupt drop of 3 to 5 points at regular intervals indicates an exhaust valve is being held open. A drop of 1 or 2 points at regular intervals indicates a missing spark plug. Erratic drops of 2 to 5 points are an indication of sticky valves, poor carburetor function, or ignition troubles.

At speed: Reading will be lower than at idle but the pointer should be steady at any speed. An unsteady pointer indicates bad exhaust valves, leak in head gasket or faulty ignition. At speeds above 40 MPH an unsteady pointer will show weak valve springs, insufficient valve clearance or faulty ignition.

CAUTION: When in the "Power Range" (5-10) the engine is "lugging" and you should shift into a lower gear.

CAUTION: When in the "Coasting Range" (21-30) touch the gas occasionally to bring the vacuum reading back into the "Driving Range" (10-17) or shift to a lower gear to prevent the engine from sucking up oil from the crankcase.

#### WHEN YOU SHOULD BE CONCERNED:

See "What You See" above.

#### **HOW IT WORKS:**

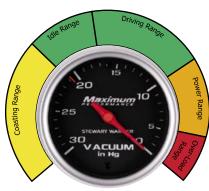
Stewart Warner mechanical vacuum gauges are connected directly to a port in the manifold via tubing and fittings.

When using to measure crank case vacuum the gauge is connected to a port in the crankcase via tubing and fittings.

#### **EVACUATING THE CRANKCASE:**

The vacuum gauge will monitor the crank case vacuum level when using a vacuum pump to evacuate the crank case, reducing the amount of horsepower lost through windage (the resistance to crankshaft rotation caused by air and oil mist in the crank shaft).

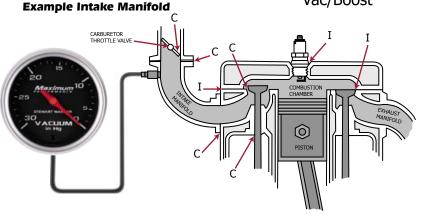
# You can find this gauge in the following product lines: Line Page Competition Tachs & 10 Gauges Deluxe™ 24 Heavy Duty™ 42



#### Straight Vac



Vac/Boost



C - Leaks occuring at thesse points would be constant and would result in a generally lower vacuum reading I - Leaks at these points would be intermittent and would result in a drop in the vacuum gauge reading when the affected cylinder operates

### **VOLTMETERS**

### **Voltmeters**

#### **GENERAL:**

Voltmeters monitor electrical system voltage to ensure proper operation of the charging system and also to monitor battery levels when the key is on and the engine is not running.

#### **GOOD FOR:**

Ensuring that the system voltage is at the proper level.

Ensuring battery has a full charge for optimum ignition operation.

Indication of under- or over-charging of the battery.

Monitoring battery charge when powering accessories without the engine running (i.e. video/game stations/audio systems/lighting).

Monitoring battery charge when working on a vehicle with the key on but engine off.

#### **WHAT YOU SEE:**

When the engine is running the needle will indicate the current electrical system voltage. When the engine is not running the needle will indicate the current battery charge level.

#### WHEN YOU SHOULD BE CONCERNED:

Consult the diagram below for "at-a-glance" details.

A constant reading in the red segments on color coded voltmeters or from approximately 10-11V or 15-16V indicates a need for a complete check of either the battery or generating system.

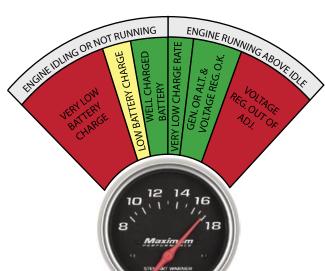
#### **HOW IT WORKS:**

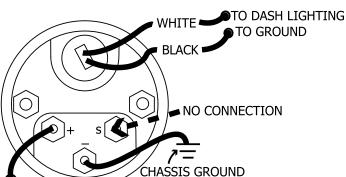
Stewart Warner voltmeters are connected via wires to a switched 12V power source. This source is the voltage that the voltmeter will indicate. No sender is required for use with a voltmeter.

You can find this gauge in the follow- ing product lines:		
Page		
10		
24		
32		
36		
42		









SWITCHED IGNITION

### Fuel Level

#### **CAN BE USED ON:**

Gasoline or diesel powered vehicles.

#### **GOOD FOR:**

Vehicles that are not equipped with a factory fuel gauge.

Dashboard replacement projects.

#### WHAT YOU NEED TO KNOW:

Before purchasing a fuel level gauge you will need to know the electrical match, measured in Ohms, of the sender in your fuel tank. See Tech Notes "Measuring fuel level sender resistance" to learn how to measure the resistance of the sender.

OPTION 1: If you do not wish to remove/replace your fuel level sender you will need to measure the resistance of the sender installed in your vehicle and purchase a gauge with a matching resistance range. Stewart Warner has several gauges with electrical matches for common sender resistances.

OPTION 2: Replace the sender & gauge. Stewart Warner offers 240-33.4 Ohm fuel gauges in each of our product lines that work with our 240-33.5 Ohm fuel level sender.

#### **HOW IT WORKS:**

Stewart Warner fuel level gauges are connected, via wires, to a fuel level sender mounted in the fuel tank. The sender has a method of measuring the fuel level, usually a float arm, and sends an electrical signal to the fuel gauge to indicate the level to display.

**CAUTION:** The electrical match between the sender and gauge must be the same in order for the gauge to display the proper fuel level. If a non-matching sender is used, the gauge will either not work or it will display incorrect or erratic readings.

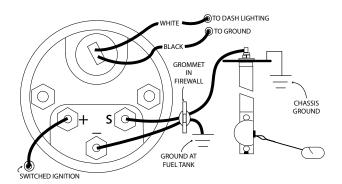
You can find this gauge in the follow- ing product lines:		
Page		
10		
24		
32		
36		
42		
40		













114876 - 240-33.5 Ohm Fuel Level Sender for 240-33.5 Ohm matching fuel level gauges.

### AIR PRESSURE

### Air Pressure

#### **GENERAL:**

Monitors air pressure applications such as air suspension pressure levels or air brake pressure levels.

#### **CAN BE USED ON:**

Any application where air pressure monitoring is desired or required.

#### **GOOD FOR:**

Air suspension pressure.

Air brake pressure.

#### WHAT YOU NEED TO KNOW:

You will need to be aware of the minimum and maximum air pressure of the application you are monitoring.

#### WHAT YOU SEE:

The needle will indicate the current level of air pressure on the application being monitored.

#### WHEN YOU SHOULD BE CONCERNED:

If the pressure gets near the maximum pressure for the application, you need to take preventative measures immediately for safety and to prevent damage to the vehicle.

On air brake systems, generally, the air pressure dis-engages the brake and a large spring engages the brake. So if you lose air brake pressure, the vehicle stops (whether you want it to or not) and will not move until the air pressure is restored.

The air pressure on air-suspended vehicles holds the vehicle up in place of the spring. If air pressure is lost, the vehicle will end up sitting on the ground.

Also, there are some systems that use air blatters to supplement the springs (mostly on trucks) when carrying heavy loads. The pressure in the system represents the "supplement spring" by the air blatters. The more pressure, the stiffer the suspension.

If the pressure remains too low or does not build to the proper operating level, you need to take preventative measures immediately for safety and to prevent damage to the vehicle.

#### **HOW IT WORKS:**

**MECHANICAL** 

Stewart Warner mechanical air pressure gauges are connected directly to a port in the system being monitored via tubing and fittings. This allows the accurate measurement of the air pressure directly from the source.

#### ELECTRIC

Stewart Warner electric air pressure gauges are connected, via wires, to a pressure sender which is installed in a port in the system being monitored, providing the pressure information to the gauge.

NOTE: In tight areas, stainless steel braided tubing can be used to remote mount the electric pressure sender, providing both an electrical ground and pressure to the sender.

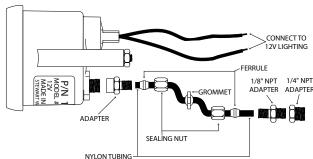
**CAUTION:** Electric gauges that require senders must be "matched" with the correct electrical match. If a non-matching sender is used, the gauge will either not work or it will display incorrect or erratic readings.

You can find this gauge in the follow- ing product lines:					
Line Page					
Competition Tachs & Gauges	10				
Deluxe™	24				
Wings™	32				
Heavy Duty™	42				





#### Mechanical Hook-Up



### Water (Coolant) Pressure

#### GENERAL:

Water pressure gauges are used for measuring coolant/water pressure.

#### **CAN BE USED ON:**

Marine applications.

Any vehicle or application where you need to measure coolant/water pressure.

#### **GOOD FOR:**

Monitoring pressure of your coolant(water) system.

#### WHAT YOU NEED TO KNOW:

Before selecting a water pressure gauge you will need to know the operating pressure requirements of the application you are monitoring.

#### WHAT YOU SEE:

The gauge will indicate the current pressure of the coolant/water you are monitoring.

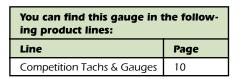
#### WHEN YOU SHOULD BE CONCERNED:

When the pressure gauge is not indicating what you are expecting to see from the system you are monitoring. You will need to know your system to determine when you should take preventative action before damage or injury occurs.

#### **HOW IT WORKS:**

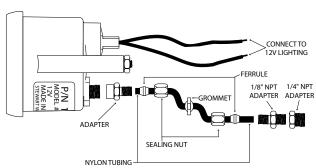
The Stewart Warner mechanical water pressure gauges are connected directly to a port in the system being monitored via tubing and fittings. This allows the accurate measurement of the pressure directly from the source.

Note: You will need to select the fittings and adapters required for your system as we do not include them with Stewart Warner Water Pressure gauges.



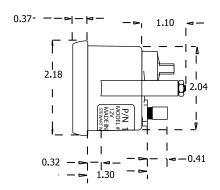


#### **Mechanical Hook-Up**

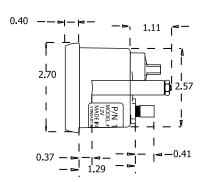


### DIMENSIONS: COMPETITION TACHS/GAUGES

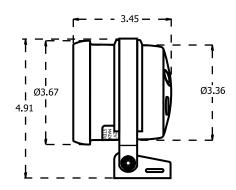
2-1/16" Gauge



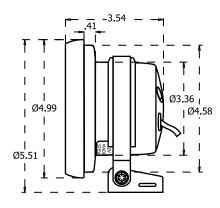
2-5/8" Gauge



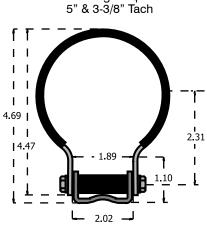
3-3/8" Tach and Speedo



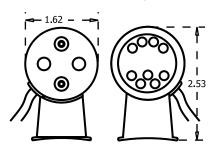
5" Tach & Speedo

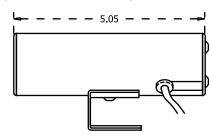


Mounting Strap for

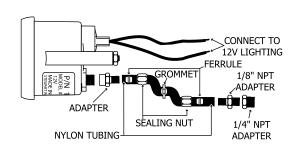


Ultra-Shift Light™, Ultra-Alert Light™ & External Shift Light

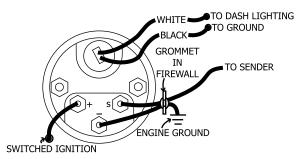




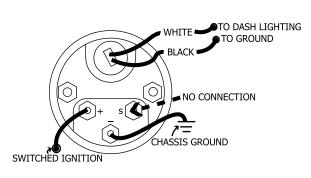
### Wiring: Competition Tachs & Gauges



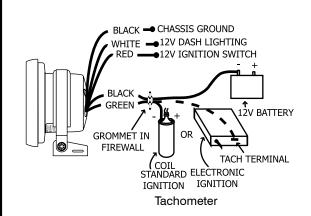
Mechanical Gauge

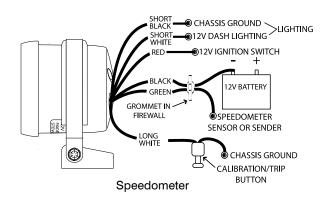


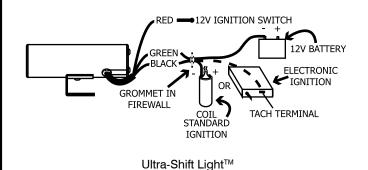
Electrical Gauge with Sender

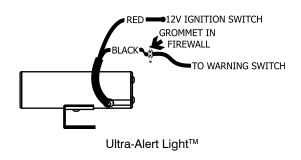


Voltmeter



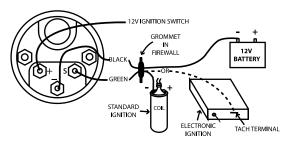






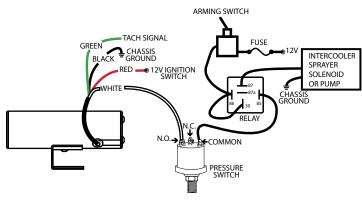
See next page for additional Ultra-Shift Light™ wiring.

### WIRING: COMPETITION TACHS/GAUGES



Gauge Ultra-Shift<sup>™</sup> (G.U.S. <sup>™</sup>)

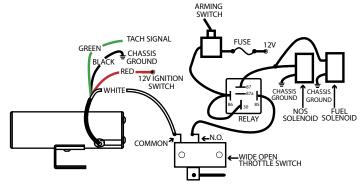
Gauge Ultra-Shift™ (G.U.S.™)



Details on using the Ultra-Shift Light<sup> $\dagger$ </sup> with Programmable Controller can be found in the Tech Info section of this catalog.

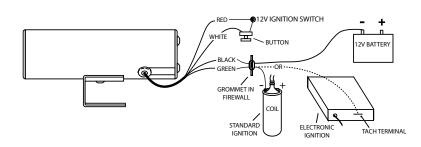
Ultra-Shift Light™ w/Programmable Controller Example Intercooler Sprayer Set-UpIt

Ultra-Shift Light<sup>™</sup> with Programmable Controller



Ultra-Shift Light™ w/Programmable Controller Example Nitrous Set-Uplt

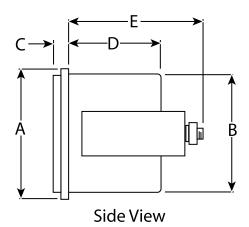
### Ultra-Shift Light<sup>™</sup> with 4-Shift Technology

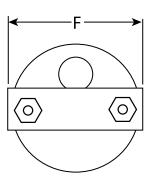


Ultra-Shift Light™ w/4-Shift Technology

Details on using the Ultra-Shift Light<sup>™</sup> with 4-Shift Technology can be found in the Tech Info section of this catalog.

### **DIMENSIONS: NON-COMPETITION LINES**



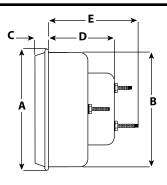


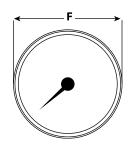
**Back View** 

Gauges - Deluxe™/Wings™/Power Series™/Heavy Duty™				
Dimension	2-1/16" Gauges		2-5/8" Ga	uges
	in.	cm	in.	cm
Α	2.28	5.79	2.80	7.11
В	2.06	5.23	2.60	6.60
C (Heavy Duty)	.188 (.375)	.476 (.95)	.188 (N/A)	.476 (N/A)
D	1.38	3.51	1.76	4.47
E	2.26	5.74	2.46	6.25
F	2.25	5.72	2.88	7.32

Gauges - Standard™/Standard Plus™							
Dimension	2-1/32" Gauges						
	in.	cm					
А	2.19	5.56					
В	2.00	5.08					
С	.25	.064					
D	.75	1.91					
Е	1.33	3.38					
F	2.06	5.23					

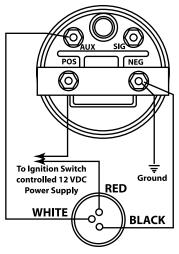
Tachometer/Speedometer Deluxe™/Wings™/Power Series™/Heavy Duty™										
Dimension	3-3/8" Me	chanical	3-3/8" Ele	ctric						
	in.	cm	in.	cm						
А	3.81	9.68	3.69	9.37						
В	3.34	8.48	3.34	8.48						
С	.49	1.24	.49	1.24						
D	2.31	5.87	2.61	6.63						
E	3.56	9.04	4.12	10.46						
F	3.59	9.12	3.59	9.12						



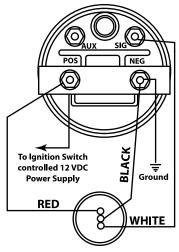


5" Tachometer/Speedometer/Clusters									
Dimension	5" Tach o	r Speedo	5" Cluster						
	in.	cm	in.	cm					
А	5.40	13.72	5.40	13.72					
В	5.04	12.80	5.00	12.7					
С	.70	1.78	.70	1.78					
D	2.62	6.66	1.12	2.85					
E	3.40	8.64	1.95	4.95					
F	5.40	13.72	5.40	13.72					

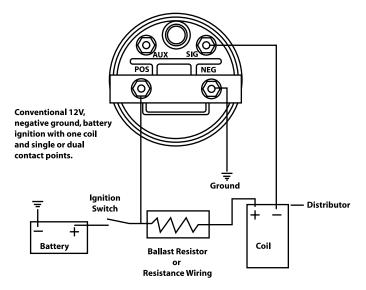
### Wiring: Non-Competition Lines



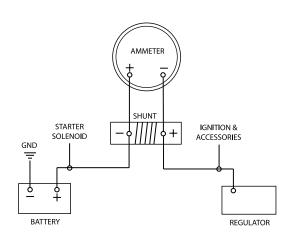
Electric Speedometer with Hall Effect Sender



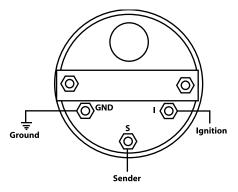
Electric Tachometer with Hall Effect Sender



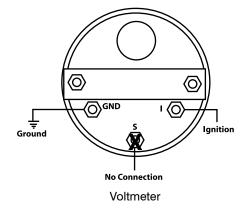
Electric Tachometer - Gasoline



Only Ammeters requiring external shunt



Electric Gauge requiring sender



Caution: Positions of studs (ground, sender, ignition) are not the same as on the Competition Tachs & Gauges or the Impact™ lines of products. Follow the installation instructions that are included with your gauge.

11,000 RPM Vert. Scale w/Shift Light & Recall 2,4,6,8,10,12 Cyl.  10,000 RPM Vert. Scale w/Shift Light & Recall 2,4,6,8,10,12 Cyl.  10,000 RPM Horiz. Scale w/Shift Light & Recall 2,4,6,8,10,12 Cyl.  10,000 RPM Horiz. Circle Track w/Peak Recall 4,6,8,10,12 Cyl.  9,000 RPM Vert. Scale w/Shift Light & Recall 2,4,6,8,10,12 Cyl.  Note: Tachs in bold above are not equipped with 1-5 3-3/8" bolded tachs have led shift light in the dial, 5"  ADD-ON 1-5/8" SHIFT LIGHTS FOR BOLDED TACHS ABOVE  1-5/8" Add-On Shift Light plugs into pigtail on tachs  1-5/8" Plug-in/Add-ON Shift Light for tachs in bold above  TACHOMETERS, STANDARD  5" & 3-3/8" Standard ElectronicTachometers  10,000 RPM Vertical Scale 4,6,8,10, &12 Cyl.  10,000 RPM Vertical Scale 4,6,8,10, &12 Cyl.	' bolded ha	D-ON Shft. L Red 114915 neters Silver	d shift light bu	at accept plug-	in ADD-ON ligh	nt.	Adaptor  N/A  N/A  N/A  N/A  N/A  ADD-ON Shift Light  Sender  N/A  TACHOMETER:
11,000 RPM Vert. Scale w/Shift Light & Recall 2,4,6,8,10,12 Cyl.  10,000 RPM Vert. Scale w/Shift Light & Recall 2,4,6,8,10,12 Cyl.  10,000 RPM Horiz. Scale w/Shift Light & Recall 2,4,6,8,10,12 Cyl.  10,000 RPM Horiz. Circle Track w/Peak Recall 4,6,8,10,12 Cyl.  9,000 RPM Vert. Scale w/Shift Light & Recall 2,4,6,8,10,12 Cyl.  Note: Tachs in bold above are not equipped with 1-5 3-3/8" bolded tachs have led shift light in the dial, 5"  ADD-ON 1-5/8" SHIFT LIGHTS FOR BOLDED TACHS ABOVE  1-5/8" Add-On Shift Light plugs into pigtail on tachs  1-5/8" Plug-in/Add-ON Shift Light for tachs in bold above  TACHOMETERS, STANDARD  5" & 3-3/8" Standard ElectronicTachometers  10,000 RPM Vertical Scale 4,6,8,10, &12 Cyl.  8,000 RPM Vertical Scale 4,6,8,10, &12 Cyl.	114012 114018 114024 114015 5/8" external bolded ha 1-5/8" ADI Amber 114914 5" Tachon Black	114013  114019  114025  114016  al shift lights, ave no dial lec  D-ON Shft. L  Red  114915  neters  Silver	114014  114020  114026  114017  but will accept dishift light bu	114109 114112 It the plug-in A accept plug-	114110  114113  DD-ON Lights in ADD-ON light	114111 114114 below.	N/A N/A N/A N/A N/A N/A Sender N/A
2,4,6,8,10,12 Cyl.  10,000 RPM Vert. Scale w/Shift Light & Recall 2,4,6,8,10,12 Cyl.  10,000 RPM Horiz. Scale w/Shift Light & Recall 2,4,6,8,10,12 Cyl.  10,000 RPM Horiz. Circle Track w/Peak Recall 4,6,8,10,12 Cyl.  9,000 RPM Vert. Scale w/Shift Light & Recall 2,4,6,8,10,12 Cyl.  Note: Tachs in bold above are not equipped with 1-5 3-3/8" bolded tachs have led shift light in the dial, 5"  ADD-ON 1-5/8" SHIFT LIGHTS FOR BOLDED TACHS ABOVE  1-5/8" Add-On Shift Light plugs into pigtail on tachs 1-5/8" Plug-in/Add-ON Shift Light for tachs in bold above  TACHOMETERS, STANDARD 5" & 3-3/8" Standard ElectronicTachometers 10,000 RPM Vertical Scale 4,6,8,10, &12 Cyl.  8,000 RPM Vertical Scale 4,6,8,10, &12 Cyl.	114018  114024  114015  5/8" externa " bolded ha  1-5/8" AD  Amber  114914  5" Tachon  Black	114019  114025  114016 al shift lights, ave no dial lec  D-ON Shft. L  Red  114915 neters Silver	114020  114026  114017  but will accept shift light bu  gts.  Blue  114916	114112  ot the plug-in A accept plug-	DD-ON Lights in ADD-ON light	below.	N/A N/A N/A N/A ADD-ON Shift Light Sender N/A
2,4,6,8,10,12 Cyl.  10,000 RPM Horiz. Scale w/Shift Light & Recall 2,4,6,8,10,12 Cyl.  10,000 RPM Horiz. Circle Track w/Peak Recall 4,6,8,10,12 Cyl.  9,000 RPM Vert. Scale w/Shift Light & Recall 2,4,6,8,10,12 Cyl.  Note: Tachs in bold above are not equipped with 1-5 3-3/8" bolded tachs have led shift light in the dial, 5"  ADD-ON 1-5/8" SHIFT LIGHTS FOR BOLDED TACHS ABOVE  1-5/8" Add-On Shift Light plugs into pigtail on tachs 1-5/8" Plug-in/Add-ON Shift Light for tachs in bold above  TACHOMETERS, STANDARD  5" & 3-3/8" Standard ElectronicTachometers 10,000 RPM Vertical Scale 4,6,8,10, &12 Cyl.  8,000 RPM Vertical Scale 4,6,8,10, &12 Cyl.	114024  114015  5/8" externa " bolded ha  1-5/8" AD  Amber  114914  5" Tachon  Black	114025  114016 al shift lights, ave no dial led  D-ON Shft. I  Red  114915 neters Silver	114026  114017  but will accept dishift light build shift light bu	114112  ot the plug-in A accept plug-	DD-ON Lights in ADD-ON light	below.	N/A N/A N/A ADD-ON Shift Light Sender N/A
10,000 RPM Horiz. Scale w/Shift Light & Recall 2,4,6,8,10,12 Cyl. 10,000 RPM Horiz. Circle Track w/Peak Recall 4,6,8,10,12 Cyl. 9,000 RPM Vert. Scale w/Shift Light & Recall 2,4,6,8,10,12 Cyl. Note: Tachs in bold above are not equipped with 1-5 3-3/8" bolded tachs have led shift light in the dial, 5" ADD-ON 1-5/8" SHIFT LIGHTS FOR BOLDED TACHS ABOVE 1-5/8" Add-On Shift Light plugs into pigtail on tachs 1-5/8" Plug-in/Add-ON Shift Light for tachs in bold above TACHOMETERS, STANDARD 5" & 3-3/8" Standard Electronic Tachometers 10,000 RPM Vertical Scale 4,6,8,10, &12 Cyl. 10,000 RPM Horizontal Scale 4,6,8,10, &12 Cyl.	114024  114015  5/8" externa " bolded ha  1-5/8" AD  Amber  114914  5" Tachon  Black	114025  114016 al shift lights, ave no dial led  D-ON Shft. I  Red  114915 neters Silver	114026  114017  but will accept dishift light build shift light bu	114112  ot the plug-in A accept plug-	DD-ON Lights in ADD-ON light	below.	N/A N/A N/A ADD-ON Shift Light Sender N/A
2,4,6,8,10,12 Cyl.  10,000 RPM Horiz. Circle Track w/Peak Recall 4,6,8,10,12 Cyl.  9,000 RPM Vert. Scale w/Shift Light & Recall 2,4,6,8,10,12 Cyl.  Note: Tachs in bold above are not equipped with 1-5 3-3/8" bolded tachs have led shift light in the dial, 5"  ADD-ON 1-5/8" SHIFT LIGHTS FOR BOLDED TACHS ABOVE 1-5/8" Add-On Shift Light plugs into pigtail on tachs 1-5/8" Plug-in/Add-ON Shift Light for tachs in bold above  TACHOMETERS, STANDARD 5" & 3-3/8" Standard ElectronicTachometers 10,000 RPM Vertical Scale 4,6,8,10, &12 Cyl. 8,000 RPM Vertical Scale 4,6,8,10, &12 Cyl.	114024  114015  5/8" externa " bolded ha  1-5/8" AD  Amber  114914  5" Tachon  Black	114025  114016 al shift lights, ave no dial led  D-ON Shft. I  Red  114915 neters Silver	114026  114017  but will accept dishift light build shift light bu	at the plug-in A accept plug-	DD-ON Lights in ADD-ON light	below.	N/A N/A ADD-ON Shift Light Sender N/A
10,000 RPM Horiz. Circle Track w/Peak Recall 4,6,8,10,12 Cyl. 9,000 RPM Vert. Scale w/Shift Light & Recall 2,4,6,8,10,12 Cyl. Note: Tachs in bold above are not equipped with 1-5 3-3/8" bolded tachs have led shift light in the dial, 5" ADD-ON 1-5/8" SHIFT LIGHTS FOR BOLDED TACHS ABOVE 1-5/8" Add-On Shift Light plugs into pigtail on tachs 1-5/8" Plug-in/Add-ON Shift Light for tachs in bold above TACHOMETERS, STANDARD 5" & 3-3/8" Standard ElectronicTachometers 10,000 RPM Vertical Scale 4,6,8,10, &12 Cyl. 8,000 RPM Vertical Scale 4,6,8,10, &12 Cyl.	114024  114015  5/8" externa " bolded ha  1-5/8" AD  Amber  114914  5" Tachon  Black	114025  114016 al shift lights, ave no dial led  D-ON Shft. I  Red  114915 neters Silver	114026  114017  but will accept dishift light build shift light bu	at the plug-in A accept plug-	DD-ON Lights in ADD-ON light	below.	N/A N/A ADD-ON Shift Light Sender N/A
4,6,8,10,12 Cyl.  9,000 RPM Vert. Scale w/Shift Light & Recall 2,4,6,8,10,12 Cyl.  Note: Tachs in bold above are not equipped with 1-5 3-3/8" bolded tachs have led shift light in the dial, 5"  ADD-ON 1-5/8" SHIFT LIGHTS FOR BOLDED TACHS ABOVE  1-5/8" Add-On Shift Light plugs into pigtail on tachs 1-5/8" Plug-in/Add-ON Shift Light for tachs in bold above  TACHOMETERS, STANDARD 5" & 3-3/8" Standard ElectronicTachometers 10,000 RPM Vertical Scale 4,6,8,10, &12 Cyl.  10,000 RPM Horizontal Scale 4,6,8,10, &12 Cyl.	114015  5/8" externa ' bolded ha  1-5/8" AD  Amber  114914  5" Tachon  Black	114016 al shift lights, ave no dial lec  D-ON Shft. I  Red  114915 neters Silver	114017 but will accept dishift light builded.  gts.  Blue  114916	at accept plug-	in ADD-ON ligh	nt.	N/A  ADD-ON Shift Light  Sender  N/A
2,4,6,8,10,12 Cyl.  Note: Tachs in bold above are not equipped with 1-5 3-3/8" bolded tachs have led shift light in the dial, 5" ADD-ON 1-5/8" SHIFT LIGHTS FOR BOLDED TACHS ABOVE 1-5/8" Add-On Shift Light plugs into pigtail on tachs 1-5/8" Plug-in/Add-ON Shift Light for tachs in bold above TACHOMETERS, STANDARD 5" & 3-3/8" Standard Electronic Tachometers 10,000 RPM Vertical Scale 4,6,8,10, &12 Cyl. 10,000 RPM Horizontal Scale 4,6,8,10, &12 Cyl.	5/8" externa bolded ha 1-5/8" AD Amber 114914 5" Tachon Black	al shift lights, ave no dial lec  D-ON Shft. L  Red  114915  neters  Silver	but will accept shift light bugster bu	at accept plug-	in ADD-ON ligh	nt.	ADD-ON Shift Light Sender
Note: Tachs in bold above are not equipped with 1-5 3-3/8" bolded tachs have led shift light in the dial, 5" ADD-ON 1-5/8" SHIFT LIGHTS FOR BOLDED TACHS ABOVE 1-5/8" Add-On Shift Light plugs into pigtail on tachs 1-5/8" Plug-in/Add-ON Shift Light for tachs in bold above TACHOMETERS, STANDARD 5" & 3-3/8" Standard ElectronicTachometers 10,000 RPM Vertical Scale 4,6,8,10, &12 Cyl. 10,000 RPM Horizontal Scale 4,6,8,10, &12 Cyl. 3,000 RPM Vertical Scale 4,6,8,10, &12 Cyl.	5/8" externa bolded ha 1-5/8" AD Amber 114914 5" Tachon Black	al shift lights, ave no dial lec  D-ON Shft. L  Red  114915  neters  Silver	but will accept shift light bugster bu	at accept plug-	in ADD-ON ligh	nt.	ADD-ON Shift Light Sender
ADD-ON 1-5/8" SHIFT LIGHTS FOR BOLDED TACHS ABOVE 1-5/8" Add-On Shift Light plugs into pigtail on tachs 1-5/8" Plug-in/Add-ON Shift Light for tachs in cold above TACHOMETERS, STANDARD 5" & 3-3/8" Standard ElectronicTachometers 10,000 RPM Vertical Scale 4,6,8,10, &12 Cyl. 10,000 RPM Vertical Scale 4,6,8,10, &12 Cyl. 13,000 RPM Vertical Scale 4,6,8,10, &12 Cyl.	1-5/8" AD Amber 114914 5" Tachon	D-ON Shft. L Red 114915 neters Silver	gts.  Blue	at accept plug-	in ADD-ON ligh	nt.	Light Sender N/A
ADD-ON 1-5/8" SHIFT LIGHTS FOR BOLDED TACHS ABOVE  1-5/8" Add-On Shift Light plugs into pigtail on tachs  1-5/8" Plug-in/Add-ON Shift Light for tachs in cold above  TACHOMETERS, STANDARD  5" & 3-3/8" Standard ElectronicTachometers  10,000 RPM Vertical Scale 4,6,8,10, &12 Cyl.  10,000 RPM Vertical Scale 4,6,8,10, &12 Cyl.	1-5/8" ADI Amber 114914 5" Tachon Black	Property of the control of the contr	_gts. Blue	3-3/8" Tach	nometers		Light Sender N/A
BOLDED TACHS ABOVE  1-5/8" Add-On Shift Light plugs into pigtail on tachs 1-5/8" Plug-in/Add-ON Shift Light for tachs in bold above  TACHOMETERS, STANDARD  3" & 3-3/8" Standard Electronic Tachometers 10,000 RPM Vertical Scale 4,6,8,10, &12 Cyl. 10,000 RPM Horizontal Scale 4,6,8,10, &12 Cyl.	Amber 114914 5" Tachon Black	Red 114915 neters Silver	Blue 114916			l Maria	Light Sender N/A
on tachs 1-5/8" Plug-in/Add-ON Shift Light for tachs in coold above TACHOMETERS, STANDARD 5" & 3-3/8" Standard Electronic Tachometers 10,000 RPM Vertical Scale 4,6,8,10, &12 Cyl. 10,000 RPM Horizontal Scale 4,6,8,10, &12 Cyl.	114914 <b>5" Tachon</b> <b>Black</b>	114915 neters Silver	114916			l Maria	N/A
1-5/8" Plug-in/Add-ON Shift Light for tachs in coold above  TACHOMETERS, STANDARD  5" & 3-3/8" Standard Electronic Tachometers 10,000 RPM Vertical Scale 4,6,8,10, &12 Cyl. 10,000 RPM Horizontal Scale 4,6,8,10, &12 Cyl.	114914 <b>5" Tachon</b> <b>Black</b>	114915 neters Silver	114916				N/A
TACHOMETERS, STANDARD  5" & 3-3/8" Standard Electronic Tachometers 10,000 RPM Vertical Scale 4,6,8,10, &12 Cyl. 10,000 RPM Horizontal Scale 4,6,8,10, &12 Cyl. 8,000 RPM Vertical Scale 4,6,8,10, &12 Cyl.	5" Tachon Black	neters				l we w	,
TACHOMETERS, STANDARD  5" & 3-3/8" Standard ElectronicTachometers  10,000 RPM Vertical Scale 4,6,8,10, &12 Cyl.  10,000 RPM Horizontal Scale 4,6,8,10, &12 Cyl.  8,000 RPM Vertical Scale 4,6,8,10, &12 Cyl.	5" Tachon Black	neters				l un n	,
5" & 3-3/8" Standard ElectronicTachometers 10,000 RPM Vertical Scale 4,6,8,10, &12 Cyl. 10,000 RPM Horizontal Scale 4,6,8,10, &12 Cyl. 8,000 RPM Vertical Scale 4,6,8,10, &12 Cyl.			White			1 1000 11	
10,000 RPM Horizontal Scale 4,6,8,10, &12 Cyl. 8,000 RPM Vertical Scale 4,6,8,10, &12 Cyl.	114000	114001		Black	CHACL	White	Adaptor
3,000 RPM Vertical Scale 4,6,8,10, &12 Cyl.		114001	114002	114100	114101	114102	N/A
	114006	114007	114008	114106	114107	114108	N/A
	114003	114004	114005	114103	114104	114105	N/A
3,000 RPM Horizontal Scale 4,6,8,10, &12 Cyl.	114009	114010	114011	114115	114116	114117	N/A
6,000 RPM Diesel Alternator Tach, Adjustable							
Calibration	114027	114028	114029	114030	114031	114032	N/A
	5" Speedo	ometers		3-3/8" Spe	edometers	1	SPEEDOMETE
5" & 3-3/8" Electronic Programmable Speedometers	Black	Silver	White	Black	Silver	White	Sender
200 MPH Programmable Electric Speedometer,	Didok	S.I.VO.	Willia	Didok	O.I.VO.	William	Condo
oushbutton calibration				114706	114707	114708	114877 or 1148
160 MPH Programmable Electric Speedometer,							
	114709	114710	114711	114703	114704	114705	114877 or 1148
120 MPH Programmable Electric Speedometer, pushbutton calibration				114700	114701	114702	114877 or 1148
260 KPH Programmable Electric Speedometer,						111792	
pushbutton calibration	114715	114716	114717	114712	114713	114714	114877 or 1148
Speedo Sender, AC self-powered, two wire w/							
0.104" Tip (easy 2 wire install)							114877
Speedo Sender, Hall Effect 8 Pulse, 12Volts w/ 0.187" Tip							114878
.104" Square Drive Tip							114880
187" Diameter Drive Tang							114882
203" Diameter Drive Tang							114883
ULTRA-SHIFT LIGHTS	1-5/8" Ultı	ra-Shift Ligh	ts				ULTRA-SHIFT
1-5/8" Programmabke Ultra-Shift Lights	Amber	Red	Blue				Adaptor
Ultra-Shift Light, Digital Tach, Peak Recall programmable 2,3,4,5,6,8,10,&12 Cly	114906	114918	114919				N/A
Ultra-Shift Light Paintable Housing, program- mable 2,3,4,5,6,8,10,&12 Cly	114946	114947	114948				N/A
Ultra-Shift Light W/Window Switch Controller,							1

ULTRA-SHIFT LIGHTS	1-5/8" Ult	ra-Shift Ligh	ts				ULTRA-SHIFT
1-5/8" Programmabke Ultra-Shift Lights	Amber	Red	Blue				Adaptor
Ultra-Shift Light 4-Shift programmable 1,2,3,4,5,6,8,10,&12 Cly	114926	114927	114928				N/A
GAUGE ULTRA-SHIFT LIGHTS	2-1/16"	2-1/16"	2-1/16"				GAUGE ULTRA- SHIFT
2-1/16" Programmable Gauge Ultra-Shift	Amber	Red	Blue				Adaptor
Black Gauge Ultra-Shift Light, Digital Tach, Peak	7	1100	2.00				7 taupioi
Recall, prog. 1,2,3,4,5,6,8,10,&12 Cly	114929	114930	114931	1			N/A
Silver Gauge Ultra-Shift Light, Digital Tach, Peak Recall, prog. 1,2,3,4,5,6,8,10,&12 Cly	114949	114950	114951				N/A
WARNING LIGHTS	1-5/8" Wa	rning Light					WARNING LIGHTS
1-5/8" Warning Lights for use with Temp or							
Pressure Switches below	Amber	Red	Blue				Sender
Ultra-Alert LED Warning Light	114907	114908	114909				See Switches Below
PRESSURE SWITCHES for WARNING LIGHTS							PRESSURE SWITCH
Warning Light Pressure Switches	Switch						Adaptors
10 Psi. NO or NC Pressure Switch	114888						See Adaptors
15 Psi, NO or NC Pressure Switch	114889						See Adaptors
35 Psi. NO or NC Pressure Switch	114890						See Adaptors
60 Psi. NO or NC Pressure Switch	114891						See Adaptors
100 Psi. NO or NC Pressure Switch	114892						See Adaptors
TEMPERATURE SWITCHES for WARNING	111002						oco / taaptoro
LIGHTS							TEMP SWITCHES
Warning light Temperature Switches	Switch						Adaptors
1/4" NPTF 200 Degree F Spade Terminal	114884						See Adaptors
1/4" NPTF 225 Degree F Spade Terminal	114885						See Adaptors
1/4" NPTF 225 Degree F Screw Terminal	114886						See Adaptors
1/4" NPTF 240 Degree F Screw Terminal	114887						See Adaptors
1-1/2" ELECTRIC GAUGES	1-1/2"	1-1/2"	1-1/2"				1-1/2" ELECTRIC GA.
All 1-1/2" Electric 90 Degree Sweep Gauges, Black Face Only	Amber	Red	Blue				Sender
Water Temp 100-260F, Back-Lit Pointer & Dial	116200	116201	116202				Included
Oil Temp 140-320F, Back-Lit Pointer & Dial	116203	116204	116205				Included
Trans Temp, 140-320F, Back-Lit Pointer & Dial	116206	116207	116208				Included
Oil Pressure 100Psi., Back-Lit Pointer & Dial	116209	1116210	116211				Included
Fuel Pressure 15 Psi., Back-Lit Pointer & Dial	116212	116213	116214				Included
Fuel Pressure 100 Psi., Back-Lit Pointer & Dial	116215	116216	116217				Included
Fuel Level, 240-33.5 Ohm, New sender recom-	110210	110210	110217				irioladoa
mended, Back-Lit Pointer & Dial	116218	116219	116220				114876
Voltmeter 8-18 Volts, Back-Lit Pointer & Dial	116221	116222	116223				None
Temp Replacement Sender, All 90 Degree Ga.							
1/8" NPT, w/ 1/4 & 1/2 " NPT Adaptors	114873						Replacement
15 Psi. 240-33.5 Ohm Replacement Sender	114874						Replacement
100 Psi 240-33.5 Replacement Sender	114875						Replacement
Fuel Level Sender, 240E-33.5F, SAE 5-hole	114876						Replacement
VOLTMETER	2-5/8"	2-5/8"	2-5/8"	2-1/16"	2-1/16"	2-1/16"	VOLTMETER
2-1/16" & 2-5/8" 90 Degree Sweep Electric Gauges	Black	Silver	White	Black	Silver	White	Sender
Voltmeter 8-18 Volts	114203	114204	114205	114200	114201	114202	N/A

FUEL LEVEL	2-5/8"	2-5/8"	2-5/8"	2-1/16"	2-1/16"	2-1/16"	FUEL LEVEL
2-1/16" & 2-5/8" 90 Degree Sweep Electric Gauges	Black	Silver	White	Black	Silver	White	Sender
Fuel Level 0E-90F, GM 1965 and newer (aprox.)	114227	114228	114229	114224	114225	114226	Not Available
Fuel Level 73E-10F, Ford pre-1990, & Chry	111227	111220	111223	111221	111223	111220	TVOL7 (Vallabio
(aprox.)	114233	114234	114235	114230	114231	114232	Not Available
Fuel Level 240E-33F, SW Industry Std.	114239	114240	114241	114236	114237	114238	114876
Fuel Level 16E-158F, 1990 aned newer Ford (aprox.)	114251	114252	114253	114248	114249	114250	Not Available
Fuel Level Sender, 240E-33.5F, SAE 5-hole	114876						Replacement
See Intellisensors for high durability sender applications							Intellisensor
FUEL PRESSURE ELECTRIC	2-5/8"	2-5/8"	2-5/8"	2-1/16"	2-1/16"	2-1/16"	FUEL PRESS ELEC.
2-1/16" & 2-5/8" 90 Degree Sweep Electric Gauges	Black	Silver	White	Black	Silver	White	Sender
Fuel Pressure, 1 Bar, Electric				114206	114207	114208	Included
Fuel Pressure, 7 Bar, Electric				114209	114210	114211	Included
Fuel pressure, 15 Psi., Electric	114215	114216	114217	114212	114213	114214	Included
Fuel pressure, 100 Psi., Electric	114221	114222	114223	114218	114219	114220	Included
15 Psi. 240-33.5 Ohm Replacement Sender	114874						Replacement
100 Psi 240-33.5 Replacement Sender	114875						Replacement
OIL PRESSURE ELECTRIC	2-5/8"	2-5/8"	2-5/8"	2-1/16"	2-1/16"	2-1/16"	OIL PRESS ELEC.
2-1/16" & 2-5/8" 90 Degree Sweep Electric Gauges	Black	Silver	White	Black	Silver	White	Sender
Oil Pressure, 7 Bar Electric				114260	114261	114262	Included
Oil pressure 100Psi. Electric	114257	114258	114259	114254	114255	114256	Included
15 Psi. 240-33.5 Ohm Replacement Sender	114874						Replacement
100 Psi 240-33.5 Replacement Sender	114875						Replacement
OIL TEMPERATURE ELECTRIC	2-5/8"	2-5/8"	2-5/8"	2-1/16"	2-1/16"	2-1/16"	OIL TEMP ELEC.
2-1/16" & 2-5/8" 90 Degree Sweep Electric Gauges	Black	Silver	White	Black	Silver	White	Sender
Oil Temp, 60°-160°C				1142263	114264	114265	Included
Oil Temp, 140°-320°F	114269	114270	114271	114266	114267	114268	Included
Temp Sender, 1/8" NPT All Performance 90 Deg. Temp Gauges	114873						Replacement
WATER TEMPERATURE ELECTRIC	2-5/8"	2-5/8"	2-5/8"	2-1/16"	2-1/16"	2-1/16"	WATER TEMP ELEC.
2-1/16" & 2-5/8" 90 Degree Sweep Electric						ue :	
Gauges	Black	Silver	White	Black	Silver	White	Sender
Water Temp, 40°-130°C	444075	444070	444077	114278	114279	114280	Included
Water Temp, 100°-260°F  Temp Sender, 1/8" NPT All Performance 90 Deg.	114275	114276	114277	114272	114273	114274	Included
Temp Gauges	114873						Replacement
TRANSMISSION TEMPERATURE ELECTRIC	2-5/8"	2-5/8"	2-5/8"	2-1/16"	2-1/16"	2-1/16"	TRANS TEMP ELEC.
2-1/16" & 2-5/8" 90 Degree Sweep Electric Gauges	Black	Silver	White	Black	Silver	White	Sender
Trans Temp Blk. 60°-160°C				114281	114282	114283	Included
Trans Temp, 140°-320°F	114287	114288	114289	114284	114285	114286	Included
Temp Sender, 1/8" NPT All Performance 90 Deg. Temp Gauges	114873						Replacement

EXHAUST TEMPERATURE 270 DEGREE ELECTRIC	2-5/8"	2-5/8"	2-5/8"	2-1/16"	2-1/16"	2-1/16"	EGT
2-1/16" & 2-5/8" 270 Degree Sweep Electric Gauges	Black	Silver	White	Black	Silver	White	Sender
Exhaust Temp 1600°F (gauge only) require choice of probe and hardware below				114400	114401	114402	Not Included
Exhaust Temp 2200°F (gauge only) require choice of probe and hardware below				114406	114407	114408	Not Included
Exhaust Temp 1200°C (gauge only) require choice of probe and hardware below				114403	114404	114405	Not Included
2-1/16" Exhaust Temp 1600°F, W/ Type "K" Probe & Complete Installation Kit				117538	119609	119608	Complete Kit
EXHAUST TEMPERATURE ELECTRIC							EGT
Pyrometer Accessories & Performance Thermocouple Probes, Type "K"							Accessories
1/4" Street Probe Kit w/ 10' Wire & Kit	114653						New or Replace
3/16" Street Perf. Probe w/10' Wire & Kit	114654						New or Replace
3/16" High Performance Probe, 10' - no fittings	114655						New or Replace
1/4" High Performance Probe, 10' w/ fittings	114656						New or Replace
1/4" x 1/8" NPT Probe Installation Kit	114657						New or Replace
3/16" x 1/8" NPT Probe Installation Kit	114658						New or Replace
3/16" Probe Band Clamp Kit	114659						New or Replace
1/4" Probe Band Clamp Kit	114660						New or Replace
AIR FUEL RATIO GAUGE	2-5/8"	2-5/8"	2-5/8"	2-1/16"	2-1/16"	2-1/16"	AIR FUEL RATIO
2" & 2-5/8" Air Fuel Ratio (Narrow Band) 270 Deg. Bar Graph	Black	Silver	White	Black	Silver	White	Sender
Air Fuel Ratio, Lean, Stoichiometric, Rich, 20 LED Bar Graph	114903	114904	114905	114900	114901	114902	Not Available
VACUUM MECHANICAL GAUGE	2-5/8"	2-5/8"	2-5/8"	2-1/16"	2-1/16"	2-1/16"	VACUUM MECH.
2-1/16" & 2-5/8" 270 Degree Sweep Me- chanical	Black	Silver	White	Black	Silver	White	Kit
Vacuum 0-30 inHg, , 6' 1/8" Nylon tube with 1/8" & 1/4" NPT fittings	114303	114304	114305	114300	114301	114302	Included
BOOST MECHANICAL GAUGE	2-5/8"	2-5/8"	2-5/8"	2-1/16"	2-1/16"	2-1/16"	BOOST MECH.
2-1/16" & 2-5/8" 270 Degree Sweep Me- chanical	Black	Silver	White	Black	Silver	White	Kit
Boost Press, 4 Bar, 6' 1/8" Nylon tube with 1/8" & 1/4" NPT fittings				114330	114331	114332	Included
Boost Press, 15 Psi., 6' 1/8" Nylon tube with 1/8" & 1/4" NPT fittings				114373	114374	114375	Included
Boost Press, 30 Psi., 6' 1/8" Nylon tube with 1/8" & 1/4" NPT fittings				114376	114377	114378	Included
Boost Press, 60 Psi., 6' 1/8" Nylon tube with 1/8" & 1/4" NPT fittings	114527	114528	114529	114524	114525	114526	Included
Boost Press, 100 Psi., 6' 1/8" Nylon tube with 1/8" & 1/4" NPT fittings				114385	114386	114387	Included
VAC-BOOST, MECHANICAL GAUGE	2-5/8"	2-5/8"	2-5/8"	2-1/16"	2-1/16"	2-1/16"	VAC-BOOST MECH.
2-1/16" & 2-5/8" 270 Degree Sweep Mech.	Black	Silver	White	Black	Silver	White	Kit
Vac/Boost 80 cmHg -1 Bar, 6' 1/8" Nylon tube with 1/8" & 1/4" NPT fittings				114333	114334	114335	Included
Vac/Boost 80 cmHg - 3 Bar, 6' 1/8" Nylon tube with 1/8" & 1/4" NPT fittings				114336	114337	114338	Included
Vac/Boost Blk. 30Hg/15Psi., 6' 1/8" Nylon tube with 1/8" & 1/4" NPT fittings	114539	114540	114541	114536	114537	114538	Included
Vac/Boost 30 inHg to 25 Psi., 6' 1/8" Nylon tube with 1/8" & 1/4" NPT fittings				114379	114380	114381	Included
Vac/Boost Blk. 30Hg/40Psi., 6' 1/8" Nylon tube with 1/8" & 1/4" NPT fittings	114545	114546	114547	114542	114543	114544	Included

BLOWER PRESSURE MECHANICAL GAUGE	2-5/8"	2-5/8"	2-5/8"	2-1/16"	2-1/16"	2-1/16"	BLOWER MECH.
2-1/16" & 2-5/8" 270 Degree Sweep Me-	Disale	O:h	)A/I=:4-	Block	Cilore	NA//- : 4 -	N:r
Chanical  Blower Press, 100 Psi., 6' 1/8" Nylon tube with	Black	Silver	White	Black	Silver	White	Kit
1/8" & 1/4" NPT fittings	114533	114534	114535	114530	114531	114532	Included
FUEL PRESSURE MECHANICAL GAUGE	2-5/8"	2-5/8"	2-5/8"	2-1/16"	2-1/16"	2-1/16"	FUEL PRESS MECH.
2-1/16" & 2-5/8" 270 Degree Sweep Me- chanical	Black	Silver	White	Black	Silver	White	Kit
Fuel Press 1 Bar , requires mounting outside cockpit (gauge only)				114318	114319	114320	See Accessories
Fuel Press 4 Bar, requires mounting outside cockpit (gauge only)				114321	114322	114323	See Accessories
Fuel Press 7 Bar, requires mounting outside cockpit (gauge only)				114324	114325	114326	See Accessories
Fuel Press 15 Psi., requires mounting outside cockpit (gauge only)	114503	114504	114505	114500	114501	114502	See Accessories
Fuel Press, 30 Psi., requires mounting outside cockpit (gauge only)				114382	114383	114384	See Accessories
Fuel Press 60 Psi., requires mounting outside cockpit (gauge only)	114509	114510	114511	114506	114507	114508	See Accessories
Fuel Press 100 Psi., requires mounting outside cockpit (gauge only)	114515	114516	114517	114512	114513	114514	See Accessories
Note: Braided Stainless hoses are recommended for all Fuel pressure applications							See Accessories
OIL PRESSURE MECHANICAL GAUGE	2-5/8"	2-5/8"	2-5/8"	2-1/16"	2-1/16"	2-1/16"	OIL PRESS MECH.
2-1/16" & 2-5/8" 270 Degree Sweep Me- chanical	Black	Silver	White	Black	Silver	White	Kit
Oil Press 7 Bar, 6' 1/8" Nylon tube with 1/8" & 1/4" NPT fittings				114327	114328	114329	Included
Oil Press 100 Psi., 6' 1/8" Nylon tube with 1/8" & 1/4" NPT fittings	114521	114522	114523	114518	114519	114520	Included
Oil Press 150 Psi., 6' 1/8" Nylon tube with 1/8" & 1/4" NPT fittings	1114391	114392	114393	114388	114389	114390	Included
Note: Braided Stainless hoses are recommended for all Oil pressure applications							See Accessories
AIR PRESSURE MECHANICAL GAUGE	2-5/8"	2-5/8"	2-5/8"	2-1/16"	2-1/16"	2-1/16"	AIR PRESS MECH.
2-1/16" & 2-5/8" 270 Degree Sweep Me- chanical	Black	Silver	White	Black	Silver	White	Kit
Air Pressure 10 Bar, 6' 1/8" Nylon tube with 1/8" & 1/4" NPT fittings				114339	114340	114341	Included
Air Pressure 150 Psi., 6' 1/8" Nylon tube with 1/8" & 1/4" NPT fittings	114551	114552	114553	114548	114549	114550	Included
WATER PRESSURE MECHANICAL GAUGE	2-5/8"	2-5/8"	2-5/8"	2-1/16"	2-1/16"	2-1/16"	WATER PRESS MECH.
2-1/16" & 2-5/8" 270 Degree Sweep Me- chanical	Black	Silver	White	Black	Silver	White	Kit
Water Press 15 Psi., (gauge only) see accessories for tubing	114587	114588	114589	114584	114585	114586	See Accessories
Water Press 35 Psi., (gauge only) see accessories for tubing	114593	114594	114595	114590	114591	114592	See Accessories

NITROUS PRESSURE MECHANICAL GAUGE	2-5/8"	2-5/8"	2-5/8"	2-1/16"	2-1/16"	2-1/16"	NITROUS PRESS MECH.
2-1/16" & 2-5/8" 270 Degree Sweep Me- chanical	Black	Silver	White	Black	Silver	White	Kit
Nitrous, 1500 Psi., (gauge only) see accessories for tubing	119601	119602	119603	119383	119384	119385	See Accessories
Note: Braided Stainless hoses are recommended for all Nitrous pressure applications							See Accessories
BRAKE PRESSURE MECHANICAL GAUGE	2-5/8"	2-5/8"	2-5/8"	2-1/16"	2-1/16"	2-1/16"	BRAKE PRESS MECH.
Check for Availability in 2006	Black	Silver	White	Black	Silver	White	Kit
PRESSURE MECHANICAL GAUGE	2-5/8"	2-5/8"	2-5/8"	2-1/16"	2-1/16"	2-1/16"	PRESS MECH.
2-1/16" & 2-5/8" 270 Degree Sweep Me- chanical	Black	Silver	White	Black	Silver	White	Kit
Pressure, 0-200 Psi., (gauge only)	114309	114310	114311	114306	114307	114308	See Accessories
Pressure, 0-300 Psi. (gauge only)	114315	114316	114317	114312	114313	114314	See Accessories
Note: Braided Stainless hoses are recommended for all general pressure applications							See Accessories
WATER TEMPERATURE MECHANICAL GAUGE	2-5/8"	2-5/8"	2-5/8"	2-1/16"	2-1/16"	2-1/16"	WATER TEMP MECH.
2-1/16" & 2-5/8" 270 Degree Sweep Me- chanical	Black	Silver	White	Black	Silver	White	Kit
Water Temp 40°-130°C 1.8m Capillary Length, w/light & 1/2" bushing				114342	114343	114344	Included
Water Temp 100°-260°F 6' Capillary Length, w/light & 1/2" bushing	114557	114558	114559	114554	114555	114556	Included
Water Temp 100°-260°F 8' Capillary Length, w/light & 1/2" bushing	114397	114398	114399	114394	114395	114396	Included
Water Temp 100°-260°F 12' Capillary Length, w/light & 1/2" bushing	114563	114564	114565	114560	114561	114562	Included
Note: See adaptor bushings/fittings for other then 1/2" NPT applications							See Accessories
OIL TEMPERATURE MECHANICAL GAUGE	2-5/8"	2-5/8"	2-5/8"	2-1/16"	2-1/16"	2-1/16"	OIL TEMP MECH.
2-1/16" & 2-5/8" 270 Degree Sweep Me- chanical	Black	Silver	White	Black	Silver	White	Kit
Oil Tank Temp, 140°-320°F 2' Capillary, w/light & 1/2" bushing					116306		Included
Oil Temp, 60°-160°C 1.8m Capillary, w/light & 1/2" bushing				114345	114346	114347	Included
Oil Temp, 140°-320°F 6' Capillary, w/light & 1/2" bushing	114569	114570	114571	114566	114567	114568	Included
Oil Temp, 140°-320°F 8' Capillary, w/light & 1/2" bushing	116303	116304	116305	116300	116301	116302	Included
Oil Temp, 140°-320°F 12' Capilary, w/light & 1/2" bushing	114575	114576	114577	114572	114573	114574	Included
Note: See adaptor bushings/fittings for other then 1/2" NPT applications							See Accessories
TRANSMISSION TEMPERATURE MECHAN- ICAL GAUGE	2-5/8"	2-5/8"	2-5/8"	2-1/16"	2-1/16"	2-1/16"	TRANS TEMP MECH
2-1/16" & 2-5/8" 270 Degree Sweep Me- chanical	Black	Silver	White	Black	Silver	White	Kit
Trans Temp 140°-320°F 9' Capillary, w/light & 1/2" bushing	114581	114582	114583	14578	114579	114580	Included
Note: See adaptor bushings/fittings for other then 1/2" NPT applications							See Accessories

	5" Tachs 8	& Speedos	3-3/8" Tachs	& Speedos	Sender/Kit
5" & 3-3/8" Deluxe Tachometers	Black	White	Black	White	If Required
10000 PRM, Elec, Gas/Ign, SW Block Logo	82699				
10000 RPM, Elec, Gas/Ign, Wings Logo	82849	82847			
9000 RPM, Mech, .5:0			535AH-D		
8000 RPM, Elec, Gas/Ign, 4, 8, 12 Cyl, 20 Pole			82163		
8000 RPM, Elec, Gas/Ign, 4, 6, 8 Cyl, 12 Pole			82170		
6000 RPM, Elec, Gas/Ign, HM, 4, 6, 8 Cyl, 12 Pole			82162		
6000 RPM, Elec, Gas/Ign, 4, 6, 8 Cyl			82162B		
0-80 MPH, Mech, Odo, Dual Scale			82692		
5-85 MPH, Elec, Odo, Program, Dual Scale			82637		
5-85 MPH, Mech, Odo, Dual Scale			82677		
0-120 MPH, Elec, Odo, Program			82896		82527 or 82646
0-140 KPH, Elec, Odo, Prog, Metric, Dual Scale			82656		114787 or 82646
0-140 KPH, Mech, Odo, Metric			82697		
0-160 MPH, Elec, Odo, Program, SW Logo		82898			114787 or 82646
0-160 MPH, Mech, Odo			550BP-D		
0-160 MPH, Elec, Odo, Wings Logo	82848	82846			114787 or 82646
0-160 MPH, Elec, Odo, Program, SW Block Logo	82698				114787 or 82646
0-180 MPH Speed, Mech, Odo, Counter Clockwise			550ABE		411335-D
3-3/8" Heavy Duty Tachometers & Speedometers	5" Tachs 8	& Speedos	3-3/8" Tachs	& Speedos	Sender/kKit
	Black	White	Black	White	If Required
3500 RPM, Elec, Dsl, .5, 1, 1.5, 2, Hall Eff			82619		
3500 RPM, Elec, Dsl, HM, Altntr			82621		
3500 RPM, Elec, Dsl, .5, 1, 1.5, 2, Hall Eff, Altntr			82640		
3500 RPM, Elec, Dsl, .5 1 1.5 2, Mag, Flywheel			82641		
6000 RPM, Elec, Gas/Ign, 4, 6, 8 Cyl			82164B		
8000 RPM, Tach, Elec, Gas/Ign, 4, 6, 8 Cyl			82170-1		
8000 RPM, Tach, Elec, Gas/Ign, 4, 6, 8 Cyl, Imprvd Filter			82171B		
8000 RPM, Elec, Gas/Ign, 4, 8, 12 Cyl			82165		
9000 RPM, Mech, .5:1			535AK-D		
5-85 MPH, Elec, Odo, Program, Sq Wave			82604		
5-85 MPH, Elec, Odo, Program			82642		114787 or 82646
0-160 MPH, Mech, Odo			550HH-D		
3-3/8" Wings Tachometers & Speedometers	3-3/8" Tac	hs and Speed	os		Sender/Kit
·	Black	White	Beige	Silver	If Required
3500 RPM, Elec, Dsl, .5, 1, 1.5, 2, Hall Eff, Altntr	82672	82671			
3500 RPM, Elec, Dsl, .5, 1, 1.5, 2, Mag, Flywheel	82674	82673			
8000 RPM, Elec, Gas/Ign, 4, 6, 8, Cyl	82660	82659	82613		
8000 RPM, Elec, Gas/Ign, 4, 6, 8, Cyl, Gld Bez			82608	82614	
0-80 MPH, Mech, Odo	82666	82665			
0-120 MPH, Elec, Odo, Program	82670	82669			82527 or 82646
0-160 MPH, Elec, Odo, Program	82662	82661			114787 or 82646
0-160 MPH, Mech, Odo	82664	82663			
0-160 MPH, Elec, Odo, Program	32004	32000	82612	82611	114787 or 82646
0-160 MPH, Elec, Odo, Program, Gld Bez			82607	32011	114787 or 82646
3-3/8" Power Series Tachometers & Speedoemeters	3-3/8" Too	hs and Speed			Sender/Kit
C 5,5 1 Office oction factionineters & Spectatemeters	Titanium I		Burgundy Ring	Blue/Gray Ring	If Required
8000 RPM, Elec, Gas/Ign, 4, 6, 8 Cyl	82837		82845	82838	
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3" Hand Held Tach	3" Hand Held Tac	h	Sender/Kit
	Black		If Required
4000 RPM Handheld, 4" Long	82682		
2-1/16" & 2-5/8" Deluxe Oil Pressure Gauges	2-1/16"	2-5/8"	Sender/Kit
	Black	Black	If Required
Oil Pressure, Elec, 0-80psi	82304		279A
Oil Pressure, Elec, 0-100psi	82305		114875
Oil Pressure, Elec, 0-100psi, Metric	82387		114875
Oil Pressure, Elec, 0-100psi, Mrn	82116		114875
Oil Pressure, Mech, 5-80psi	82322		114840/114841
Oil Pressure, Mech, 5-100psi	82323	82406	114840/114841
Oil Pressure, Mech, 10-200psi	82324		114840/114841
Oil Pressure, Mech, 10-100psi		82407	114840/114841
2-1/16" & 2-5/8" Deluxe Fuel Pressure Gauges	2-1/16"	2-5/8"	Sender/Kit
	Black	Black	If Required
Fuel Pressure, Elec, 0-16psi	82333		114874
Fuel Pressure, Mech, 1-10psi	82319		See accessories
Fuel Pressure, Mech, 1-15psi		82405	See accessories
Fuel Pressure, Mech, 2-30psi	82320		See accessories
Fuel Pressure, Mech, 10-200psi	82325		See accessories
2-1/16" & 2-5/8" Deluxe Air Pressure Gauges	2-1/16"	2-5/8"	Sender/Kit
	Black	Black	If Required
Air Pressure, Elec, 0-150psi, Metric	82388		279C
Air Pressure, Elec, 0-150psi	82346		279C
Air Pressure, Mech, 10-150psi	82329		114840/114841
Air Pressure, Mech, 10-150psi	82350		114840/114841
Air Pressure, Mech, 10-150psi, Metric	82393		114840/114841
Air Pressure, Mech, 10-100psi		82408	114840/114841
Dual-Air Pressure, Mech, 10-150psi	82332		114840/114841
2-1/16" & 2-5/8" Deluxe Pressure Gauges	2-1/16"	2-5/8"	Sender/Kit
	Black	Black	If Required
2-1/16" Gauge, Press, Mech, DLX, 5-100psi, Metric	82392		114840/114841
2-1/16" & 2-5/8" Deluxe Boost-Vac/Boost Gauges	2-1/16"	2-5/8"	Sender/Kit
	Black	Black	If Required
Boost Press, Manif, Mech, 2-30psi	82321		114840/114841
Boost, Mech, 0-30/0-15, Red Pointer	82340		114840/114841
2-1/16" & 2-5/8" Deluxe Vacuum Gauges	2-1/16"	2-5/8"	Sender/Kit
	Black	Black	If Required
Vacuum, Mech, 0-30Hg	82328		114840/114841
Vacuum, Mech, 0-30Hg		82411	60" Tube Included
2-1/16" & 2-5/8" Deluxe Fuel Level Gauges	2-1/16"	2-5/8"	Sender/Kit
	Black	Black	If Required
Fuel Level, Elec, 2400hm	82303		114876
Fuel Level, Elec, 730hm	82342		See accessories
Fuel Level, Elec, 900hm	82341		114876
Fuel Level, Elec, 2400hm, Pos Gnd	82353		114876
Fuel Level, Elec, 240Ohm, Mrn	82111		114876
Fuel Level, Elec, 2400hm	82386	82413	114876

2-1/16" & 2-5/8" Deluxe Oil Temperature Gauges	2-1/16"	2-5/8"	Sender/Kit
	Black	Black	If Required
Oil Temp, Elec, 100-280F, Mrn	82115		280ED-F
Oil Temp, Elec, 140-320F	82308		280EE-F
Oil Temp, Mech, 140-325F	82327-144		144" Tube Included
Oil Temp, Mech, 140-325F	82327-216		216" Tube Included
Oil Temp, Mech, 140-325F	82327-60	82410-60	60" Tube Included
Oil Temp, Mech, 140-325F	82327-72	82410-72	72" Tube Included
Oil Temp, Mech, 140-325F	82327-96	82410-96	96" Tube Included
Oil Temp, Elec, 140-320F, Pos Gnd	82352		280EE-F
Oil Temp, Elec, 140-320F, Metric	82390		280EE-F
Oil Temp, Mech, 140-320F, Metric	82395-144		144" Tube Included
Oil Temp, Mech, 140-320F, Metric	82395-72		72" Tube Included
Oil Temp, Mech, 140-320F, Metric	82395-96		96" Tube Included
2-1/16" & 2-5/8" Deluxe Water Temperature Gauges	2-1/16"	2-5/8"	Sender/Kit
	Black	Black	If Required
Water Temp, Elec, 100-240F	82306		280EA
Water Temp, Elec, 100-240F, Mrn	82114		280EA
Water Temp, Elec, 100-280F	82307		280ED-F
Water Temp, Mech, 100-265F	82326-48		48" Tube Included
Water Temp, Mech, 100-265F	82326-72		72" Tube Included
Water Temp, Mech, 100-265F	82326-96		96" Tube Included
Water Temp, Mech 100-265F	82326-144		144" Tube Included
Water Temp, Elec, 100-280F, Pos Gnd	82351		280EA
Water Temp, Mech, 100-265F	82409-144		144" Tube Included
Water Temp, Mech, 100-265F	82409-60		60" Tube Included
Water Temp, Mech, 100-265F	82409-72		72" Tube Included
Water Temp, Mech, 100-265F, Metric	82394-144		144" Tube Included
Water Temp, Mech, 100-265F, Metric	82394-72		72" Tube Included
Water Temp, Mech, 100-265F, Metric	82394-96		60" Tube Included
Water Temp, Elec, 100-240F, Metric	82389		280EC
2-1/16" & 2-5/8" Deluxe Voltmeter Gauges	2-1/16"	2-5/8"	Sender/Kit
	Black	Black	If Required
Voltmeter, Elec, 10-16V	82309		
Voltmeter, Elec, 10-16V, Mrn	82112		
Voltmeter, Elec, 10-16V	82391		
Voltmeter, Elec, 20-32V	82347		
2-1/16" & 2-5/8" Deluxe Ammeter Gauges	2-1/16"	2-5/8"	Sender/Kit
	Black	Black	If Required
2-1/16" Gauge, Amm, Elec, DLX, 30-0-30	82310		Internal Shunt
2-1/16" Gauge, Amm, Elec, DLX, 60-0-60	82311		Internal Shunt
2-5/8" Gauge, Amm, Elec, DLX, 60-0-60	82404		Internal Shunt
2-1/16" Gauge, Amm, Elec, DLX, 100-0-100	82313		Internal Shunt
2-1/16" Gauge, Amm, Elec, DLX, 100-0-100	82343		Requires Shunt
2-1/16" & 2-5/8" Deluxe Pyrometer Gauges	2-1/16"	2-5/8"	Sender/Kit
	Black	Black	If Required
Pyrometer, Elec, 300-1500F	82335		See accessories
2-1/16" & 2-5/8" Deluxe Trans Temperature Gauges	2-1/16"	2-5/8"	Sender/Kit
	Black	Black	If Required
Trans Oil Temperature, Elec, 150-350F	82344		280EE-F

2-1/16" & 2-5/8" Heavy Duty Oil Pressure Gauges	2-1/16"	2-5/8"	Sender/Kit
	Black	Black	If Required
Oil Pressure, Elec, 0-80psi	284AE		279A
Oil Pressure, Elec, 0-100psi	284L		114875
Oil Pressure, Mech, 5-100psi	284D		114840/114841
Oil Pressure, Mech, 10-200psi	284P		114840/114841
2-1/16" & 2-5/8" Heavy Duty Fuel Pressure Gauges	2-1/16"	2-5/8"	Sender/Kit
	Black	Black	If Required
Fuel Pressure, Mech, 0-15psi	284E		See accessories
Fuel Pressure, Elec, 0-16psi	284AM		See accessories
2-1/16" & 2-5/8" Heavy Duty Air Pressure Gauges	2-1/16"	2-5/8"	Sender/Kit
	Black	Black	If Required
Air Pressure, Elec, 0-150psi	284T		279C
Air Pressure, Mech, 5-100psi	284N		114840/114841
Dual-Air Pressure, Mech, 10-150psi	82331		114840/114841
2-1/16" & 2-5/8" Heavy Duty Boost Gauges	2-1/16"	2-5/8"	Sender/Kit
	Black	Black	If Required
Boost, Mech, 0-30/0-15, Red Pointer	284BF		114840/114841
2-1/16" & 2-5/8" Heavy Duty Vacuum Gauges	2-1/16"	2-5/8"	Sender/Kit
	Black	Black	If Required
Vacuum, Fuel Econ, Mech, HD, 0-30Hg	82301		T-fit & Hose Included
Vacuum, Mech, 0-30Hg	284AH		114842
2-1/16" & 2-5/8" Heavy Duty Fuel Level Gauges	2-1/16"	2-5/8"	Sender/Kit
	Black	Black	If Required
Fuel Level, Elec, 240Ohm	284M		114876
Fuel Level, Elec, 730hm	284BR		N/A
Fuel Level, Elec, 900hm	284BS		See accessories
2-1/16" & 2-5/8" Heavy Duty Oil Temperature Gauges	2-1/16"	2-5/8"	Sender/Kit
	Black	Black	If Required
Oil Temp, Elec, 140-320F	284K		280EE-F
Oil Temp, Mech,140-325F	284C144		144" Tube Included
Oil Temp, Mech, 140-325F	284C36		36" Tube Included
Oil Temp, Mech, 140-325F	284C72		72" Tube Included
2-1/16" & 2-5/8" Heavy Duty Water Temperature Gauges	2-1/16"	2-5/8"	Sender/Kit
	Black	Black	If Required
Water Temp, Mech, 100-265F	284B144		144" Tube Included
Water Temp, Mech, 100-265F	284B36		36" Tube Included
Water Temp, Mech, 100-265F	284B72		72" Tube Included
Water Temp, Elec, 100-230F	284AF		280EC
Water Temp, Elec, 100-280F	284J		280ED-F
2-1/16" & 2-5/8" Heavy Duty Voltmeter Gauges	2-1/16"	2-5/8"	Sender/Kit
	Black	Black	If Required
Voltmeter, Elec, 10-16V	284H		
Voltmeter, Elec, 20-32V	284AJ		
2-1/16" & 2-5/8" Heavy Duty Ammeter Gauges	2-1/16"	2-5/8"	Sender/Kit
	Black	Black	If Required
Ammeter, Elec, 60-0-60,	284A		Internal Shunt
Ammeter, Elec, 100-0-100	284AA		Requires Shunt
Ammeter, Elec, 150-0-150	284AD		Requires Shunt

2-1/16" & 2-5/8" Heavy Duty Pyrometer Gauges	2-1/16"		2-5/8"		Sender/Kit
	Black		Black		If Required
Pyrometer, Elec, 300-1500F	82334				See accessories
2-1/16" & 2-5/8" Heavy Duty Trans Temperature Gauges	2-1/16"		2-5/8"		Sender/Kit
	Black		Black		If Required
Trans Oil Temp, Mech, 20-300psi	284R				114840/114841
Trans Oil Temp, Mech, 25-400psi	284S				114840/114841
2-1/16" Wings Oil Pressure Gauges	2-1/16"	2-1/16"	2-1/16"	2-1/16"	Sender/Kit
	Black	White	Silver	Beige	If Required
Oil Pressure, Elec, 0-80psi	82474	82473			279A
Oil Pressure, Mech, 5-80psi	82476	82475			114840/114841
Oil Pressure, Elec, 0-80psi			82497	82530	279A
Oil Pressure, Elec, 0-80psi, Gld Bezel				82520	279A
2-1/16" Wings Air Pressure Gauges	2-1/16"		2-1/16"		Sender/Kit
	Black		White		If Required
Air Pressure, Mech, 10-150psi	82488		82487		114840/114841
2-1/16" Wings Boost Gauges	2-1/16"		2-1/16"		Sender/Kit
	Black		White		If Required
Boost, Mech, 0-30/0-40	82492		82491		114840/114841
2-1/16" Wings Fuel Level Gauges	2-1/16"	2-1/16"	2-1/16"	2-1/16"	Sender/Kit
	Black	White	Silver	Beige	If Required
Fuel Level, Elec, 900hm	82494	82493			See accessories
Fuel Level, Elec, 2400hm	82472	82471	82499	82532	114876
Fuel Level, Elec, 2400hm, Gld Bezel				82522	114876
Fuel Level, Elec, 730hm	82496	82495			N/A
2-1/16" Wings Oil Temperature Gauges	2-1/16"		2-1/16"		Sender/Kit
	Black		White		If Required
Oil Temperature, Elec, 140-320F	82490		82489		280EE-F
2-1/16" Wings Water Temperature Gauges	2-1/16"	2-1/16"	2-1/16"	2-1/16"	Sender/Kit
	Black	White	Silver	Beige	If Required
Water Temp, Elec, 100-240F	82478	82477	82498	82531	280EC
Water Temp, Mech, 100-265F	82480-144	82479-144			144" Tube Included
Water Temp, Mech, 100-265F	82480-72	82479-72			72" Tube Included
Water Temp, Mech, 100-265F	82480-96	82479-96			96" Tube Included
Water Temp, Elec, 100-240F, 2-1/16", Gld Bezel				82521	280EC
2-1/16" Wings Voltmeters Gauges	2-1/16"	2-1/16"	2-1/16"	2-1/16"	Sender/Kit
	Black	White	Silver	Beige	If Required
Voltmeter, Elec, 10-16V	82482	82481	82610	82533	
Voltmeter, Elec, 10-16V, Gld Bezel				82523	
2-1/16" Wings Pyrometers Gauges	2-1/16"	2-1/16"	2-1/16"	2-1/16"	Sender/Kit
	Black	White	Silver	Beige	If Required
Pyrometer, Elec, 300-1500F	82486	82485			See accessories
2-1/16" Wings Air Suspension Gauges	2-1/16"		2-1/16"		Sender/Kit
	Black		White		If Required
Air Suspension, Mech, 2-100psi	82484		82483		114840/114841
2-1/16" Power Series Oil Pressure Gauges	2-1/16"		2-1/16"	2-1/16"	Sender/Kit
	Titanium Ring		Burgundy Ring	Blue/Gray Ring	If Required
Oil Pressure, Elec, 0-80PSI	82756		82752	82760	279A
Oil Pressure, Mech, 0-80PSI	82759		82755	82763	279A

2-1/16" Power Series Fuel Level Gauges	2-1/16"	2-1/16"	2-1/16"	Sender/Kit
		Burgundy	Blue/Gray	
	Titanium Ring	Ring	Ring	If Required
Fuel Level, Elec, 240Ohm	82516	82515	82517	114876
2-1/16" Power Series Water Temperature Gauges	2-1/16"	2-1/16"	2-1/16"	Sender/Kit
	Titanium Ring	Burgundy Ring	Blue/Gray Ring	If Required
Water Temp Elec, 100-240F	82757	82753	82761	280EC
Water Temp, Mech, 100-265F	82843	82842	82844	72" Tube Included
2-1/16" Power Series Voltmeter Gauges	2-1/16"	2-1/16"	2-1/16"	Sender/Kit
	Titanium Ring	Burgundy Ring	Blue/Gray Ring	If Required
Voltmeter, Elec, 10-16V	82758	82754	82762	
2-1/16" Standard Fuel Level Gauges	2-1/32"	2-1/32"		Sender/Kit
	Black	White		If Required
Fuel Level, Elec, 2400hm	82211			114876
2-1/16" Standard Water Temperature Gauges	2-1/32"	2-1/32"		Sender/Kit
	Black	White		If Required
Water Temp, Mech, 100-250F, No Ltng	82210-144			144" Tube Included
Water Temp, Mech, 100-250F, No Ltng	82210-36			36" Tube Inculded
Water Temp, Mech, 100-250F, No Ltng	82210-48			48" Tube Included
Water Temp, Mech, 100-250F, No Ltng	82210-60			60" Tube Included
Water Temp, Mech, 100-250F, No Ltng	82210-72			72" Tube Included
2-1/16" Standard Pressure Gauges	2-1/32"	2-1/32"		Sender/Kit
	Black	White		If Required
Pressure, Mech, 0-50psi, no lighting	82207			114840/114841
Pressure, Mech, 5-80psi, no lighting	82208			114840/114841
Pressure, Mech, 5-100psi, no lighting	82209			114840/114841
2-1/16" Standard Ammeter Gauges	2-1/32"	2-1/32"		Sender/Kit
	Black	White		If Required
Ammeter, Elec, 30-0-30, No Lighting	82200			Internal Shunt
Ammeter, Elec, 20-0-20, No Lighting	82201			Internal Shunt
Ammeter, Elec, 60-0-60, No Lighting	82202			Internal Shunt
Six Gauge Box Kit ~ Deluxe	2-1/16"	2-5/8"		Sender/Kit
	Black	Black		If Required
6-Ga Kit Mech Speed, Elec Tach	82218			Senders Included
Three Gauge Box Kit ~ Deluxe	2-1/16"	2-5/8"		Sender/Kit
	Black	Black		If Required
3-Ga Panel, Mech, Voltmeter, Oil Pressure, Water Temp	873134			Tube kit included
3-Ga Panel, Elec, Voltmeter, Oil Pressure, Water Temp	873136			Senders Included
3-Ga Panel, Mech- Fuel Pressure, Oil Pressure, Water Temp		82221		Tube kit included
Two Gauge Box Kit ∼ Deluxe	2-1/16"	2-5/8"		Sender/Kit
	Black	Black		If Required
2-Ga Panel, Mech, Oil Pressure, Temperature	873135			Tube kit included
2-Ga Panel, Elec, Oil Pressure, Temperature	873137			Senders Included
Six Gauge Box Kit ~ Wings	2-1/16"	2-1/16"		Sender/Kit
	Black	White		If Required
6-Ga, Elec, Tach, Speedo, Volt, Fuel, Water Temp, Oil Press, Gas/Ign Appl	82223	82222		Senders Included
6-Ga, Mech, Tach, Speedo, Volt, Fuel, Water Temp, Oil Press, Gas/Ign Appl	82225	82224		Senders Included

Five Gauge Box Kit ~ Wings	2-1/16" 2-1/16"		2-1/16"	2-1/16"	Sender/Kit
	Black	White	Silver	Beige	If Required
5-Ga, Mech, Speedo, Volt, Fuel, Water Temp, Oil Pressure	82227	82226	82244	82243	Senders Included
5-Ga, Elec, Speedo, Volt, Fuel, Water Temp, Oil Pressure	82229	82228			Senders Included
5-Ga, Elec, Speedo, Voltmeter, Fuel, Water Temp, Oil Pressure, Gld Bezels				82230	Senders Included
Six Gauge Box Kit ~ Wings Diesel Application	2-1/16"		2-1/16"		Sender/Kit
	Black		White		If Required
6-Ga, Mech, Tach, Speedo, Volt, Fuel, Water Temp, Oil Press	82232		82233		Senders Included
Six Gauge Box Kit ~ Power Series	2-1/16"		2-1/16"	2-1/16"	Sender/Kit
	Titanium Ri	na	Burgundy Ring	Blue/Gray Ring	If Required
6-Ga, Elec, Tach, Speedo, Volt, Fuel, Water Temp, Oil Press, Gas/Ign Appl	82246		82245	82247	Senders Included
6-Ga,Mech, Tach, Speedo, Volt, Fuel, Water Temp, Oil Press, Gas/Ign Appl	82249		82248	82250	Senders Included
Five Gauge Box Kit ~ Power Series	2-1/16"		2-1/16"	2-1/16"	Sender/Kit
	Titanium Ri	ng	Burgundy Ring	Blue/Gray Ring	If Required
5-Ga, Elec, Speedo, Volt, Fuel, Water Temp, Oil Press	82252		82251	82253	Senders Included
5-Ga, Mech, Speedo, Volt, Fuel, Water Temp, Oil Press	82255		82254	82256	Senders Included
One Gauge Chrome Panel Kit ~ Standard	2-1/16"		2-5/8"		Sender/Kit
	Black		Black		If Required
Panel, Ammeter, Elec, 60-0-60	82212B				
Panel, Oil Pressure, Mech, 0-100psi	82213B				114840/114841
Panel, Temperature, Mech, 100-250F	82214B72				72" Tube Included
Two Gauge Chrome Panel Kit ~ Standard	2-1/16"		2-5/8"		Sender/Kit
	Black		Black		If Required
Panel, Ammeter, Oil Pressure, 60-0-60/100psi	82215B				114840/114841
Panel, Oil Press, Temperature, 100psi/100-250F	82216B				72" Tube Included
Three Gauge Chrome Panel Kit ~ Standard	2-1/16"		2-5/8"		Sender/Kit
	Black		Black		If Required
Panel, Ammeter, Oil Pressure, Temperature	82217B				114840/114841
Four Gauge Cluster					Sender/Kit
	5" Clusters				If Required
4-Ga, 5" Dia, Volt, Fuel Level, Water Temp, Oil Pressure	366ACY	366ACY 366ACY-1			114876
4-Ga, 5" Dia, Volt, Fuel Level, Water Temp, Oil Pressure,	OCCAPIL				114076
Wings Logo  Three Gauge Mini-Panel Cluster	366ADH  Panel				114876
Timee dauge Willistraties Oldstel		'h / 2"d			Sender/Kit  If Required
3-Ga Voltmeter, Water Temp, Oil Pressure	<b>4-1/8"w / 2"h / 2"d</b> 82459				Sdrs & Adptrs Included
Fuel Level Senders	82459 <b>LH</b>		RH		Notes
Sdr, Fuel Level, 240 Ohm, Adjustable	LH				Holes
Sdr, Fuel Level, 240 Ohm, 10-15"	439361-F		114876 439362-F		Stud Term
Sdr, Fuel Level, 900hm, 15.5-24"					Stud Term
Sdr, Fuel Level, 9001111, 15.5-24  Sdr, Fuel Level, Flange, Gasket, 5 Washers, 5 Screws	439363-D 439364-D 366LP-F			Gidd lellil	
oui, i uei Levei, Fidilige, Gasket, 3 Wasileis, 3 Sciews	SUULP-F				

Temperature Sender				Notes
Sdr, Tmp, Kit, 100-240°F, 1/8" NPTF, 5/8" Hex	280EA			adptrs: 1/4" 3/8" 1/2" PT
Sdr, Tmp, Kit, 100-230°F, 1/8" NPTF, 5/8" Hex	280EC			adptrs: 1/4" 3/8" 1/2" PT
Sdr, Tmp, Kit, 100-280°F, 1/8" NPTF, 5/8" Hex	280ED-F			adptrs: 1/4" 3/8" 1/2" PT
Sdr, Tmp, Kit, 140-320°F, 1/8" NPTF, 5/8" Hex	280EE-F			adptrs: 1/4" 3/8" 1/2" PT
Sdr, Tmp, 100-280°F, 1/8" NPTF, 5/8" Hex	334H-D			
Sdr, Tmp, 100-240°F, 1/8" NPTF, 5/8" Hex	362CZ-D			
Sdr, Tmp, Drain Plug, 1/2-20	280EH-F			UNF Threads
Pressure Sender				Notes
Sdr, Press, 15 psi 1/8" NPTF	114874			
Sdr, Press, 80 psi 1/8" NPTF	279A			
Sdr, Press, 100 psi 1/8" NPTF	114875			
Sdr, Press, 150 psi 1/8" NPTF	279C			
Speed Sensors				Notes
Sdr, Pulse, Hall Effect, 8 pulses per rev, 7/8"-18	114878			
Sdr, Speed, HALL ROTARY	82527			
Sdr, Press, 100 psi, 240-33.50hm	279B-F			1/8" PT Stud Term
Sdr, Press, 60 psi, 240-33.50hm	279D		1/8" PT Stud Term	
Misc. Accessories				Notes
Tach, Handheld, Cone Rubber Tip	96798			
Tach, Handheld, Cup Rubber Tip	96799			
Tach, Handheld, 12" Ext Shaft	412850			
Tach, Handheld, 3" Ext Shaft	412850-1			
Light Kit, 1/2", 12V, 1" Long Metal Socket, Two Wire	82550			
Light Kit, 1/2", 12V, 1" Long Metal Socket, One Wire	82551			
Light Kit, 5/8", 12V, 1" Long Plastic Socket, Two Wire	366SX			
Light Kit, 5/8", 12V, 1" Long Plastic Socket, One Wire	366SZ			
Light/Buzzer, Warning Kit, with 364L-F and 83307 Switches	366TJ			
Light Kit, 5/8", 12V, 1" Long Metal Socket, One Wire, Mntg Bracket	366CH			
Light Kit, 5/8", 12V, 1" Long Metal Socket, One Wire	366FK-F			
Light, Warning, 12VDC	420125-F			
Light/Buzzer, Warning	825104-D			

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