





GAUGES . TACHOMETERS . SPEEDOMETERS . FUEL PUMPS . HOUR METERS

STEWART-WARNER INSTRUMENTS

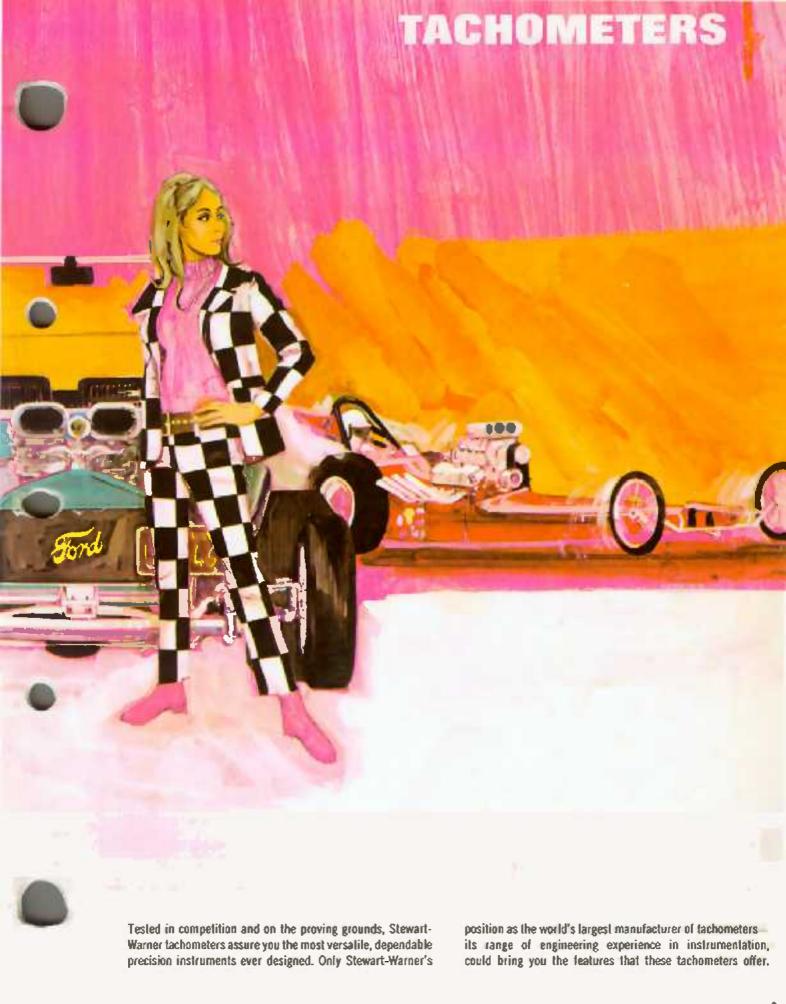
FOR PASSENGER CARS, TRUCKS, AIRCRAFT AND INDUSTRIAL USE



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ELECTRONIC TACHOMETERS



MODEL NO. 999-D 90° FACE DIAL



MODEL NO. 998-0 250° FACE DIAL

"E. T." SERIES STANDARD SIZE TACHS

These units offer the ultimate in luturistic appearance, and operate on any 4, 6 or 8-cylinder passenger car with 12-Volt ignition. They feature a simple 2-wire hook-up to facilitate installation, and feed directly off the ignition system. Because of their solid-state, electronic design, they have no internal moving parts to wear or get out of order, and will give years of trouble-free service. These Tachs utilize rugged, spring loaded, jeweled D'Arsonval movements which assure full-scale accuracy $\pm 2\%$ through entire meter range. Zener diode regulation eliminates the need for batteries or external senders for operation. These Tachs are temperature and voltage compensated to assure consistently accurate readings under widely varying operating conditions.

targe 3½" dia, cases feature equally spread calibrations for precise readings and easy legibility. Faces have contrasting white numerals, yellow accent graduations and fuminous fire orange pointers on a black background and can be read at a glance. Tachs are housed in tough Noryt? cases with Lexan* bezels that absorb shocks and impact. Cases are finished with satin chrome bezels and black suede Nextel* coaling. Integral indirect illumination floods the dials with soft, uniform Lunar Blue light for maximum visibility. Tach faces can be rotated within Tach head a full 350° for easiest readability. Pedestal mount can be mounted on steering column, above or below dash board, or on instrument panel.

DIAL RANGE	MODEL NO.	FACE TYPE
0-8,900 RPM	999-D	90° Sweep
0-8,000 RPM	998-D	250° Sweep

ELECTRONIC TACHOMETERS



MODEL NO. 999-C



MODEL NO. 998-C 250° FACE DIAL

"E. T." SERIES COMPACT SIZE TACHS

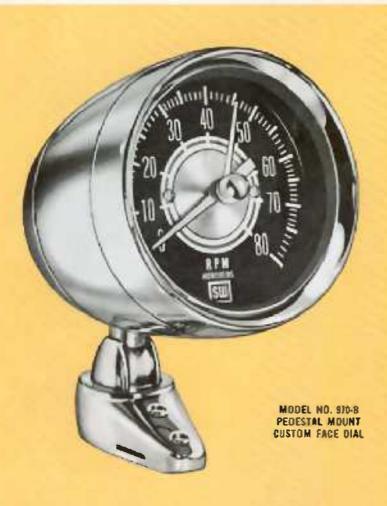
These precision Tachs combine sleek, modern styling with high accuracy and dependability. Use in any 4, 6, or 8-cylinder car having 12-Volt positive or negative ground ignition. Two wire hook-up makes installation easy—eliminates battery drain as Tachs operate directly off the ignition, Solid-state electronic mechanisms have no internal moving parts, assuring years of trouble-free dependable service. Jeweled D'Arsonval movements allow full scale accuracy $\pm 3\%$ through entire meter range. Zener diode regulation needs no external senders or batteries for operation, Temperature and voltage compensation assure consistently accurate readings under widely varying operating conditions.

Linear sweep faces have equally spaced calibrations for precise readings at a glance. White numerals, yellow accent graduations and fire orange pointers stand out sharply from black background, 3" diameter Noryl* cases Lexan* bezets withstand shock and are resistant to scuffs and abrasion. Non-reflective satin chrome bezels add a custom louch. Integral indirect Lunar Blue illumination provides uniform tight for maximum night readability. Tach faces can be swiveled in head a full 360°, allowing face to be precisely positioned for optimum visibility. Pedestal may be mounted on steering column, above or below dash board, or on instrument panel.

DIAL RANGE	MODEL NO.	FACE TYPE
0-8,000 RPM	999-C	90° Sweep
0-8,000 RPM	998-C	250° Sweep



ELECTRONIC TACHS



970-B TACH

The 970-B Tach provides fast, accurate readings under any operating conditions. Fully transistorized, solid state circuitry resists shock and vibration. Electronic taps permit use with 4 6, or 8 cylinder engines.

The handsomely designed 31/6" Custom face dial can be positioned for maximum readability by rotating the unique pedestal assembly. Pedestal mount sweeps a full 360° in all planes. Special coated ring floods the dial with uniform "Eunar Blue" light, minimizing glare and reflection. Dial range is 0-8000.

For use with 12 volt, negative ground ignition systems only, ignition monitor is required. See chart on page 7 for proper application and monitor.

"960" SERIES ONE-PIECE TACHS

The 960 Series one-piece electronic Tachs are designed for 6 and 8 cylinder, 4 cycle gasoline engines with standard 12 volt negative ground ignition systems. The "969" is fully transistorized and features Zener Circuitry that eliminates all batteries and relays. NO SENDER IS REQUIRED. Its case is rust-resistant steel, 3¾" in drameter. Black and White face dials have white pointer, Custom face dial has red pointer, Light kit included. For top of dash or steering-post mounting use Mounting Kit No, 366-MS.

Dial Range	Cylinders	Face Dial	Model No.
0-5900	6	Black & White	960-BD
0-5000	8	Black & White	960-BE
0-8000	8	Black & White	960-BF
0.8000	8	Custom	960-AA

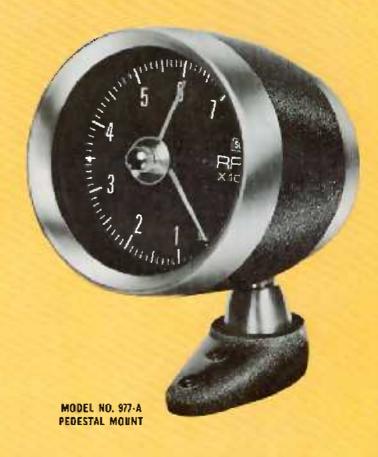


ELECTRONIC TACHS





FOR IN-PANEL MOUNTING



"977" SERIES TACHS

The "977 Tach" incorporates the latest engineering improvements to provide fast, accurate readings under all conditions. Fully transistorized, Solid State circuitry provides greater shock and vibration resistance. The patented moving coil

mechanism is the most rugged ever designed. Electronic taps permit instant change to 4, 6, or 8 cylinder applications. The 3% dia, face dial arrangement is preferred by the world's teading race car drivers. The shift point is always top-dead center for quick, accurate reading. Unique pedestal head assembly rotates to any desired shift position. Face dials are black with white numerals. Yellow pointer on black dial provides maximum readability at all times. Models 977-A and 977-B have black wrinkle linish cases with brushed chrome trim. Model 977-J pedestal mounted Tach has case entirely of chrome plate. Special coated ring floods the dial with uniform, soft "Lunar Blue" light that cuts glare and reflection. Exclusive, versatile pedestal mount sweeps a full 360° in all planes. Choice of universal Pedestal Mount or inpanel mount. For use with 12 volt, negative ground ignition systems only. Note: 977 Series Tachs require use of an igni-tion monitor. See chart for proper monitor and application

DIAL RANGE	PEDESTAL PART I	IO. PANEL
0-7,000 RPM	977-A	_
0-8.000 RPM	977-J	977-M
0-9,000 RPM	977-8	_



IGNITION MONITORS for 977 and 970 Series Tachs

Ignition Type	Monitor	Ignitian Type	Monitor
Standard Battery Ignition	990-8		
Autolite Transistor	990-A	Mallory Rev Pol	990-B
Cragar "Power Pack" CO	*990-D	Mallory "Super Mag"	*990-0
Delco Remy Transistor	990-A	Mallory T12-NA	990-A
Delcotronic CD	4990-D	Motorola	990-A
Delta "Mark X" CD	*990-D	Prestotite CD-65	•990-0
Gregg €0-12N	*990-D	Prestolite 250 Transistor	990-A
Holley TP-1 Transistor	990-A	Schiefer Magneto	990-D
Leece-Neville Transistor	990-A	**Spaulding	930-B
Mallory CD	*990-D	Vertex Magneto	*990-D
Mallgry-Mini-Mag	990-A	Wice Transistor	990-A

*Adjustable monitor for either magneto **Use 4 cylinder terminal with or capacitor discharge ignition systems.

8 cylinder engine.



ELECTRIC TACHS







MODEL NO. 813929 COMPACT TACHOMETER



MODEL NO. 388-MS MOUNTING CUP

STANDARD AND COMPACT TACHOMETERS

An accurate, dependable, easy to install electric tachometer for 2-cycle and 4-cycle engines. Fits standard ignitions and the more popular transistor, capacitor discharge and magneto ignition systems. Simple 2 wire installation permits ease of installation. The stordy D'Arsonval meter movement is housed in a weather-proof, magnetic-shielded case. Custom face dial only. Bright chrome bezels. Internal lighting, with terminals, socket and 12V bulb included in kit. Standard and Compact tachometers are identical in construction. The Standard Tachometer has a 3%" dia. case. The Compact Tachometer has a 2%" dia. case.

MODEL NUMBERS

Dial Range	Standard	Compact
0-6000 RPM	432967	813244
0-8000 RPM	429370	813929
0-10,000 RPM	810750	

"V" Series Senders for Standard and Compact Meters

"V" Series Senders. Models are available for standard 6V or 12V ignition systems as well as transistor, capacitor discharge and magneto ignition systems. Compact size permits the sender to be mounted on a Standard Meter inside a 356-JH mounting cup. All models can be used on remote or dual meter installations. All models fit either positive or negative ground installations.



STANDARD V-TYPE SENDERS (4 Cycle, 6 or 12 Volts, Negative or Positive Ground, Ignition Systems)

Number of		
Cylinders	Part No.	Ignition Systems
8	819891	Standard, Transistor, Capacitor Discharge
δ	819892	Standard, Transistor, Capacitor Discharge
4	819893	Standard Transistor Capacitor Discharge
8	819894	Magneto

8 Cylinder Application Chart for Transistor, Capacitor Discharge and Magneto Ignition Systems

System	Part No.	System	Part No.	System	Part No.
Autokte	819891	Judson	819891	Presidite 201, 250, CD-65	819891
Delco	819891	Mattery Double Life	819891	Schiefer	819894
Delcotronic	819891	Mailory Mini-Mag	219894	Sonbila	819894
Delta C-D	\$19891	Mattery Rev-Pol	429377	Spaulding (Grant)	819893
DuCoil	819891	Mattery Super Mag	819894	Tung-Sol El-5	819891
Holley	819891	Mallory T-12NA	819891	Yertex (Ronco)	819894
Hunt Magneto	819894	Motorola C-D	819891	Wico	819891

CHROME CUP MOUNTING KITS FOR TACHOMETERS

NO. 366-JH

Chrome cup mounting kit for instrument with case measuring 3½" diameter and not more than 2" from back of bezel to back of case (including studs). Preferred when instrument is to be mounted on top of dash.

NO. 366-MS

Chrome cup mounting kit. Same as No.

366-JH except with a desper cup that will hold instrument measuring not more than 3" from back of bezel to back of case (including studs).

NO. 368-MP

Chrome cup mounting kit. Same as No. 366-JH except with cup for instruments with case measuring 2%" diameter and not more than 2" from back of bezel to back of case (including studs).

NO. 366-FR

Kit for mounting any 3%" dia case instrument on steering column or on top of dash, Consists of a black zinc chromated formed clamp to hold the instrument; a black aluminum base; an adjustable metal strap and necessary screws, nuts, etc.

NO. 366-JF

Mounting kit. Same as No. 366-FR for 25/8" case diameter instruments.

MECHANICAL TACHS





Na. 551-SE



No. 551-WC



No. 551-SH



No. 551-\$J

MECHANICAL TACHOMETERS

These Mechanical Tachometers are designed to be used on engines with built-in tachometer take-offs, and meet or exceed OEM specifications for replacement on trucks, industrial engines, and high performance cars.

Tachometers incorporate 334° dia., rust resistant, steel cases and are equipped with panel mounting brackets and hole in back of case to hold built for lighting. Shaft connection is straight-out with 36° 18 external thread and .105" square hole.

Model Nos. 551-SE, 551 SF, 551-WB, and 551-WC have black face dials with white numerals, white pointers, and non reflective Satin Chrome bezels. Model Nos. 551-SH, and 551-SI have black face dials, with white numerals, fire orange pointers, and bright chrome bezels.

MODEL NUMBERS

		TIO	

Dial Range	No Odometer	With Odometer	Bezel
0-3500 RPM	551-SE	551-\$F	Satin-Chrome
0-5000 RPM	551-SH		Bright-Chrome
0-8000 RPM	551-SI		Bright-Chrome
1:1 CALIBRATION			
Dial Range	No Odometer	With Odometer	Bezel
0-3500 RPM	551-WB	551-WC	Satin-Chrome

HEAVY DUTY MECHANICAL TACH

This regged Mechanical Tachometer is designed for competition cars, motor-cycles and drag boats. It is engineered to out-last and out-perform all other types of mechanical tachometers. Rust-Resistant steel case measures 3½" dia. Accuracy and reliability under all operating conditions are assured by these integral construction features: Lodex magnet with heavy duty hauspring assures pointer stability at high speeds and extreme vibration; paddle wheel damping prevents needle fluctuation and assures smooth pointer response; special "Certified Calibration" for accuracy within $\pm 1\%$ at every RPM speed. In addition, the 535-AH leatures an easy-to read "Competition" face dial with adjustable red-line indicator.

Calibration is 2:1 straight out shaft connection with 1/6"-18 external thread and .105" sq. hole.

DIAL	RANGE
0.90	MOD NO

PART NO. 535-AH





Available in two face dia1 sizes: 2½ " dia., 4½ " dia. Face dial marking made to order.

INDUSTRIAL TACHOMETERS

Stewart-Warner Industrial Tachometers are used to control the speed of production machines so as to obtain maximum output consistent with quality of product. If the speed of the machine is variable and controllable, only a tachometer can supply the information that makes control possible. Even on a machine with a constant speed electric motor a tachometer is frequently installed in order to detect variations in speed that might indicate malfunction and a need for corrective action. A tachometer can be installed on any machine where a drive shaft is accessible, Face dials are black with white numerals and pointer. Dials read in RPM but can be printed to show rate of production—Feet per minute, Gallons per hour, etc., depending upon the product. Replacement tachometers for existing installations may be had by ordering (See Catalog No. 1130.) On new installations, call your S-W Representative who will be glad to work out the proposal for you.



SPECIAL PURPOSE TACHS



MOTORCYCLE TACHOMETERS

The Stewart-Warner one piece electronic motorcycle tach is designed for use on all standard, 6 or 12 volt positive or negative ground battery ignition systems and most transistorized ignition systems. Both models feature the popular 12,000 R.P.M., easy to read, 25/2" diameter custom face dial mounted in a shock-proof, vibration resistant chrome cup that insures greater accuracy and longer life. The exclusive universal mounting device fits all Honda models, all Suzuki models, all Yamaha models and most other popular motorcycles. Installation is easy. Complete instructions are included with each tachometer

APPLICATION CHARTS*

APPLICATION—Honda, Suzuki, Yamaha	TACH MODEL NUMBER
Honda Models: S-90, CB 72, CB-77, CL 72, CL-77, CB-450	819890
All Other Honda Models	B)9849
All Syzoki	819889
All Yamaha	819389
OTHER MOTORCYCLES AND APPLICATIONS	
1 Cylinder, 2 cycle	819889
2 cylinder, 2 cycle with dual coils and dual points	519889
1 cylinder, 4 cycle with spark produced every revolution	B19B29
1 cylinger, 4 cycle with one spark produced every two revolutions	819890
2 cylinder, 4 cycle with single coil distributor ignition	819883
2 cylinder, 4 cycle with dual points and dual coils, with spark	
produced every revolution	819889
2 cylinder, 4 cycle with dual coils and dual points with one spark	
produced each two revolutions in each cylinder	819890



Dial Range Meter No. 6-3000 RPM 811531 0-5000 RPM 812831



FOR DIESEL TACHOMETERS PART NO. 811532 includes .187* Drive Trp No. 811533 and installation Instructions.

DIESEL TACHOMETERS

These tachometers are for use with diesel engines or any engine equipped with a built-in tachometer take-off. The Meter is similar to the Meters in the "Standard" tachometer line, except for the range of the dial scale. Meter is calibrated for engine take-off operating at half engine speed, clockwise or counter-clockwise rotation. For other take off speeds appropriate Ratio Cartridges are available. The heavy-duty Sender is fully sealed and it is constructed to withstand severe vibration. The Sender generates the electrical impulses that actuate the Meter. Battery current is required only for lighting. Sender has ½" internal thread connection with .187" Drive Tip and attaches directly to engine take-off. Installation requires use of both Meter and Sender. Two meters can be run off single sender.



Diameter Part No. 152" 811535 187" 811533 .203" 811536



1.5:1 2.05:1

RATIO CARTRIDGES
Tach Take-Off/Engine RPM
Ratio Part No.
1.1 811537

811538

811539



EXTENSION SLEEVE
For some GM, Mack and other applications. 2½ " long. Consists of Steeve No. 103402 plus appropriate clutch.

Description	Part No.
Steeve only	103402
152" Clutch for GM	814011
.187° Clutch	814012
.203" Clutch for Mack	814013

PORTABLE TACHOMETER

Stewart-Warner's Portable Tachometer measures shaft speeds instantly—accurately—from 100 to 4,000 R.P.M., clockwise or counter clockwise rotation. Can be used whenever end of shaft is accossible. No watch or counter needed—just press tachometer



tip against end of shalt and read revolutions per minute on face dial. Strongly constructed to withstand hard usage. Durable steel case has fine-grain, black-wrinkle finish. Face dial cover glass is set in cork gasket and bezel is pressed on to make a dustproof, waterproof seal. Comes with Cone Tip No. 96798 for shalts with center hole; Cup Tip No. 96799 for shafts with flat or convex end. Packed in screw-top metal can that is suitable carrying case.

EXTENSION SHAFT

Available as an accessory is a 12" exlension shaft for getting at hard-toreach points. Part No. 412850.



CUP TIP CONE TIP 196799 #96798

-



small sizes, choice of face dials, perfectly matched instruments.



PRESSURE GAUGES









BLACK & WHITE FACE

CUSTOM FACE

Mechanical gauges have center-gear bourdon tube mechanisms which provide 270° sweep of pointer for the most accurate readings. Electric gauges have electro-magnetic mechanisms for instantaneous reading. Electric gauges are recommended where engine and control panel are more than 20 feet apart. Brass case gauges (except 360-BX and 360-EK) have windows for 366-CH Light Kit. 360-BX, 360-EK and aff steel case gauges have chimneys with light kit provided.

DELUXE GAUGES-2-1/16" Dia. Case

	BLACK & WHI		TE FACES	s I	CUSTOR	FACES
TYPE & RANGE	STEEL		BRASS		BRASS	
	MECH.	ELECT.*	MECH.	ELECT.*	MECH	ELECT,
FUEL 0-10 lbs.	360-HY**	_	_	-	-	
FUEL 0-30 lbs.	360-HZ		_	-	-	8_
FUEL 0-200 lbs.	360-JE	_ /	_		1_	_
OIL	360 JB	306-DC (12V)	360-AD	30E-G (12V)	360-08	306-BB (12V)
0-80 ibs.				385-B (6V)		
01L 0-100 lbs.	360-JC	305-DD (12V)	360-A	-	360-DP	_
01L 0-200 lbs.	360-10		_	_	_	_
ORIVE OIL 0-300 lbs.	p _i ,		360-BM		_	_
DRIVE OIL 0-400 lbs.	_		360-Es		_	_
MANIFOLD 0-30 lbs.	360-JA		_	_	_	_
AIR 0-150 lbs.	380-DE	_		_	***	_

es 90° pointer sweep.

*Note: Select electric gauge senders described below





BLACK & WHITE FACE

CUSTOM FACE

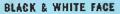
Rugged diaphragm mechanism is built to withstand severe vibration and overload conditions. Perfect for automotive use where 90° face dial is preferred, and for industrial engines. farm tractors or other applications where dust, vibration or rough treatment are expected. Models with windows back of bezels for indirect lighting require Lighting Kit No. 366 CH.

UTILITY GAUGES-2-1/32" Dia. Case

TYPE & RANGE	BLACK & WHITE FA				
TEPE & NAME	LIGHT	NO LIGHT	LIGHT	NO LIGHT	
FUEL 0-10 lbs.	352-DA	_	_	-	
OTL 0-50 lbs.	-	352-AT	_	_	
OIL 0-80 lbs.	352-CX	352-AW	352-EJ	_	
OIL 0-100 lbs.		352-AY	_	The	









CUSTOM FACE

RACING GAUGES-2-5/8" Dia. Case

Racing gauges also feature centergear bourdon-tube mechanisms which provide 270° sweep of pointer for the most accurate readings. Preferred where fast, easy reading is required. Chimneys for internal lighting require Lighting Kit No. 366-FK.

TYPE & RANGE	BLACK & WHITE FACES	CUSTOM FACE
FUEL 0-10 lbs.	367-B	_
01L 0-100 lbs.	691-08	691-L
01L 0 150 lbs.	691-DB	_
AIR 0-150 lbs.	691-FB	_
	*368-P	

"w/warning light 31/4" dia. case.

INSTALLATION KITS (for mechanical pressure gauges)

Mechanical pressure gauges have 1/4" external P.T. connection on back of gauge. For making installation, use Kit No. 366-FF or 366-HM

Kit No. 366-FF. Consists of: Six (6) feet of ¼" nylon tubing; couplings with ¼" internal P.T.; coupling with ¼" external P.T.; adapter for ½" P.T. oil gallery.

Kit No. 366-H M. Same as No. 366-FF except has sixteen (16) feet of tubing for rear-engined cars.

ELECTRIC GAUGE SENDERS

Gauge No. 305-B requires Sender No. 353 E.
Gauge Nos. 306-6, 306-88, 306-00 require Sender No. 353-2.
Gauge No. 306-DD requires Sender No. 353 S.
For 24V systems use 12V gauge plus No. 428989 Resistor.
For 32V systems use 12V gauge plus No. 417813 Resistor.

TEMPERATURE GAUGES











BLACK & WHITE FACE

CUSTOM FACE

Mechanical gauges have center-gear bourdon-tube mechanisms which provide 270° sweep of pointer for the most accurate readings. Electric gauges have electro magnetic mechanisms for instantaneous reading. Electric gauges are recommended where engine and control panel are more than 20 feet apart. Available with either Brass case or Steel case. Brass case gauges have windows for lighting (Kit 366-CH). Steel case gauges have chimneys with light kit provided.

DELUXE GAUGES-2-1/16" Dia. Case

		8	LACK & WI	HTE FACES		CUSTO	M FACES
	PE &	STI	EEL	BA	ASS	BRA	455
R/	NGE	MECH.	ELECT.	MECH.	ELECT.	MECH.	ELECT.
			1000000	361-L	310-F	361-AT	311-CC
	ATER				(6V)		(12V)
60	°-240°			_	311-W	_	_
					(12V)		
	ATER		311-HH	_	_	_	eren-
100	°-240°		(12V)				
	ATER 9-2509	361-CB	_			_	
		361-CC	311-HJ (12V)	361-A	311-R (12V)	361-BB	311-CF
	DIL		(TCA)				(12V)
100	°-270°	_			310-D (6V)		
	01L ° 325°	_	313-HX+ (12V)	- MARK	=/	_	_
100	252		(12.1)				

^{*}Requires Temp. Sender No. 362-AA

NOTE: All Electric Temperature Gauges above require Temperature Senders below.





BLACK & WHITE FACE

CUSTOM FACE

Rugged diaphram mechanism is built to withstand severe vibration and overload conditions. Perfect for automotive use where 90° face dial is preferred, and for industrial engines, larm tractors or other applications where dust, vibration or rough treatment are expected. Models with windows back of bezels for indirect lighting require Lighting Kit No. 365 CH.

UTILITY GAUGES-2-1/32" Dia. Case

	BLACK & Y	HITE FACES	CUSTO	M FACES
TYPE & RANGE	LIGHT	KO LIGHT	LIGHT	NO LIGHT
WATER	356-BW	356-AJ	356 CX	_
100°-250°	-	*366-C (For R	adiator Hose	Connection)

^{*48&}quot; lubing





BLACK & WHITE FACE

CUSTOM FACE

RACING GAUGES-2-5/8" Dia. Case

Racing gauges also feature center-gear bourdon-tube mechanisms which provide 270° sweep of pointer for the most accurate readings. Preferred where fast, easy reading is required. Chimneys for internal lighting require Lighting Kil No. 366-FK.

A STANGE	BLACK & WHITE FACES	CUSTOM FACES
WATER 100°-250°	692-E	692-H
OIL 100°-325°	442057	_

TEMPERATURE GAUGE ADAPTER NUTS FOR MECHANICAL GAUGES

Outside	Mis,	Part
Thread	1.0.	No.
*¼ * P.T.	.3860*	428819 (Steel)
%" P.T.	4375*	408550 (Brass)
35" P.T.	4375*	72446 (Steel)
₩* P.T.	.4375*	90567 (Brass)
1/2" P.T.	.5000*	412268 (Brass)
664-18	4531*	95527 (Brass)

"For tubing less than 120" in longth.

TEMPERATURE SENDERS FOR ELECTRIC GAUGES

		FOR ON			SEMBERS	2501	R TWO	GAUGES
ë.T.	Volts	Parl No.	P.T.	Valls	Part No.	P.T.	Valla	Parl Ne.
36"	12Y	352-C2	4*	12V	362-AJ	14*	12V	362-BD
14"	6V	362-AM	15"	6V	352-1	7/1	129	362-BC
34"	12Y	362-AN	195"	12V	362-AH	14"	12V	362-BB
16°	69	352-8	**15"	127	362-AA			
*Note	: Two g	iuges must b	e naeg w	ith these	aenders			

**For No. 311-HK (100° to 325°)

FOR 24V SYSTEMS USE 12V GAUGE WITH NO. 428989 RESISTOR. FOR 32V SYSTEMS USE 12V GAUGE WITH NO. 417813 RESISTOR.



FUEL LEVEL GAUGES



BLACK & WHITE FACE



CUSTOM FACE

Heavy-duty electro-magnetic mechanisms for fast, instantaneous reading. Steel case gauges have chimneys for lighting with lighting kit provided. Brass case gauges have windows for lighting and require Lighting kit No. 366-CH.

DELUXE GAUGES-2-1/16" Dla. Case

TYPE & RANGE	BLACK & W	HITE FACES	CUSTOM FACE
ITE & KANDE	STEEL	BRASS	BRASS
FUEL E-1/2-F (12V)	301-CP	301-н	301-AW
FUEL E-V/-F (6V)	_	300-B	_



BLACK & WHITE FACE



CHSTOM FACE

Rugged thermo-electric mechanism provides accurate readings under vibration conditions encountered in off highway operation. Only custom gauge has windows for lighting. Use Lighting Kit No. 366-CH.

UTILITY GAUGES-2-1/32" Dia. Case

	BLACK & WHITE FACES	CUSTOM FACE	
YPE & RANGE	(NO LIGHT)	(WITH LIGHT)	
FUEL E-13-F (12V)	378-P	378-8H	
FUEL E-1/2-F (6V)	365-X	_	



BLACK & WHITE FACE



CUSTOM FACE

Heavy duty electro-magnetic mechanism for last, accurate readings on large lace dial. Chimney for lighting Use Lighting Kil No. 366-FK.

INSTALLATION

Every electric fuel level gauge requires a sender or tank unit in the gasoline lank. List of Senders or Tank Units is shown below. When installing a new sender, use Installation Kit. No. 366-LP which consists of the following. 1—No. 93310 Flange, 1—No. 72030 Gaskel: 5—No. 81463 Washers; 5—No. 79295 Screws.

RACING GAUGES-2-5/8" Dia. Case

TYPE & RANGE	BLACK & WHITE FACES	CUSTOM FACE
FUEL E-14-F (12V)	616-B	616-E
FUEL E+15-F (6V)	615-A	

FOR 24V SYSTEMS USE 12V GAUGE WITH NO. 428989 RESISTOR FOR 32V SYSTEMS USE 12V GAUGE WITH NO. 417813 RESISTOR

Mote: All Fuel Level Gauges above require Fuel Level Senders below.

FUEL LEVEL SENDERS FOR ELECTRIC GAUGES



Description

10"-15" depth; LM arm 10"-15" depth; RM arm 15% "-24" depth; 1 M arm 15% "-24" depth; RM arm 6-Volt 12-Volt 380-TF 391-A 390-TG 391-B 391-C 380-TJ 391-D



FOR 6"-12" DEPTH

 Description
 6-Volt
 12-Volt

 6*-12* depth; LH arm
 384-B
 385-B

 6*-12* depth; RH arm
 384-C
 385-C

FOR 10"-24" DEPTH NOTE: For new Installations of a Fuel Level Sender (Tank Unid), order Installation Kit No. 366-LP which contains the following parts: 1—No. 93310 Flarge, 5—No. 7795 Screws, I—No. 77030 Gashel, 5—No. 61463 Washers.

AMMETERS · ALTERNATOR GAUGES VOLTMETERS · VACUUM GAUGES











BLACK & WHITE FACE

CUSTOM FACE

Extra heavy-duty electro-magnetic mechanism with internal shunts provide accurate readings. Steel case gauges (except 375-T and 348 F) have chimneys with light kit provided. 375-T, 348-F, and all brass case gauges have windows for 366-CH Light Kit.

DELUXE GAUGES—2-1/16" Dia. Case

TYPE & RANGE	BLACK & W	HITE FACES	casto	M FACES
	STEEL	BRASS	STEEL	BRASS
AMPS 30-0-30	359-EM	359-1	_	-
AMPS 60-0-60	359-EN	350 M	4	359-00
AMPS 60-0-60	_	⊒37-A*	-	_
AMPS 100-0-100	369-AX	369-C		-
AMPS 100-0-100	_	377-B**	_	-
ALT. 60-0-60	359-CT	_	359-CW	_
YOLTS 11-15	375-AL	-	375-T 348-F (TH	ERMAL)

^{*}Requires remote short No. \$13489.





BLACK & WHITE FACE

CUSTOM FACE

Heavy-duty electro-magnetic mechanism with internal shunts. For automotive use and for industrial engines, farm tractors and other applications where dust, vibration or rough treatment are expected. Available with or without windows for lighting. For lighting use Kit 366-CH

UTILITY GAUGES-2-1/32" Dia. Case

TYPE & RANGE	BLACK & WHITE FACES		GUSTOM FACES	
FIFE & NAMUE	LIGHT	NO LIGHT	LIGHT	NO LIGHT
AMPS 20-0-20		357 W	_	_
AMPS 30 0-30	357-08	357 N	357-DN	_
AMPS 60-0-60	35/-81	357-X	357-DP	_





BLACK & WHITE FACE

CUSTOM FACE

RACING GAUGES-2-5/8" Dla. Case

Extra heavy-duty electro-magnetic mechanism with internal shunts. Large face dial provides fast easy reading. Chimney for lighting. Use Lighting Kit 366-FK.

TYPE 1 RANGE	BLACK & WHITE FACES	CUSTOM FACES
AMPS 30-0-30	690-B	-
AMP\$ 60-0-60	690-C	690 - J







BLACK & WHITE FACE

VACUUM GAUGES

DELUXE GAUGES-2-1/16" DIA. CASE

Heavy-duty center-gear bourdon-tube mechanism provides accurate reading on 90° scale. Steel case gauges have chimney for lighting with light kit provided. Brass case gauges have window for lighting. Use Eighting Kit No. 366-CH.

RACING GAUGES-2-5/8" DIA. CASE

Heavy duty center-gear bourdon-tube mechanism provides accurate reading on 270° scale. Preferred for fast reading. Chimney for lighting. Use Lighting Kit No. 366-FK.

	BLAC	& WHITI	FACES	CUSTON	FACES
	DEL	UXE	RACING	DELUXE	RACING
DIAL RANGE	STEEL	BRASS		BRASS	
0-30" VACUUM	355-BM	355-A	355-B	355 AP	355-R

NOTE. Vacuum gauges have ½° external P.T. connection on back of gauge. Use installation Kit No. 365-FF for front-engined cars: Kit No. 366-RM for rear engined cars.

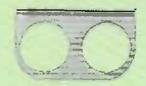


MOUNTING PANELS

STRIPED CHROME PANELS



No. 811658—For 2½2" or 2 ½6" Ga. No. 428122-2—Black finish No. 811659—For 2½" dia. gauge.



For 21/42" or 21/4" dia, gauges. No. 811196-With bracket for lighting.

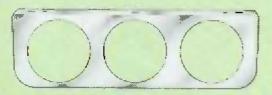
BRIGHT CHROME PANELS



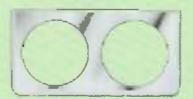
No. 817825 For 21/2" and 21/16" dia. gauges.



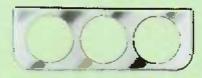
No. 814143-For 21/2" or 21/46" dia. gauges. Bracket for lighting.



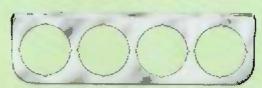
No. 813642-For 25/8" dia. gauges.



No. 813877-For 21/4" dia, gauges.



For 21/2" or 21/4" dia, gauges, No. 811653-Brackets for lighting.



For 21/4" or 21/4" dia gauges. No. 813878—Brackets for lighting.

INSTALLATION KITS

No. 366-FF-For installing mechanical oil pressure gauges and vacuum gauges with 1/4" p.t. connection.

CONTENTS OF KIT

- A. Coupling with 1/4" Int. P.T.
 B. Six (6) feet 1/4" Nylon tubing.
 C. Coupling with 1/4" Ext. P.T.
 D. Adapter for 1/4" P.T. oil gallery.
 E. Instruction sheet

No. 366-HM - Same as No. 366-FF except with 16' of tubing for rear engine cars.

LIGHTING KITS

No. 366-CH—For use with instruments having windows for indirect lighting. Consists of 12" single wire lead with light socket and 12V bulb, and bracket which attaches to stud on back of instrument.

No. 366-FK-Same as No. 366-CH except without bracket.

No. 419046-Two-wire light socket.

PACKAGED GAUGE KITS





These counter display packages include panel, gauges, lighting kits, oil pressure gauge installation kit (when required) and installation instructions.

No. 366-JL. Consists of an Ammeter and Oil Pressure Gauge enclosed in a plastic case. Includes No. 366-FK Lighting Kit.

No. 366-JM. Consists of No. 811196 Panel, No. 357-8L Ammeter, No. 352-CX Oil Pressure Gauge, No. 366 FK Lighting Kit, No. 366-FF Installation Kit.

No. 366-ML. Consists of No. 817825 Panel, No. 357-DP Ammeter.

No. 366-MM. Consists of No. 817825 Panel, No. 352-EJ, Oil Pressure Gauge, No. 366-FF Installation Kit.

No. 366-MN. Consists of No. 817825 Panel, No. 356-CX Water Temperature Gauge.

No. 366-MK. Consists of No. 814143 Panel, No. 357-DP Ammeter, No. 352-EJ Oil Pressure Gauge, No. 366-FF Kit, No. 366-FK Kit.

No. 366-MJ. Consists of No. 811653 Panel, No. 357-DP Ammeter, No. 352-EJ Oil Pressure Gauge, No. 356-CX Water Temperature Gauge, 366-FF Kit, two No. 366-FK Kits.



SAFETY PANELS



MODEL 524-DF

CONTINUOUS PROTECTION AUTOMATIC OPERATION ...

For the protection of unattended or remotally controlled internalcombustion engines on Irrigation Pumps, Oil Rigs, Generator Sets, Air Compressors, Fork Lift Trucks, Refrigeration Machines, Air Conditioners, etc.

MODEL 524-DF FOR BATTERY IGNITION AND DIESEL

Model 524 DF Safety Panel consists of the following: one No. 444446 Safety Oil Pressure Gauge; one No. 442412 Safety Water Temperature Gauge with 48", 72", or 144" tubing (specify length); one No. 357-N Ammeter; one No. 420711 Stop Switch & Re-Set; one No. 421015 Fuse, installed in a weatherproof steel case with hammered aluminum finish. Complete wiring diagram and operating instructions.



MODEL 524-DH

AUTOMATICALLY SHUTS OFF ENGINE...

BEFORE lubricating oil pressure drops to dangerously low level because of inoperative oil pump, lack of oil, clogged oil lines, etc. BEFORE engine temperature rises dangerously high because of inoperative pump, clogged radiator, leaks in radiator, broken fan belt, etc.

MODEL 524-DH FOR MAGNETO IGNITION

Model 524-OH Safety Panel consists of the following; one No. 444446 Safety Oil Pressure Gauge; one No. 442412 Safety Water Temperature Gauge with 48" tubing; one No. 421664 Three Way Toggle Switch; and one No. 421685 Instruction Plate; all installed in a weatherproof steel case with hammered aluminum finish. Complete with wiring diagram and installation and operating instructions.

SAFETY PANEL PARTS

Stewart-Warner Safety Gauges are ruggedly built to withstand vibration and hard usage, They have chrome bezels and individual mounting brackets. Gauges fit flush with front of panel. Silver contacts prevent corrosion and assure clean contact points. Points

are adjustable from rear of gauges. All gauges and switches may be used with either 6V or 12V circuits. Speed-grip connector supplied with each gauge.



357-N Ammeter (30-0-30). Siliconedamped pointer. Terneplate case, 2-1/32" dia, Chrome bezel.



421684 Three-Way Switch, Assembly, 2-1/32" dia, Chrome bezel, (Switch only is Part No. 421664.)



420711 Stop Switch and Re-Set. Brass case, 2-5/8" dia. Neaprene cover. Chrome bezel.





442412 Safety Water Temperature Gauge has 48" tubing and 1/2" P.T. connection, 72" and 144" tubing also available. 2-1/32" dia. case with chrome bezel.



444486 Water Pressure Gauge (0-160 lbs.) For output side of jet type pumps. Construction same as 444446 Series Gauges.

SENDERS AND SWITCHES

Temperature and Pressure











PRESSURE SENDER



353-E 353-Z



PRESSURE SWITCH





TEMPERATURE SWITCHES



SELECTION GUIDE AND CROSS REFERENCE

TEMPERATURE SENDERS—Series 362—For Temperature Gauges

	6V	120	TWO GAUGES	CONSTANT VOLTAGE
1/8" PT 1/4" 1/8" 1/2"	362-AM 362-8 362-J	362-CZ 362-WN 362-AJ 362-AH 362-AA (100-325*)	362-8D 362-BC 362-BB	362-CL 362-BH 352-BK 352-W
1/8" 1/4" 1/2"		362-AD 362-BY		362-D1 362-AP

CROSS REFERENCE FOR REPLACEMENT OF STEWART-WARNER O.E.M.

DI WIE 1111111			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
D.E.M. No.	S-W No.	O.E.M No.	S-W No.	D.E.M. No.	S-W No.
SEC	362.1	362-A31	SUFAK	-CT	362-AH
362-P	362-BK	362-AX	AN AN	362-CW	362-CZ
362-5	362-AM	362-AY	362-W	362-DA	362-AA
362-T	362-BK	362-AZ	362-BH	362-DB	362-CL
362-V	352-8H	362-8A	362-AH	362-DC	362-AH
362-X	362:54	362-BE	362-AA	362-DD	362-AN
362-Y	352-AN	362-8F	362-BH	362 DF	362-AN
362-AE	362-AJ	362-BJ	362 BH	362-DP	362-AH
362-AK	362-AJ	362-BW	362-1	362-DS	362-CL
352-AR	362-AD	362-BX	362-AH	362-DT	362-A0
ANE ANII	200.110	444-811	Out File	362-EC	362-W

PRESSUR	E SENDERS-S	eries 353—For Pres	sure Gauges
Gauge	V3	127	6V-30 OHM
0-80 (.8. 0-80 LB. (Two gauges) 0-100 LB.	153-E	353-2 353-AM 353-S	353-K

CROSS REFERENCE FOR REPLACEMENT OF STEWART-WARNER O.E.M.

O.E.M. No.	S-W No.	O.E.M. No	S-W No.
353-B	353-E	353-AG	353.K
953-E	353-E	353-AH	3S3-Z
353-0	353-K	353-AF	353-2
353-L	353-K	353-AW	353-7
353-R	353-2	353-BA	353-7

TEMPERATURE SWITCHES—Series 363—For Warning Lights
Single Switch

	Ditti Fide	or interest	
Temp,	Thread ¼ "	%**	56 "
200° 225° 250° 260°	363-D	363-E	363-F 363-G 363-AE 363-AA 263-A8
120°-250° 120°-250°	Double	Switch	363-AD 363-AE

CROSS REFERENCE FOR REPLACEMENT OF STEWART-WARNER O.E.M.

VI STERRAT THATTER V.E.I.				
O.E.M. No.	S-W Na.	O.E.M. No.	S.W No.	
363-H	363-F	363-X	363-AB	
363-1	363-F	353-AL	363-0	
363-N	363-E	438031	363-E	
363-P	363-F	438054	363-F	
363-R	363-G	438070	363-F	
363-5	363-F	438082	363-AB	
363-T	363-F	438086	363-€	

PRESSURE SWITCHES-Series 364-For Warning Lights 6 LB. 10 LB. 15 LB. 60 LB. 364-AH 364-AJ 364-AL 438076 438071

CROSS REFERENCE FOR REPLACEMENT OF STEWART-WARNER O.E.M.

D.E.M. No.	S-W No.	E.O.M. No.	S-WNo.
364-H	364-L	964-Y	364 - K
364-N	364-L	364-AA	364-M
384-P	364-L	364-AE	364 - K
354-R	364-M	364-AF	364-L
364-S	364-AH	TE4 AM	364 AH
264.30	364-L	MAN	364-1



SIGNAL LIGHT

For use with any Pressure or Temperature Switch, No. 417364 for 6-volt systems No. 420125 for 12-volt systems



OIL PRESSURE SWITCHES

by make, year and car engine



REPLACEMENT OIL PRESSURE SWITCHES FOR WARNING LIGHTS

CAR/YEAR	ENGINE	S-W No.	CAR/YEAR	ENGINE	S-W No.	CAR/YEAR	ENGINE	S-W No.
GENERAL	MOTORS		GENERAL	MOTORS (Cont'd.)			CORPORATION (
BUICK 1960-62 1963-64 1965-66 1965-66 1967-70	ALL ALL 400,401,425 225,300,340 ALL	364-AH 364-L 364-L 364-M 364-AJ	OLDSMOBIL 1956-63 1964 1964 1964 1965-70	E ALL 394 V-6 V-8 ALL	364-L 364-L 364-M 364-AH 364-AH	1957-58 1961-63 1965 1966-70	ALL V-B ALL 6 cyl. 8 cyl. W/Warning Light	364-T 364-T 364-AL 364-T
SPECIAL 1961-62 1963 1963 1964 1965-70	ALL V-8 V-6 ALL ALL	364-AH 364-L 364-M 364-M 364-AJ	PONTIAC 1959-80 1961-70 FORD MO	ALL W/Warning Light	364-AH 364-L	DODGE DAR 1960-61 1962 1962-63 1964-65	T & LANCER ALL 8 cyl. 6 cyl. 6 cyl.	364-T 364-T 364-AL 364-T 364-AL
GADILLAC 1957-62 1963-70	ALL ALL	364-AJ 364-AK	FORD & FA 1954-70 MUSTANG 1965-70	ALL ALL	364-M	1957-61 1962-63	6 cyl. 8 cyl. •VALIANT-BARRAGU ALL 8 cyl.	364-T DA 364-T 364-T
1967-70	W/Warning Light	364-AH	MERCURY 1957-70	& COMET W/Warning Light	364-M	1962-63 1964-65 1966-70	6 cyl. ALL 6 cyl.	364-AL 364-T 364-AL
CHEVELLE C 1962-70 CHEVROLET	W/Warning Light	364-AH	LINCOLN 0 1956-82 1966-70	CONTINENTAL ALL ALL	354-M 364-M	1966-70	8 cyt. W/Warning Light I MOTORS	364-T
1958-63 1956-70	348,409 ALL	364-M 364-AH	THU NO ERB 1955-70	ALL	364-M	RAMBLER 1956-70	W/Warning Light	3€4 L
CORVAIR 1960 1961-66	ALL ALL	364-AH 364-L		R CORPORATION		WILLYS		
CORVETTE 1956-70	W/Warning Light	364-AH	CHRYSLER 1957-58 1954-70	ALL	364-T 364-T	WILLYS 1958-63 1965-70	ALL	364-L 364-U

TEMPERATURE SENDERS AND SWITCHES by make, year and car engine





REPLACEMENT TEMPERATURE SENDERS FOR GAUGES—Series 362 REPLACEMENT TEMPERATURE SWITCHES FOR LIGHTS—Series 363

OAD (WPED	CHRING	0.47.41	810 NELO					
CAR/YEAR	ENGINE	S-W No.	CAR/YEAR	ENGINE	S-W No.	CAR/YEAR	ENGINE	S-W No.
GENERAL N	MOTORS		GENERAL N	ADTORS (Cont'd	l.)	FORD MOTO	R CO. (Cont'd.)	
BUICK 1960-70 1964-70 1965-70	460,430 225,300,340 (Riviera)	363-AD 363-AA 362-BY	TORONADO 1966 1967-70 PONTIAC	ALL W/Gauge	363-AD 362-BY	THUNDERBIR 1957-63 1963-64 1965-69	ALL ALL ALL	362-BH 362-CL 362-BK
CADILLAC			1959-70	ALL	363-AD			
1956-64 1965-70	ALL	362-DH 362-BY	FORD MOT	OR COMPANY		CHRYSLER A	CORPORATION	
CAMARO 1967-70	W/Gaugo	362-8Y	FALCON 1960-63 1964	ALL ALL	362-BH 362-CL	1955-59 1960 1961-63	ALL ALL ALL	362-AD 362-AP 362-BH
CHEVELLE & 1962-66 1963-70	CHEVY II ALL W/Gauge	363-AH 352-BY	1965-69 FORD, FAIRL 1957-63	ALL	362-BK	1964-66 1964-66 1965-70	W/Gauge W/Air Warmng Light	362-CL 362-DJ 363-AS
CHEVROLET 1957-61 1962-65	ALL	362-BY 363-AD	1963-65 1966-69 1966-69	ALE 34" W/Gauge Warning Light 34" W/Gauge	362-BH 362-CL 363-AT 362-BK	DODGE (Dart, 1955-59 1960 1961-63	Lancer, DeSoto) ALL ALL ALL	362-AD 362-AP 362-BH
1966-70 1966-70 CORVETTE	W/Gauge ALL	362-BY 363-AS	LINCOLN CO 1957-63 1963-65 1966-69	NTINENTAL ALL ALL ALL	362-BH 362-CL 363-AT	1964-66	W/Air All 6 Cyl. WD/Air All 8 Cyl. Warning Eight W/Gauge	362-DJ 362-CL 363-AS 362-CL
1962-64 1962-70	ALL W/Gauge	363-AD 362-BY	MERCURY 1957-63 1963-64	ALL	362-BH 362-CL	PLYMOUTH (V 1955-59 1960-63	ALL	362-AD 362-BH
0LDSMOBILE 1956-58 1959-62	ALL	363-AD 363-AF	1965-66 1967-69 MERCURY CE	ALL	362-BK 363-AT	1964-66 1964-66 1967-70	WO/AC W/AC ALL W/Gauge	362-CL 362-DJ 362-CL
1963-65 1966 1967-70	ALL ALL ALL	363-AD 363-AA 363-AD	1967-69 MUSTANG	ALL	362-BK	AMERICAN I	MOTORS	
F-85 1961-64 1965	ALL ALL	363-AE 363-AD	1965 1966-69 BRONCO	ALL	362-CL 362-BK	RAMBLER 1957-64 1965-65	ALL 6 Cyl.	362-BH 362-CL
1966-70	ALL	363-AD	1965-63	ALL	362-BK	1967-70	ALL.	362-CL



Look in one of today's high performance cars—or look in a "classic" from 1907—and you'll see that drivers and manufacturers have preferred Stewart-Warner speedometers for over 60 years. Why? Because Stewart-Warner can provide a face

dial scale up to 160 M.P.H. for high performance driving . . . or non-reflective instruments for replacement of O.E.M. originals on trucks and buses or highly styled units for customizers even "specials" like police speedometers.

SPEEDOMETERS





MODEL NO. 550-BP BLACK AND WHITE DIAL



MODEL NO. 550-BR CUSTOM DIAL



MODEL HO. 550-85 BLACK AND WHITE DIAL

STANDARD SPEEDOMETERS

These speedometers meet or surpass specifications as established by original equipment manufacturers. All units are especially damped with silicone to prevent excessive pointer oscillation under extreme vibration and severe shock. The heavy-duty magnetic mechanism will give accurate readings and long life under all operating conditions.

The styling of Model No. 550-BP and Model No. 550-BR matches 900 Series electronic tachometers and offers the car enthusiast the ultimate in customized appearance.

Model No. 550-BS is the perfect replacement speedometer for heavy duly trucks when repair or replacement is necessary. This unit features a non reflective satin chrome bezel and million mile odometer, designed to match the existing truck instrumentation.

GENERAL SPECIFICATIONS

All speedometers have rust resistant 3½" dia. steel cases, Shaft connection is %" 18 UNF external thread.

MODEL NO. 550-BP: Bright Chrome Bezel; Black face dial, white numerals, fire-orange pointer.

MODEL NO. 550-BR, Bright Chrome Bezel, Custom face dial, fire-grange pointer.

MODEL NO. 550-BS: Salin Chrome Bezel; Black face dial, white numerals; white pointer.

SPEEDOMETER ACCESSORIES

DRIVE JOINTS (for use on transmission)







MODEL 777

Model	Transmission End	Shaft End
666-8, H & R 665-F	193 Tip 104 Sq. Tip	.213 Slotted Hole 105 Square Hole
666-X	187 Tip	191 Stolted Hole
777-8, H	.203 Tip	,213 Slotted Hole
777.F	152 Tip 104 Sq. Tip	161 Stotted Hote 105 Square Hote
777-L & X 777-P	.187 Tip .203 Tip	191 Slotted Hole ,105 Square Hole

ADAPTERS

DUAL ADAPTER

No. 778-T: Screws on back of speedometer or tach to permit connection of an accessory instrument, such as a Taxi Meter, Police Speedometer, Survey Speedometer or Recording Bitumeter, and enables one flexible shaft to operate two instruments. Rugged, die cast housing and hardened steel gears assure long, dependable service.



No. 778-T

RIGHT ANGLE ADAPTERS

Attaches to connection on back of speedometer to change direcion of shaft connection or direction of rotation.

No. 407010 -1:1 Ratio Direct Drive No. 411335 - 1:1 Ratio -- Reverse Drive

FLEXIBLE SHAFTS

Drive shaft for No. 550 Series Speedometers should be of proper length and have %"-18 internal thread connection for the speedometer and %"-18 internal thread connection for the transmission end. When a No. 550 Series Speedometer replaces a No. 585 or No. 771, and the old Bexible shaft is to be retained, a No. 778-G adapter must be added to the speedometer connection.



SPECIAL PURPOSE SPEEDOMETERS



MODEL NO. 540-0 POLICE SPECIAL SPEEDOMETER



MODEL ND. 585-D SURVEY SPEEDOMETER



MODEL NO. 702-D RECORDING BITUMETER

POLICE SPECIAL SPEEDOMETER

Made especially for police use. Has extra large, easy-to-read face dial with a "touch button," exclusive with Stewart-Warner, that enables officer to lock the speedometer pointer at any attained speed. Shows positive proof of speeding. Pointer stays locked in position until release button is pressed. Has 4" dia face dial with black background, white numerals, red pointer. Both season and trip odometers. Straightout shaft connection with %"-18 external thread and .105 square hole. Improved non-glare indirect lighting with shield to prevent reflection in windshield. Light socket and wire, and 12V bulb included.

SURVEY SPEEDOMETER MODEL NO. 585-D

For measuring speed and distance where great accuracy is required. Used by power companies to space poles, equipment depots, etc., by car-testing laboratories for checking accuracy of car speedometers and to measure gas mileage; by sports car officials for laying out rally courses. Four inch face dial has black background, white numerals and pointer. Chrome bezel, Indicates speeds up to 90 MPH in tenths. Shaft connection is straight-out

with ¾" 20 internal thread. When used in place of original speedometer, use flexible shaft of proper length with ¾"-20 external thread at upper end and lower end same as original shaft.

RECORDING BITUMETER MODEL NO. 702-D

For accurate, economical road re-surfacing and oiling Measures vehicle speed in FEET per minute. Enables operator to coordinate vehicle speed with flow of oil or bitumen to get exact coverage required. Face dial is black, 4½" dia., with white numerals. Has adjustable, static orange pointer which is set at desired speed. White pointer shows vehicle speed. Two odometers and tabulator show distance traveled to within fraction of a foot. Installation requires Fifth Wheel Drive. Right Angle shaft connection with ½" 20 internal thread with .105" square hole. Drive consists of the following:

1—Fifth Wheel Drive Assembly with 16" dia wheel. (Purchase from: E. D. Etnyre, Oregon, Illinois.)

1—No. 660-A Drive Joint Use 4,125 ratio for Recording Bitumeter, 790 ratio for Survey Speedometer.

1-95000 Flexible Shaft, Specify length.

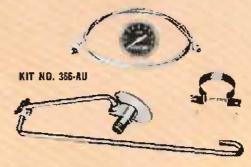
NOTE: When fifth wheel drive is in use, speed of vehicle must not exceed 1700 feet per minute. (Approximately 19 M.P.H.)

SPEEDOMETER FOR LOW-SPEED WHEELED VEHICLES

This speedometer is designed for use on tractors, crop sprayers and other wheeled vehicles that travel at speeds below ten miles per hour. Easy to install on any vehicle. Speedometer is driven from center of tire tread and gives true record

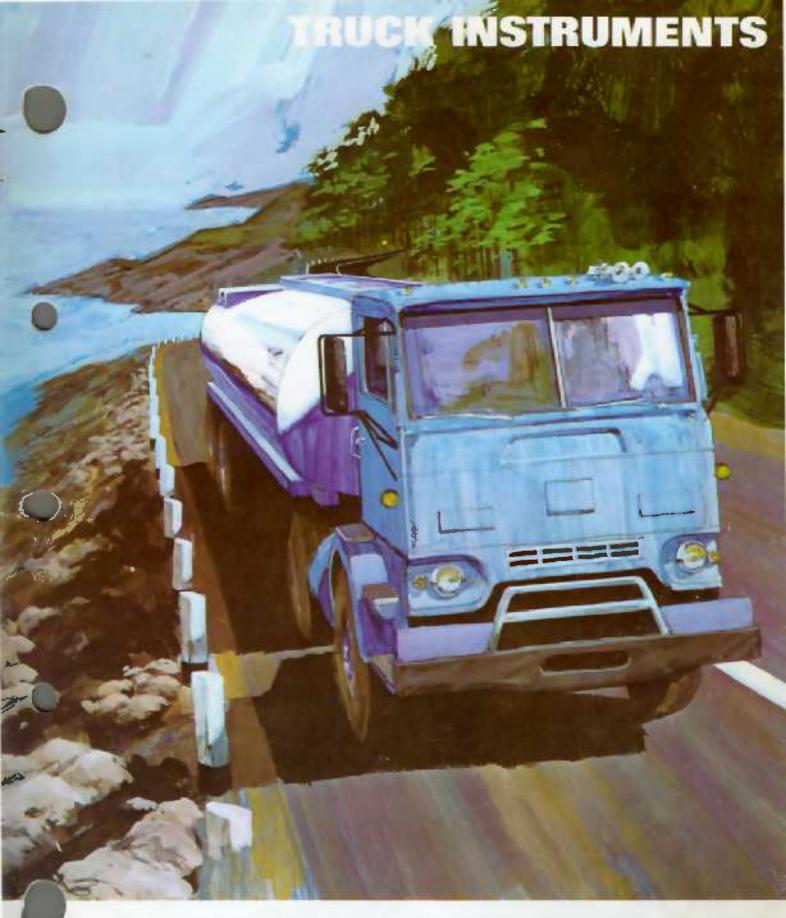
of speed and distance traveled—regardless of terrain, condition of soil, engine RPM or transmission gear ratios. Pays for itself many times over by reducing waste both in the application of costly chemical sprays and fertilizers and in the harvesting of crops. Kit includes everything needed for most installations.





KIT NO. 366-AU INCLUDES

One Speedometer Head (No. 563-AB), Flexible Shaft 108" long (No. 95350), Mounting and Drive Equipment, and Installation Instructions (SER-SW 4057). For other part numbers see SER-SW 366-AU.



Keep 'em on the run—avoid costly downtime! It takes only a little warning to head off an expensive breakdown. Stewart-Warner offers a precision instrument to monitor every vital system on a truck—heavy-duty tachometers,

speedometers and pressure, temperature, vacuum and fuel level gauges, ammeters, hour meters and more. So, if your fleets operate on city streets or modern expressways, give them the least expensive form of fleet insurance money can buy.



TRUCK INSTRUMENTS



MODEL NO. 550-BS SPEEDOMETER



MODEL NO. SSI-SE TACHOMETER



MODEL NO. 551-5F TACHOMETER

SPEEDOMETERS AND TACHOMETERS

GENERAL SPECIFICATIONS

These instruments meet or surpass specifications as established by heavy duty truck manufacturers. They can be quickly installed when repair or replacement of the original speedometer or tachometer is required. All units are especially damped with silicone to prevent acute pointer oscillation under extreme vibration and severe shock. The heavy-duty magnetic mechanism will give accurate readings and long life under all operating conditions, Satin chrome bezels are non-reflective to roduce glare. Cases are rust-resistant steel, 3½" dia., ½"-18 shalt connection with .105" square hole. For lighting use lighting Kit No. 366-FK.

SPEEDOMETERS

Speedometer Model No. 550-BS has 0-80 MPH dial scale and odometer that registers total mileage to 1,000,000 miles before repeating. Black and White face dial. White pointer.

TACHOMETERS

Tachometers have 0-3500 RPM dial scales, and are available in 1:1 or 2:1 calibrated models, with or without odometers that show total engine revolutions. Black and White face dials. White pointers.

CALIBRATION	W/O ODOMETER	W/ODOMETER
2:1	551-SE	551-SF
1:1	551-W8	551-WC



MODEL NO. 960-BD TACHOMETER



MODEL NO. 812831



MODEL NO. 811531 TACHOMETER

ELECTRIC AND DIESEL TACHOMETERS

MODEL 960 TACHOMETERS

Model 960 Series one piece electronic tachometers are designed for 6 and 8 cylinder, 4 cycle gasoline engines with standard 12 volt negative ground ignation systems. The "960" is fully transistorized and features Zener Circuitry that eliminates all batteries and relays, NO SENDER IS REQUIRED. Its case is rust-resistant steel, 3½" in diameter. Black and White face dials have white pointer. Light kit included. For top of dash or steering-post mounting use Mounting Kit No. 366-MS.

Dial Range	Cylinders	Model No.
0-5000	6	960-80
0-5000	8	960-BE

DIESEL TACHOMETERS

These tachometers are designed for use with diesels or any engine equipped with built-in tachometer take-off. The sender generates electrical impulses that actuate the meler. Battery current is required only for lighting the meter. The sender has ½"-18 internal thread with .187" Drive Tip, and may be attached directly to engine take-off. For information on Drive Tips, Radio Cartridges, Extension Sleeves see page 18 in Tachometer section.

Dial Range	Part No.	į
0-3000 RPM	811531	
0-5000 RPM	812831	S



TRUCK INSTRUMENTS





PRESSURE



TEMPERATURE



VACUUM



FUEL LEVEL



AMMETER



VOLTMETER

GENERAL SPECIFICATIONS

These heavy-duty gauges indicate proper engine operating conditions. They are highly resistant to shock, vibration, and temperature extremes, assuring the greatest possible recording accuracy. Mechanical gauges are equipped with centergear burdon tube mechanisms. Electric gauges have electromagnetic mechanisms. All gauges feature non-reflecting Satin Chrome bezels, dust-proof steel cases, and 2-1/16" dia. black face dials with white numbers and white pointers. Include chimneys for lighting (Use Lighting Kit No. 366-FK).

Unless otherwise specified mechanical gauges are equipped with 7/16"-2 O UNF external connections.

PRESSURE GAUGES

Dial Range	Part No.
0-100 lbs, Oil	360-HM
0-100 lbs. Oil	306-DB 12V (Sender No. 353-S)
*0-100 lbs. Oil	360-JW
0-150 lbs. Air	360-HL
*0-150 lbs. Air	368-P 3%" dia. case-bright bezel)
*0-150 lbs. Air	360-JY

VACUUM GAUGES

Dial Range	Part No.
0-30" Hg	355-BL
*0-30" Hg	355-BT

TEMPERATURE GAUGES

Dial Range	Part No
100°-240° Water	311-HF 12V (Sender No. 362-AH)
100°-250° Water	361-CA
100°-325° Oil	311-HC 12V (Sender No. 362-AA)

AMMETERS-VOLTMETERS

Dial Range	Part No
60 0-60 Amps.	359-EP
100-0-100 Amps.	369-AW
10-16 Volts	375-AK

FUEL LEVEL GAUGE

Dial Range	Part No.
E-F	301-CL 12V
(See page	14 for Senders.)

^{*}These models are equipped with 1/4" NPTF external connections.





TRUCK INSTRUMENTS







MODEL 108-AW SENDER

ELECTRIC SPEEDOMETER

This highly accurate, electrically operated Speedometer has been designed for use on all trucks and busses, and meets or exceeds the specifications established by original equipment manufacturers. Speedometer units are calibrated the same as mechanical speeds and are especially damped with silicone to prevent excessive pointer oscillation under extreme vibration and shock. The rugged, heavy duty mechanism will give accurate readings and long life under all operating conditions. Installation does not require flexible shaft drive equipment—the Speedometer is operated by a 106-AW Sender, which simply attaches directly to the transmission.

Speedometer features a "million mile" odometer, and is equipped with a non-glare flat black face dial with white numerals and pointer, mounted in a zinc plated, rust-resistant, steet case with Satin-Chrome bezel, 3% inch diameter case. Includes integral indirect lighting kit with terminals, socket, and 12-Volt light bulb for easy readability under all light conditions.

DIAL RANGE

SPEEDOMETER NO.

0-100 MPH	105-H
<u> </u>	

Note: Please order Sender No. 106 AW and required Drive Tip separately.

MODEL 106-AW SENDER

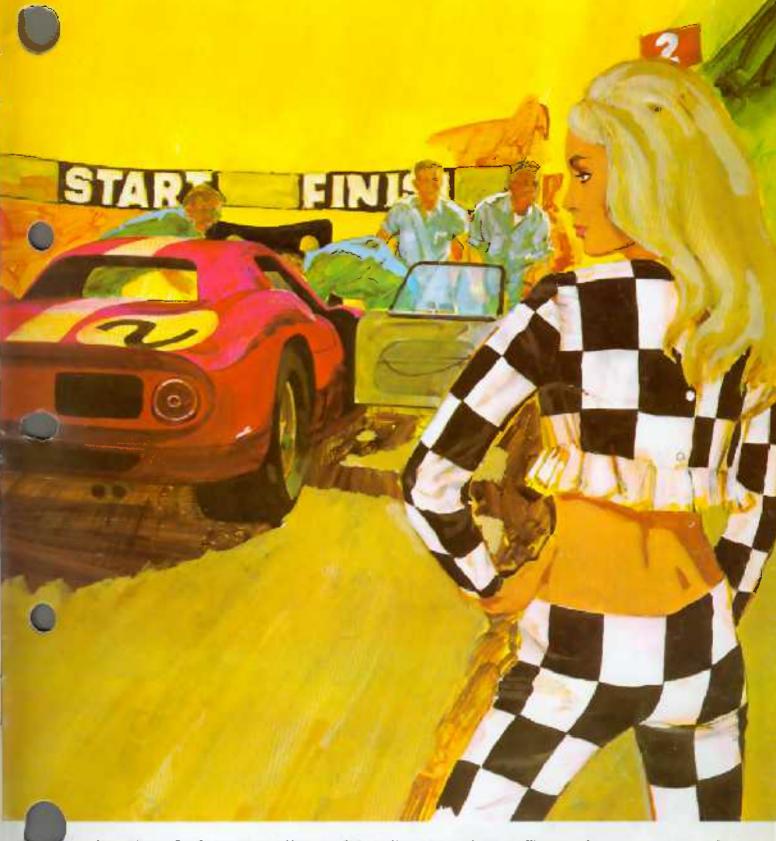
This easily installed sender transmits electrical impulses for proper operation of Model 105-H Speedometer. Attackes to transmission in place of flexible shaft and may be mounted in any position, and for either clockwise or counter-clockwise direction of rotation. It is capable of withstanding extreme vibration, and is temperature compensated to assure proper operation under all outdoor conditions, includes complete installation instructions.

NOTE: Please order required Drive Tip separately. Select from chart at right.

DRIVE TIPS

TIP SIZE PART NO.		TIP SIZE	PART NO.	
.194" sq	821870	152" tang	821874	
150" sq	821871	187" tang	821875	
1834" sq.	821872	.203" tang	821876	
193" sq.	821873			

FUEL PUMPS

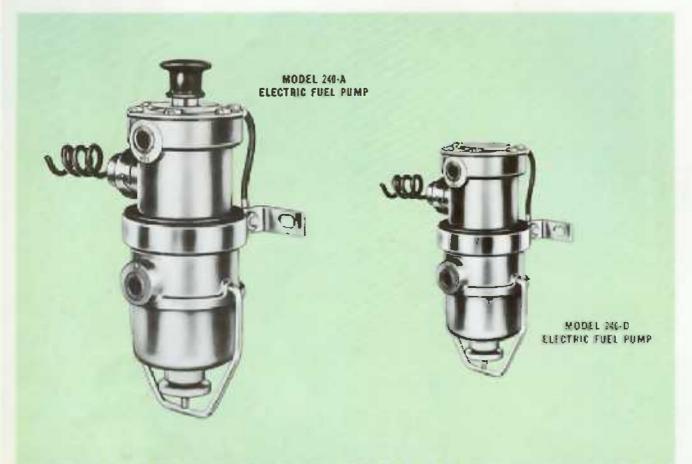


Stewart-Warner Fuel Pumps run around in a pretty fast crowd! Selected above all others and installed on competition cars at Le Mans, at Sebring, and at Daytona. Undeniable proof of

top performance. The same Stewart-Warner Electric Fuel Pump assures quick starts and avoids fuel starvation on passenger cars, over-the-road trucks and industrial engines.



ELECTRIC FUEL PUMPS



MODEL 240-A ELECTRIC FUEL PUMP

For all Gasoline Engines

- ASSURES QUICK STARTS. Pump delivers gas the instant ignition switch is turned on.
- ELIMINATES STARVING. Delivers up to 60 GPH free flow, more than enough for the most powerful auto engines at top speed.
- ELIMINATES FLOODING. Adjustable pressure regulator (up to 8 PSI at the pump) can be adjusted to keep carburetor full without flooding.
- ELIMINATES SURGING Surge chamber in pump evens out gas flow —lessens wear on needle and seat.

MODEL 240-A is a powerful piston-type electric fuel pump designed for modern, high performance engines. The maximum pressure of which the pump is capable is 8 P.S.I. at the outlet port, but its built-in adjustable pressure regulator permits a pressure setting at any desired level up to the maximum. It has a delivery capacity of up to 60 gallons per hour, free flow, and it will take care of the requirements of any of today's high performance engines at full speed. It also has a built-in fuel filter. Other filters, pressure regulators or surge eliminators are not needed in the line when the Model 240-A is used.

SPECIFICATIONS

Medel: No. 240-A (Specify 6V or 12V). Gas line connections: %" internal P.T. Mounting Botts: 5/16" cap screws on 2%" centers. Factory pressure setting: 3½—4 P.S.I. adjustable 1—8 P.S.I. (at the pump). Voltage range: 10—15.2 volts (12 volt). Gurrent draw: will not exceed 8 amps for 6 volt: 4 amps for 12 volt. Delivery capacity: pump delivers 33 G.P.H. under factory test conditions: 60 G.P.H. tree flow. Shipping weight: approximately 5 pounds.

MODEL 240-C ELECTRIC FUEL PUMP

Model 240-C Electric Fuel Pamp is identical to Model 240-A, except it is designed for operation on 24-volt current supply. Specifications for both models are the same.

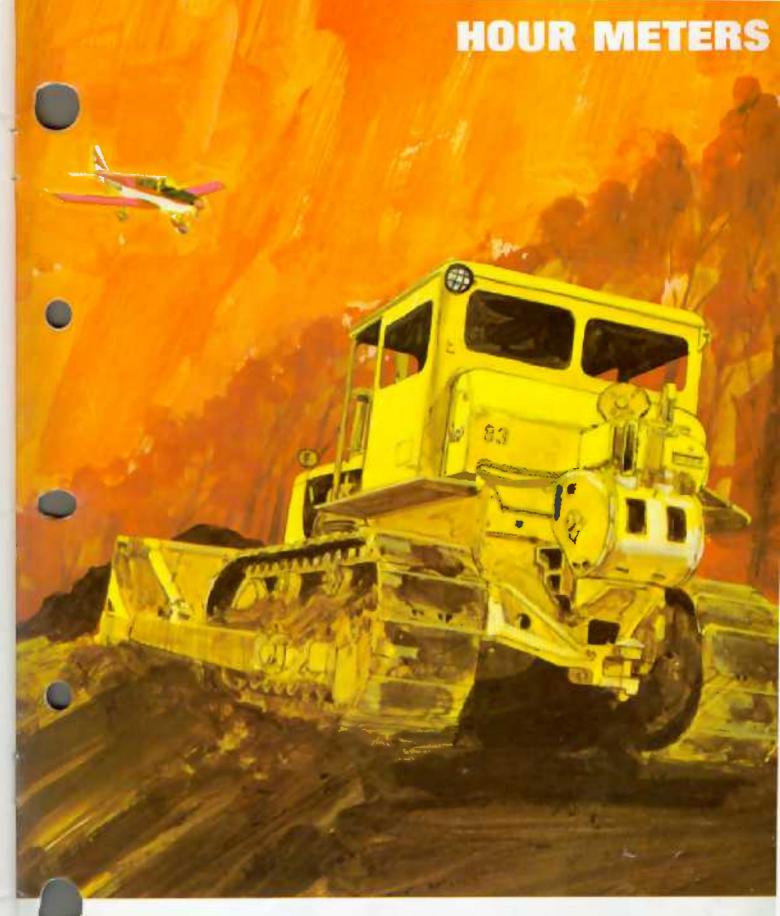
MODEL 240-D ELECTRIC FUEL PUMP

Model 240-D Electric Fue? Pump is designed for use in installations in which the electric pump is used as a "standby" or "booster" and is installed in the fuel fine between gas tank and mechanical pump. It is the same as the 240-A except that the 240-D does not have the adjustable pressure regulator and it has a pressure rating of 5—6 P.S.I. (at the pump).

RECOMMENDED APPLICATIONS				
Horsepower	Displacement	Model		
Up to: 350	Up to: 550 cu. in.	240-A		
500	800 cu. in.	240-A (2)		
650	1000 cu, in,	240-A (3)		

HOBBS NO. 4012 SAFETY SWITCH

This is a single-pole, double-throw pressure switch that can be wired into the electrical system so as to shut off the electric fuel pump when engine oil pressure drops below 4 P.S.I. In effect, this means that the pump would be shut off if the engine stopped running for any reason, even though the ignition switch remained on.



How long has it run? For off-the-road vehicles, aircraft and all kinds of powered equipment, there's no way of knowing except by accurate measurement of engine hours and minutes of operation. That's why a Hobbs Hour Meter provides the best

answer. You get a measure of vehicle or machine output. Just as important, you can keep protective maintenance on schedule! Let Hobbs tell you the exact running time—the real key to measure of performance and protection against downlime!



HOUR METERS









MODEL M15000

MODEL MISODE

MODEL M15002

MODEL M15006

HOBBS MINIMETERS

These extremely accurate Minimeters are electrically powered, escapement controlled DC hour meters for recording operating time to provide a positive basis for regular maintenance of equipment. The outstanding accuracy of these units (+1% under all operating conditions) is achieved through the use of a jewelled movement, shockproof adometer, and permanently lubricated parts.

Each unit is factory tested and run-in for 40 hours, including complete cycling, to assure consistent accuracy of calibration and dependable operation. Average "rundown" time is only 5 seconds, yielding greater accuracy and eliminating the need for extra-cost "brake" mechanisms. These Minimeters can be used as replacements for any screw, stirrup, or aircraft

mounted DC hour meters. Designed to meet or exceed all requirements of Military Spec. MIL-L-3971B.

These units are dirt and moisture sealed, and operate efficiently at temperatures ranging from -65° to $+160^{\circ}$ F. Non-reflecting dials are finished in flat black for easy readability. Odometer numbers are black and white, recording hours in one-tenth increments. Minimeters operate on any power source ranging from 4 - 40V DC.

	MOUNTING	PART NO.	MOUNTING	PART NO.
	3-Screw	M15001	Aircraft	*M15006
	2-Screw	M15000	Aircraft	†M15007
	Stirrup	M15002		
_	*Reads Total Hours.		†Reads Flig	ht Hours.

HOBBS SOLID-STATE DIOCHRONS

These solid-state Diochron hour meters are designed to record the hours of operation of gas, diesel, or battery powered equipment. Key components are potted for high "6" shock protection, to assure smooth operation under vibration. Solid-state timing circuit features instantaneous start and stop. The electronic operating mechanism is housed in a high-impact, durable case sealed against dirt and moisture. These Diochrons are accurate within $\pm 1\%$ at room temperatures, and operate efficiently at temperatures ranging from -40° to $+160^\circ$ F.

Easy-to-read black face dials, with automatic recycling odometers, record up to 10,000 hours at one-tenth hour increments. Available in 12 Volt and 24-Volt DC models, for either screw or stirrup type mounting.

VOLTAGE	MOUNTING	PART NO.
12V-DC	3-Screw	M16000
12V-DC	Stirrup	M16001
24V-DC	3-Screw	M16002
24V-DC	Stirrup	M16003



HOUR METERS





MODEL NO. M-5600 DC METER SCREW MOUNT



MODEL NO. M-S601 DC METER STIRRUP MOUNT



MODEL NO. M-5628 DC MARINE METER STIRRUP MOUNT

HOBBS HOUR METERS

Hobbs Hour Meters are designed to record the hours of operation of engines, electric motors, vehicles, aircraft, boats, machine tools, or any equipment whose hours of operation are important to know for maintenance or rental. There are meters for use with direct current (DC) sources in voltage ranges from 4V to 40V

and with alternating current (AC). Direct current meters are used on trucks, tractors, boats, airplanes, lift trucks, stationary engines, etc. Alternating current meters are used on machine tools, elevators, generating equipment, business machines, etc. There is a Hobbs Hour Meter for most applications.

DIRECT CURRENT METERS

Direct current meters have sealed, water and dust proof lexon cases with screw mounting or with stirrup clamps. Cases measure 2" from back of bezel to end of case (plus terminals and sluds) and require 2.19" dia hole for mounting. Stirrup-mount meters have bright chrome bezels. Screw-mount meters have black bezels. Mechanisms have jeweled governors, heavy-duty bearings, shock-proof odomelers, large contact points and high voltage

insulation. Face dials are soft black. Odometer numbers are black on white. Meters record hours of use by tenths and read to 9999.9 hours, Repeat automatically. One model covers all voltages from 4 to 40V DC, Marine meters are of same construction as standard direct current meters but they have stirrup mounting only and custom face dials. These hour meters meet all requirements of Military Spec. MIL-M-39718.

SPECIFICATIONS AND PART NUMBERS

Normal	Voltage	Part No.	Part No.	Part No.
Voltage	Range	Screw Mount	Stirrup Mount	Marjse
6-12-24-36	4-40	M-5600	M-5601	M-5628

HOUR METER ACCESSORIES



Mounting Brackets

For mounting Hour Moters in any location when panel installation is not practical. Multiple holes allow positioning for easy reading. Foot of bracket can be bent when necessary. M-329 (2 13% * x 4*) for meter only. M-558 (4* x 5% *) use when meter and dampener are used logether.



Panel Mountleg Bracket

Designed to bolt to a flat surface area 2.124_6 " x 51/4". Provides easy-to-read meter position. M-486 for screw type D.C. meter only.



Dampaer

Use where needed to protect meter from severe vibration, Can be used an panel or with M-558 bracket.

M-3888 (3½ ° dia.) for scrow type D.C. meters. M-2165 (3½ ° dia.) for 2½ ° A.C. meters.



HOUR METERS AND SWITCHES



MODEL NO. M-5611 DC AIRCRAFT METER SCREW MOUNT



MODEL NO M-1806 AC INDUSTRIAL METER SCREW MOUNT

AIRCRAFT METERS

Hobbs Aircraft Meters have black lexon cases with black bezels. Face dial is soft black. Odometer has black numerals on white background. Case measures 2.25" from back of bezel to end of case (including terminals), Requires 2.19" dia, hole for mounting. Special mounting bracket (2.50" square) and black screws are provided for installation into instrument panel. These meters have Brake Mechanisms for instant stop and start to insure highest degree of accuracy. Interchangeable with all previous models of Hobbs aircraft and flight meters. Dial fettering reads "Total Hours" or "Flight Hours."

SPECIFICATIONS AND PART NUMBERS

NOMINAL	VOLTAGE	PART N	
VOLTAGE	RANGE	TOTAL HOURS	FLIGHT HOURS
6-12	4-15	M-5611	M-5613
24.36	15.50	81 5612	M 5612

HOBBS-PRESSURE AND VACUUM SWITCHES

Hobbs Switches are designed to actuate an Hour Meter, warning light, buzzer or engine cut-off when oil or air pressures drop below or exceed safe levels. Switches are made in three models: Single-circuit, one terminal grounded internally. Single-circuit, two terminals, both insulated; Dual circuit, three terminals, one normally open (NO), one normally closed (NC), one common. All switches have silver-alloy contacts and are enclosed in prastic



Single circuit 1 terminal Grounded internally



ALTERNATING CURRENT METERS

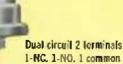
Afternating Current Meters have sealed, water and dust proof texon cases, for screw mounting only. Case measures 2.94" from back of bezel to end of terminals and requires 2.19" dia, hole for mounting. Bezel is black and may be had in either 2½" or 3½" dia. Mechanism is heavy-duty synchronous motor, UL approved. Face is soft black. Odometer numbers are black on white Meters record hours in tenths and read to 99999.9 hours. These meters meet government specifications for 2½" and 3½" instruments, Standard meters are available in 120V and 240V, 60 cycle models. Other voltages and cycles supplied on special order.

SPECIFICATIONS AND PART NUMBERS

VOLTAGE	CYCLES	PART NO. 2.69" BEZEL	PART NO. 3.50° BEZEL
120V AC	60	M-1906	M-1932
240V AC	60	M-1909	M-1935

coated, weather-proofed cases with 1/2" external P.T. connections. Capacities range up to 150 PSI. Activating pressure is set and sealed at the factory. Nominal ratings are 6V-DC, 15 amps; 12V-DC, 8 amps; 24V-DC, 4 amps. Switches with other than standard contact settings or for special purposes are available on special order.

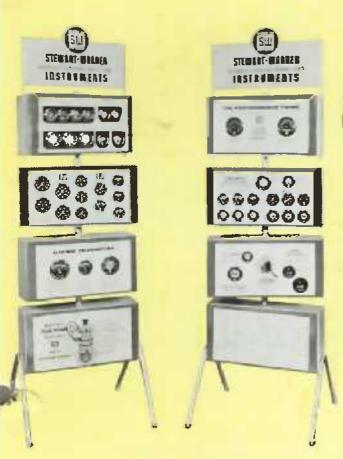




	SPECIFICAT	TONS AND PART N	JMBERS-LOW-P	RESSURE SWITE	CHES	
Standard Pressure Setting	Pressure Range		Circuit minal Normally Closed		Circuit minals Normally Closed	Oual Circuit 3 Terminals NO & NC
4 PSI	1-7 PSI	H-4000	M-4001	M-4006	M-4007	M-4012
15 PSI	7-30 P\$I	M-4002	M-4003	M-4008	M-4009	M-4013
60 P\$1	30-150 PS1	M-4004	M-4005	M-4010	M-4011	M-4014
		VACUU	M SWITCHES			
4" HG	2 to 6" KG	M-4070	M-4071	M-4076	M-4077	

MERCHANDISE DISPLAYS





Stockholder floor display

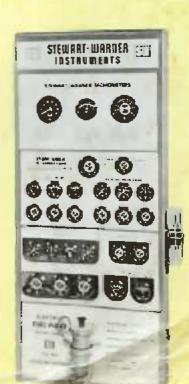
NO. 366-DG-7 The most effective silent salasman on the jobber's floor! The Stockholder Display consists of four double-faced box sections that revolve around a center post of 1" galvanized iron pipe. The box sections are enameled a brilliant red. Banner sign is double-faced, linished in bright yellow enamel with red, white and black lettering—display panels are yellow with black letters. Legs are plated steel tubing with ball feet.

Consists of (1) No. 18-60 Stockholder Frame, and component display kills which include factory installed instruments. For full component and part number listing, refer to Calalog 1300.

wall display

NO. 366-NF-1. This eye-catching Wall Display attracts and stimulates customer interest in S-W instruments while freeing floor space for other uses. Prominently shows a wide variety of instruments, for both passenger cars and trucks, against contrasting back panels. The sturdy metal display rack has factory-punched holes on back for easy mounting—no special hooks or fittings are required. Heavy gauge steel frame is enameled in bright Stewart-Warner red; display panels are yellow with black lettering.

Consists of one (1) No. 18 75 Wall Display Frame, and component display hits which include factory installed instruments. For full poems 1981ing, refer to Catalog 1300.









STEWART-WARNER SUI INSTRUMENT DIVISION

1840 DIVERSEY PARKWAY, CHICAGO, ILLINOIS 60614

