



**RECORD  
TECHNOLOGIES**

# Hard Parts Catalogue

Gauges  
Senders  
Cables  
Adapters  
Counters

Industrial  
Instrumentation  
Applications



2020/2021

## About Us:

We are a Canadian-grown, family-run company that combines current industry savvy and future foresight with a strong commitment to customer relationships. Since the 1970s our company's products and customer service processes have earned us a solid reputation for being innovative, user-friendly and low-maintenance.

Originally known as Mr. Speedometer, our early years were spent installing, testing and repairing taximeters and speedometers. This work introduced us to all sorts of cables, tips and adapter parts, causing our business to naturally evolve into one that provided a variety of meters and gauges to multiple industries.

In the 1980s and 1990s we focused on the installation, repairs and testing of speedometers, taximeters and tachographs for a variety of transportation and automotive industries gaining a good reputation as a reliable source for repairs and parts.

As we evolved so too did the opportunities for growth our taxi business had us using many SSWhite products that company eventually approached to become their western Canadian distributors - a move which added building cables and adapters offering.

Eventually, our heavy involvement in the taxi industry enticed us to purchase the Record Taximeter product and we became the official manufacturer of this industry-leading meter. Adding the manufacturing and sales of taxi top lights to our product offering was the logical next step for us, allowing us to offer a 'full-service' shopping experience to the taxi industry. Our experience further enticed us to start our own fleet of 60 taxis, giving us an advantageous insider's perspective of our client's needs and the future of the taxi industry.

In September of 2007, SSWhite offered us the opportunity to purchase their ATM Division. In December of 2007 the deal was done and in January of 2008 we received the entire inventory and tooling from SSWhite to begin to market their product to North America and beyond.

In 2013 we officially changed our name to Record Technologies. As the stock of SSWhite depletes, we will continue to provide our clients with the same high standard of part manufacturers they are used to. While the name on all of our parts moving forward will be Record, you can rest assured that only the name, and not our commitment to serving you the best we can, has changed.

We offer our toll free line ( 1 – 800 – 661 – 1649 ) Call us with your questions or concerns

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# Pressure Gauges

## Mechanical Pressure - Black Bezel - International



HG115



HG161

Part #	Description	Scale	Tubing Kit
HG115	Air Pressure	0 – 150 psi	HA121
HG131	Dual Air Pressure	0 – 150 psi	HA121 ( 2 Required)
HG131W	White Face Dual Air Pressure	0 – 150 psi	HA121 (2 Required)
HG144	Fuel Pressure	0 – 100 psi	HA121
HG114	Oil Pressure	0 – 100 psi	HA121
HG130	Oil Pressure	0 – 200 psi	HA121
HG116	Transmission Oil Pressure	0 – 300 psi	HA121
HG161	Transmission Oil Pressure	0 – 400 psi	HA121
HG143	Turbo Vacuum Pressure	30" Hg/0/30 psi	HA121
HG202	Manifold Pressure	0 – 30 psi	HA121

## Mechanical Pressure - Chrome Bezel - Diamond



Part #	Description	Scale	Tubing Kit
HG162	Air Pressure	0 – 150 psi	HA121
HG163	Dual Air Pressure	0 – 150 psi	HA121 (2 Required)
HG159	Oil Pressure	0 – 80 psi	HA121
HG160	Oil Pressure	0 – 100 psi	HA121
HG166	Oil Pressure	2" – 30" Hg	HA121

## Electric Pressure - Black Bezel - International



HG109

Part #	Description	Scale	Sender
HG109	Oil Pressure	0 – 100 psi	HA107

## Electric Pressure - Chrome Bezel - Diamond



HG149

Part #	Description	Scale	Sender
HG147	Oil Pressure	0 – 80 psi	HA161
HG148	Oil Pressure	0 – 100 psi	HA107
HG149	Oil Pressure	0 – 400 psi	HA163

# Temperature Gauges

## MECHANICAL Temperature - Black Bezel - International



HG134

Part #	Description	Scale
HG133	Oil Temp. 72" capillary tube	140 - 320°f
HG134	Oil Temp. 96" capillary tube	140 - 320°f
HG137	Water Temp. 48" capillary tube	100 - 280°f
HG118	Water Temp. 72" capillary tube	100 - 280°f
HG132	Water Temp. 96" capillary tube	100 - 280°f
HG119	Water Temp. 144" capillary tube	100 - 280°f
HG186	Water Temp. 316" capillary tube	100 - 265°f

## MECHANICAL Temperature - Chrome Bezel - Diamond



HG171 - HG172

Part #	Description	Scale
HG167	Water Temp. 48" capillary tube	100 - 280°f
HG168	Water Temp. 72" capillary tube	100 - 280°f
HG169	Water Temp. 96" capillary tube	100 - 280°f
HG170	Water Temp. 144" capillary tube	100 - 280°f
HG187	Water Temp. 316" capillary tube	100 - 265°f
HG171	Oil Temp. 72" capillary tube	140 - 320°f
HG172	Oil Temp. 144" capillary tube	140 - 320°f

## ELECTRIC Temperature - Black Bezel - International



HG105

Part #	Description	Scale	Sender #
HG105	Engine Oil	140 - 320°f	HA104
HG106	Engine Water	100 - 240°f	HA105
HG129	Engine Water	100 - 280°f	HA132
HG107	Transmission Oil	140 - 320°f	HA104

## ELECTRIC Temperature - Chrome Bezel - Diamond



HG129

Part #	Description	Scale	Sender #
HG156	Oil Temperature	140 - 320°f	HA104/HA157
HG157	Water Temperature	100 - 240°f	HA158/HA159

# FUEL / VOLTMETERS & AMMETERS

International - Black Bezel

Diamond - Chrome Bezel

FUEL GAUGE



Part #	Description	Bezel	Scale/Range	Sender Type
HG108	Fuel Level 240-33Ω	Black	E ½ F	HA106
HG158	Fuel Level 240-33Ω	Chrome	E ½ F	HA106

VOLTMETER

HG152



HG110



HG153

Part #	Description	Bezel	Scale/Range	Voltage
HG110	Voltmeter	Black	10 to 16 VDC	12 Volt
HG152	Voltmeter	Chrome	10 to 16 VDC	12 Volt
HG142	Voltmeter	Black	20 to 32 VDC	24 Volt
HG153	Voltmeter	Chrome	20 to 32 VDC	24 Volt

AMMETER



PART #	Description	Bezel	Scale/Range	Voltage
HG111	Ammeter	Black	-60/0/+60	12 Volt
HG112	Ammeter	Black	-100/0/+100	12 Volt
HG154	Ammeter	Chrome	-60/0/+60	12 Volt
HG155	Ammeter	Chrome	-100/0/+100	12 Volt
HG185	Ammeter	Chrome	-30/0/+30	12 Volt



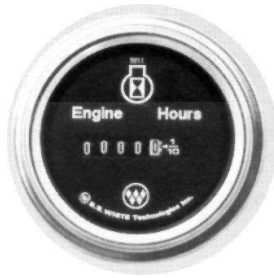
# Hourmeters

## ANALOG HOURMETERS

Part #	Bezel	Description	Scale/Range	Voltage
HG191	Black	Round	9999.9	12 to 60 VDC
HG192	Chrome	Round	9999.9	12 to 60 VDC
HG194	Black	Rectangular	9999.9	12 to 60 VDC
HG204	Black	Round, 3 Hole Mount	9999.9	12 to 60 VDC



HG191



HG192



HG194



HG204



## DIGITAL HOURMETERS

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Part #	Bezel	Description	Scale/Range	Voltage
HG300	Black	Service Interval w/switch	9999.9	12 to 60 VDC
HG391	Black	Round LDC	9999.9	12 to 60 VDC
HG394	Black	Rectangular, 2 Hole Mount	9999.9	12 to 60 VDC



HG300



HG391



HG394

# Tachometers & Speedometers

## Electronic Tachometer 3-3/8"

Part Number	Bezel	Range	Hourmeter
R175-12/24B	Black	0 – 3000	Yes - Digital
R175-12/24C	Chrome	0 – 3000	Yes - Digital
R176-12/24B	Black	0 - 3000	No
R176-12/24C	Chrome	0 – 3000	No

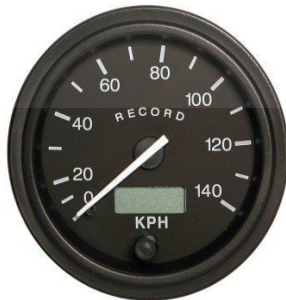


**Magnetic Pickup  
R104-106**



## Electronic Speedometer 3 - 3/8"

Part Number	Bezel	Scale	Odometer
R174-12/24B	Black	0 – 140 KPH	Digital
R174-12/24C	Chrome	0 – 140 KPH	Digital



## **Mechanical Tachometer**

**HG101**



**Ratio  
.5 to 1**



# Pulse Generators / Senders and Accessories

HA125



Part #	Pulses / Revolution	Thread Size
HA125	8 pulses	5/8 - 7/8 - 18 male
HA126	8 pulses	5/8 - 18 male
HA211	8 pulses	5/8- 18 male both sides
HA122 GM	16 pulses	7/8- 18 female
HA123 FORD	16 pulses	7/8 - 18 female
HA133	30 pulses	7/8 - 18 female

HA211



## Pulse Generator Extensions

HA126



Part #	Description	Application
HA172	.104 Sq. ext. tip	HA125, HA126, or HA 130
HA174	Extension Kit	HA125, HA126 or HA130

HA123



## Tips Using Coupling HA130

Part #	Tip End Size
HA102	.156" dia. x .104" Sq.
HA101	.187" dia. x .104" Sq.
HA103	.203" dia. x .104" Sq.

## Tips Using Coupling HA129

Part #	Tip End Size
HR116	.104" dia. x 104" Sq.
HR124	.156" dia. x 104" Sq.

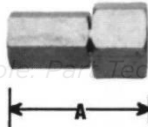
HA122



## Coupling Adapters

Part #	Dimension 'A'	Thread Size
HA129	1.37"	5/8-18 to 7/8" -18
HA130	2.00"	5/8-18 to 7/8" - 19

HA130



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## Drive Tangs for HA133

R104-106 & R104-108



HA133



Part #	Tip Size
HA164	.152 dia.
HA165	.187 dia.
HA166	.203" dia.
HA167	.104 SQUARE

HA127



Part #	Thread Length	Coil Resistance	Thread Size
HA108	1 - 3/4"	2 prong - 270Ω	3/4"-16
HA127	3 - 5/6"	2 prong - 270Ω single	3/4"-16
HA128	2-3/8"	4 wire - dual 270Ω	3/4"-16
R104-106	3"	270Ω with 6' lead wire	3/4"-16
R104-108	2-1/4"	270Ω with 6' lead wire	3/4"-16
104-112	2-3/8"	4 wire - dual with plug connectors 270Ω	3/4"-16
104-102	3-1/4"	270Ω with 6' lead wire	3/4" -16

# Senders



## Fuel Sending Unit

Part #	Description
HA106	Fuel Sender: 6" – 24" Adjustable with 5-hole flange, 240 - 33Ω



## Temperature Senders - Do not use Teflon Tape or thread sealant compound.

Part #	Sender Type	Scale/Range	Thread Size
HA503	Dual	120 – 240°F	¼" – 18 npt
HA504	Dual	120 - 240°F	⅜" – 18 npt
HA105	Single	100 - 230°F	⅛" npt
HA159	Single	100 - 240°F	⅛" npt
HA132	Single	100 - 280°F	⅛" npt
HA104	Single	140 - 320°F	⅛" npt
HA196	Single	100 - 280°F	¼" npt

## Oil Pressure Senders

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Part #	Scale/Range	Sender Type	Thread Size
HA506	0 – 80 PSI	DUAL, 240 - 33Ω	⅛" npt
HA507	0 – 100 PSI	DUAL, 240 – 33 Ω	⅛" npt
HA161	0 – 80 PSI	Single, 240 - 33Ω	⅛" npt
HA107	0 – 100 PSI	Single, 240 - 33Ω	⅛" npt
HA162	0 – 150 PSI	Single, 240 – 33Ω	⅛" npt
HA163	0 – 400 PSI	Single, 240 - 33Ω	⅛" npt

## Kits - Temperature Sender with Bushings



HA160

Part #	Scale/Range	Thread Size	Sender Type	Bushing Kit
HA155	100 - 230°F	⅛" thru ½" npt	HA105	HA160
HA158	100 - 240°F	⅛" thru ½" npt	HA159	HA160
HA156	100 - 280°F	⅛" thru ½" npt	HA132	HA160
HA157	140 - 320°F	⅛" thru ½" npt	HA104	HA160

# Switches and Accessories

## Temperature Switches



Part #	Description	Operating Temp.	Thread Size	Contacts
HA147	Temp. Switch; screw connect	200°F	1/4" npt	Normally Open
HA148	Temp. Switch; screw connect	225°F	1/4" npt	Normally Open
HA194	Temp. Switch; quick connect	180°F	1/4" npt	Normally Open

## Pressure Switches



Part #	Operating Pressure	Thread Size	Contacts
HA149	6 psi	1/8" npt	Normally Closed
HA151 **	4 psi	1/8" npt	Normally Open
HA153	15 psi	1/8" npt	Normally Open
HA154	15 psi	1/8" npt	Normally Closed

## Bushing Adapter Kit

Part #	Description	Thread Size
HA168	Temp. Sender & Adapter Bushings	1/4" npt
HA169	Temp. Sender & Adapter Bushings	3/8" npt
HA170	Temp. Sender & Adapter Bushings	1/2" npt
HA173	Water Temp. Sender & Adapter Bushings	1/2" - 14 npt

## Metric Adapter Kit

HA119
1 Each - 10 x 1.0 to 1/8" npt
1 Each - 12 x 1.0 to 1/8" npt
1 Each - 14 x 1.5 to 1/8" npt
1 Each - 16 x 1.5 to 1/8" npt
1 Each - 18 x 1.5 to 1/8" npt



## Bushing Adapter Kit

Part #	Description
HA160	Contains three (3) 1/8" npt bushings to change to 1/4", 3/8" and 1/2" npt

# Pyrometers and Accessories

## PYROMETER



Part #	Scale	Size	Bezel
HG183	0 - 1500°	2"	Chrome
HG184	0 - 1500°	2"	Black

## THERMOCOUPLES - All are 'Type K'



Part #	Type	Probe Length	Thread Size
HA109	Turbo	2-1/2"	1/4" npt
HA110	Manifold	3"	1/4" npt
HA111	Universal	2"	1/4" npt

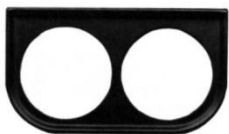
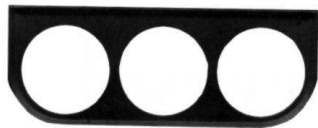


## LEAD WIRES - All are 'Type K' Service.

Part #	Length
HA117	14 FEET
HA118	7 FEET

Lead wires are insulated type "K" wire with PVC coating. Supplied with ring terminals ends for sure and easy connections. Do NOT use copper wire.

# Gauge Accessories



## GAUGE MOUNTING PANELS

Part #	Description	Hole Diameter	Finish
HA137	1 Hole	2-1/8"	Black
HA190	1 Hole	2-1/8"	Chrome
HA195	1 Hole	3-3/8"	Black
HA145	2 Hole	2-1/8"	Black
HA191	2 Hole	2-1/8"	Chrome
HA138	3 Hole	2-1/8"	Black
HA192	3 Hole	2-1/8"	Chrome

## VOLTAGE REDUCER

Reduces the voltage from a 24 volt system to 12 volts for gauge



Part #	Description
HA114*	240 – 33Ω Instruments Only

\*Two are required – one for power, one for ground.



HA112



HA113

## LIGHT KITS

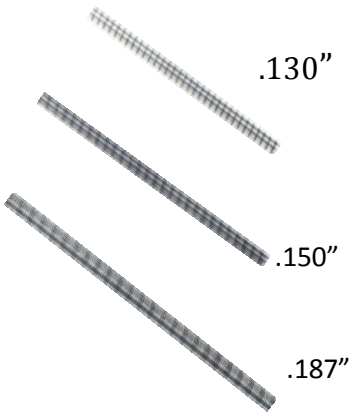
Part #	Description
HA112	12 Volt Light with Pigtail
HA113	12 Volt Light - Bulb/Socket
HA181	24 Volt Light
HA186 Indicator Light (RED)	12 Volt



## TUBING KITS - Pressure Gauges

Part #	For Gauge Type	Length
HA121	Pressure - Air and Oil	6 Feet
HA178	Pressure	16 Feet

# Cable and Casing



## Inner Core - Car & Light Truck

Part #	Diameter	Feet / Weight
HS101	.130"	100' / 6 lbs
HS102	.130"	500' / 21 lbs
HS103	.130"	1000' / 38 lbs

## Inner Core - Heavy Duty Truck

Part #	Diameter	Feet / Weight
HS104	.150"	100' / 8 lbs
HS105	.150"	500' / 28 lbs
HS106	.150"	1000' / 51 lbs
HS107	.187"	100' / 9 lbs
HS108	.187"	500' / 39 lbs



## Outer Casing

Passenger cars and trucks use an inner core of .130" dia with .330 outer casing.

Heavy Duty trucks, buses and some marine applications use .150" dia inner core

with .445 outer casing.



Part #	Description	Outer Diameter	Feet / Weight
HC101	Metal Casing	.235"	100' / 7 lbs
HC102	Metal Casing	.265"	100' / 9 lbs
HC103	Metal Casing	.297"	100' / 11 lbs
HC104	Metal Casing	.445"	100' / 27 lbs
HC105	Metal Casing/Vinyl Coated	.297"	100' / 8 lbs
HC106	Metal Casing/Plastic Coated	.445"	100' / 18 lbs
HC109	Metal Casing/Plastic Coated	.330"	100' / 8.5 lbs
HC111	Metal Casing	.445"	100' / 19 lbs

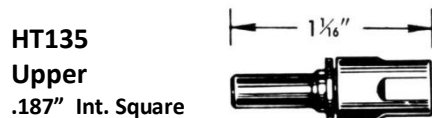
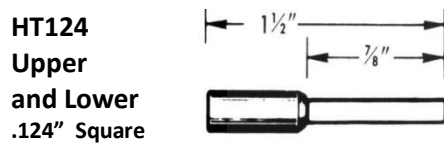
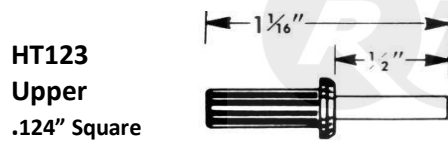
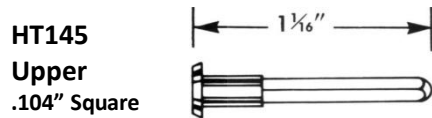
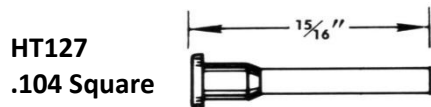
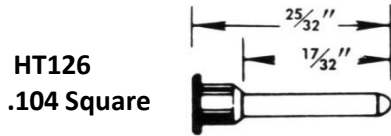


Individual Cables can also be manufactured, either as per your sample, or by your known specifications

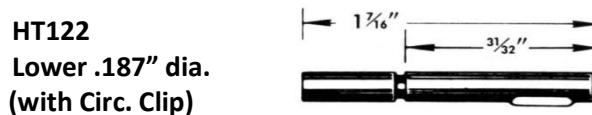
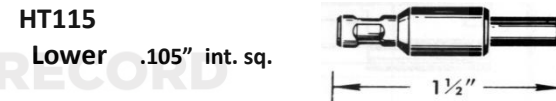
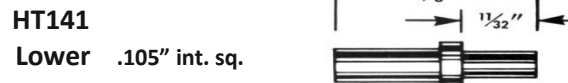


# Tips for .130" Diameter Inner Core

## UPPER



## LOWER

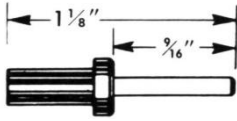


\*\*\* Limited Quantities Available

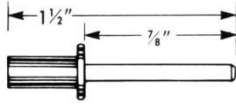
# Tips for .150" Diameter Inner Core

## UPPER

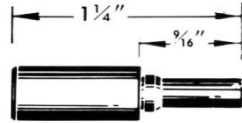
HT109  
Upper  
.104" Sq.



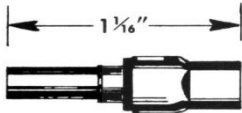
HT139  
Upper  
.104" Sq.



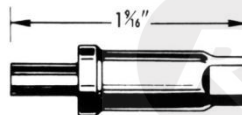
HT110 \*\*\*  
Upper  
.187" Int. Sq.



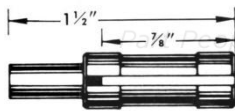
HT113  
Upper  
.187" Int. Sq.



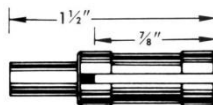
HT114  
Upper  
.187 Int. Sq.



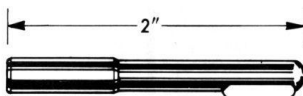
HT149  
Upper  
.187" dia. w/slot



HT120  
Upper  
.213" dia. w/slot

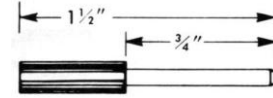


HT131  
Lower  
.203" dia.

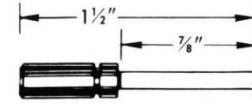


## LOWER

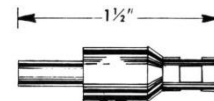
HT107  
Lower  
.104" Sq.



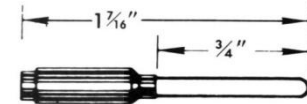
HT125  
Lower  
.104" Sq.



HT111  
Lower  
.105" Int. Sq.



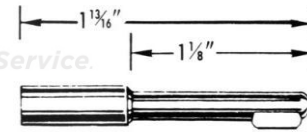
HT129  
Lower  
.124" Sq.



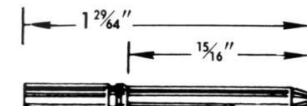
HT105  
Lower  
.150" Sq.



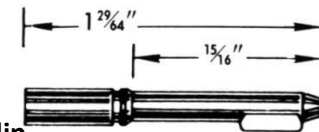
HT106  
Lower  
.156" dia.



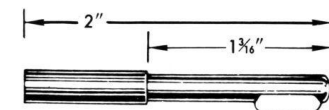
HT112  
Lower  
.156" dia.



HT156  
Lower  
.187" dia. with circ. clip



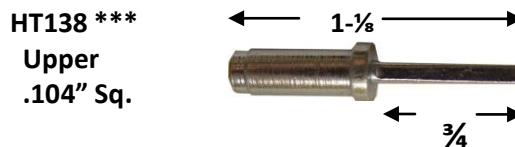
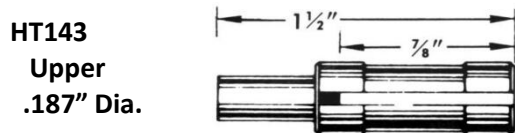
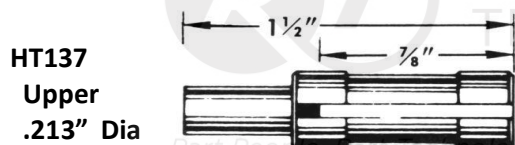
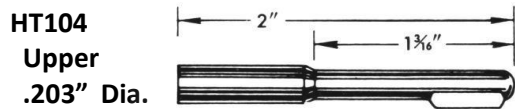
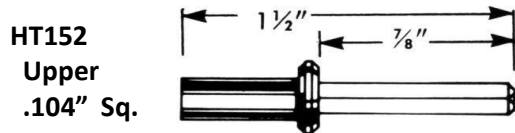
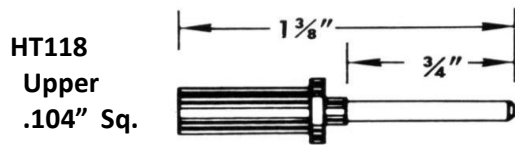
HT130  
Lower  
.187" dia.



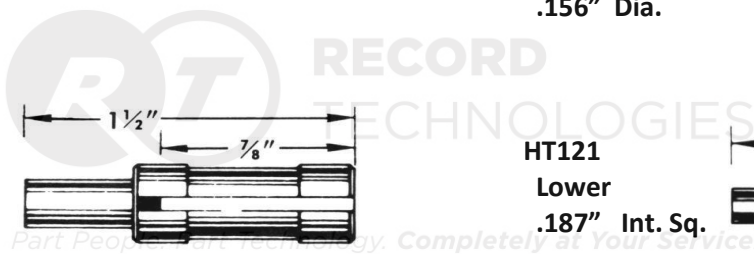
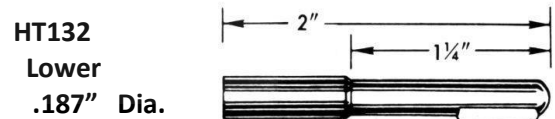
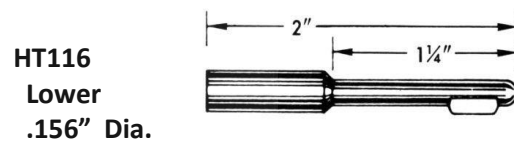
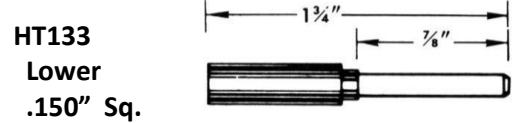
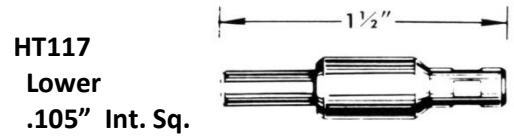
\*\*\* Limited quantity available - item  
Phased out

# Tips for .187" Diameter Inner Core

## UPPER





## LOWER

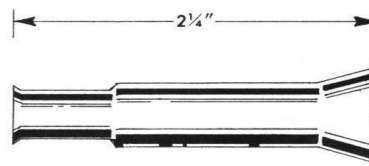


\*\*\* Limited Quantity Available

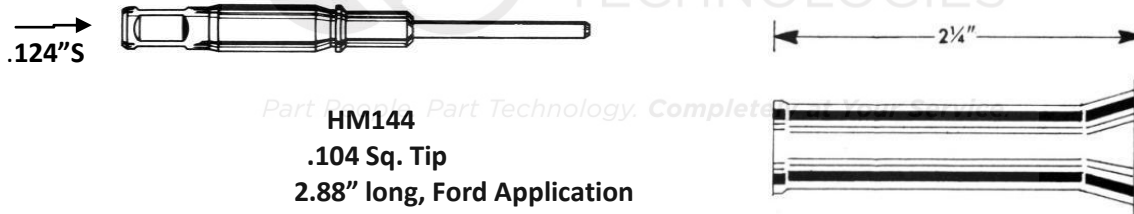
# Compensating Tips for .130 & .150 Inner Core

## .130 Tips to be used with Ferrule Assembly, HF150

Part #	Description	Illustration
HM192 ***	.150" Dia.	
HM193 ***	.187" Dia.	
HM194	.203" Dia.	
HM195	.104" Sq.	
HM196 ***	.150" Sq.	



## .150 Tips to be used with Ferrule Assembly, HF126



Part # HM144  
 .104 Sq. Tip  
 2.88" long, Ford Application



HM121  
 .156" Dia. Tang  
 2.195" Long

HM124  
 .104" Square Tip  
 2.195" Long

HM125  
 .150" Square Tip  
 2.195" Long

HM139  
 .150" Square Tip  
 2.263" Long

HM122  
 .187" Dia. Tang  
 2.195" Long

HM140 \*\*\*  
 .193" Square Tip  
 2.20" Long

HM141 \*\*\*  
 .193" Square tip  
 2.63" Long

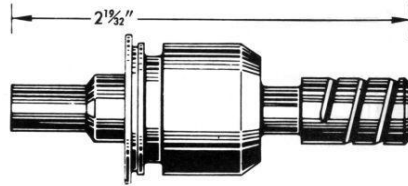
HM123  
 .203" Dia. Tang 2.195" Long

\*\*\* Limited Stock Available

# Ferrules for Casing .235", .265", .297"

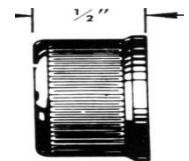
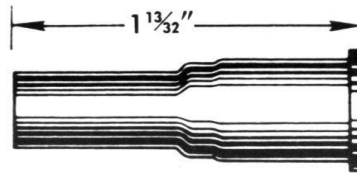
**USE HM118 OR HM224 FERRULE CRIMPING TOOL**

**.235" O.D.**  
**HF109 –**  
 Use with HM173 Flange



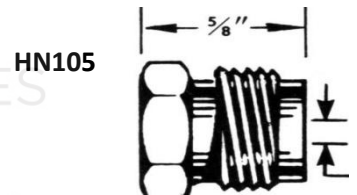
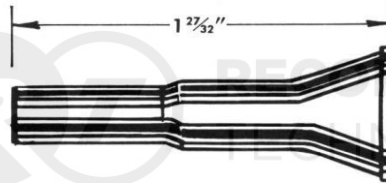
HM173

**.265" O.D.**  
**HF113**  
 Upper, with  
 Bushing Use Nut  
 HN101



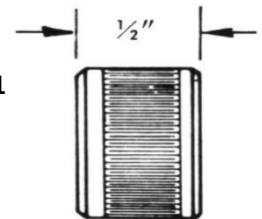
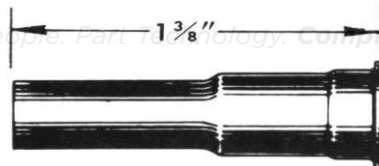
HN102

**HF102**  
 Lower  
 Use Nut HN102



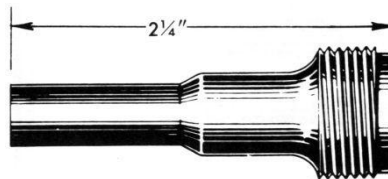
HN105

**.297" O.D.**  
**HF104**  
 Lower  
 Use Nut HN101  
 HN105  
 HN113

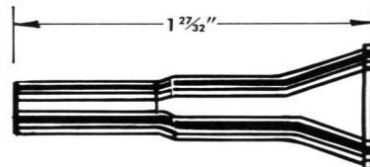


HN101

**HF110**  
 Lower  
 Use with Flange HM173



**HF101**  
 Lower

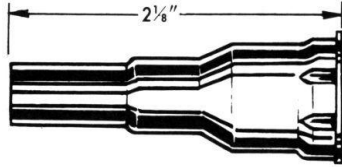


HN113

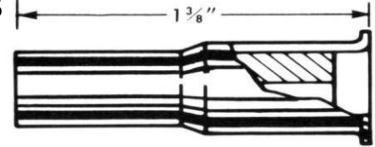
# Upper Ferrules for .330" Casing

## UPPER

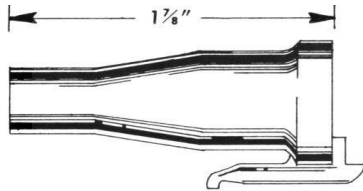
HF114 - GM



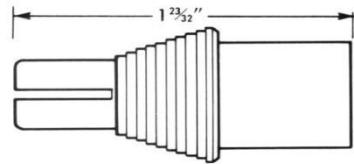
HF133 -  
Use Nut HN105



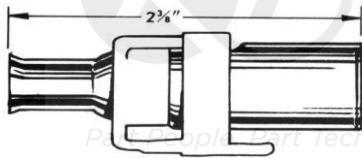
HF115 - CHRYSLER -  
Plastic  
Use HM133  
Crimping Ring



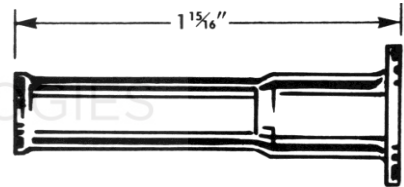
HF139  
Chrysler



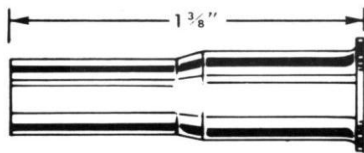
HF116 - FORD



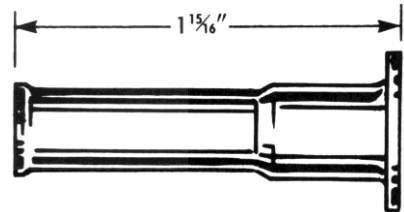
HF130  
Use HN106



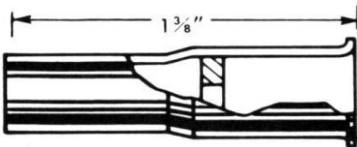
HF117 -  
Use Nut HN101



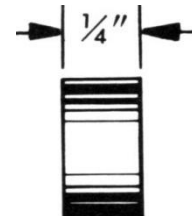
HF132  
With  
Bushing



HF131 -  
Use Nut HN101  
Or HN105



HM133 - Crimping Ring



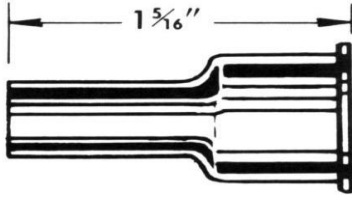
\*\*\* Limited Stock Available



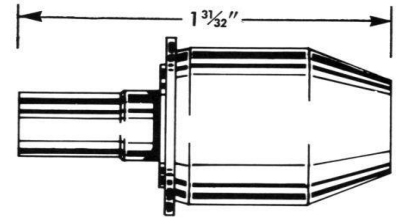
# Lower Ferrules for .330" Casing

## LOWER

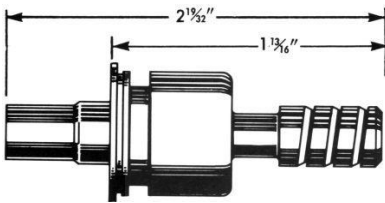
**HF119**  
Use Nut HN102



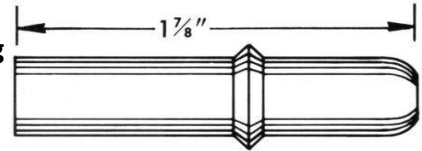
**HF136**  
AMC Lower Plug



**HF121**  
FORD PLUG

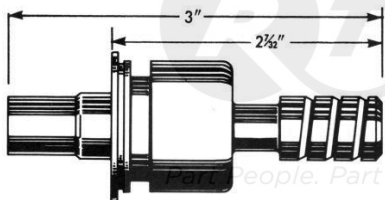


**HF142**  
1983 Lower Plug

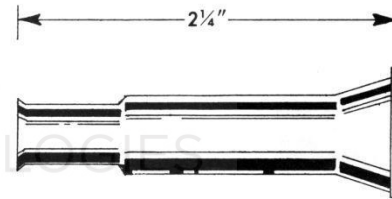


**HF148** - Like the HF150, but NO Bushing

**HF122**  
FORD PLUG

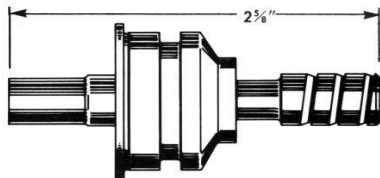


**HF150**

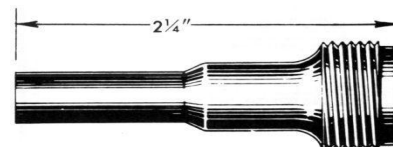


**Compensating Ferrule (Has Bushing)**  
Use Nut HN102, HN111

**HF135**  
AMC PLUG

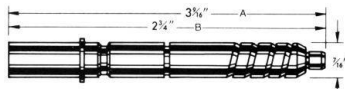


**HF151**



Extension with 7/8-18 Thd.

**HF127, HF128, HF129 \*\*\***



Use with

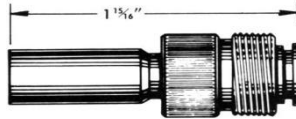


**HM173**

\*\*\* Limited Quantities Available

# Ferrules for .445" Casing

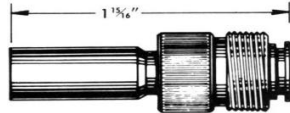
**HF105**  
3/4"-20 Ext. Thd. Nut



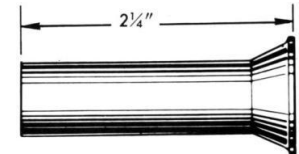
**HF108**  
Lower – Use  
Nut HN102



**HF105V VINTAGE**  
(Special Use)



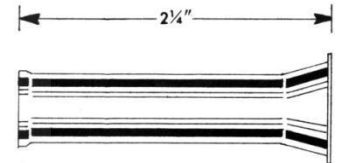
**HF125**  
Lower – Use  
Nut HN102



**HF143**  
5/8"-18 Ext. Thd Nut



**HF126**  
Compensating Ferrule  
Use Nut HN102, HN111



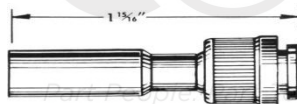
**HF153 \*NEW\***  
7/8"-18 Ext. Thd Nut  
(with bushing for tip)



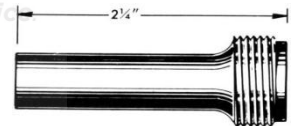
**HF111**  
Lower, With bushing  
Use Nut HN102, HN111



**HF106**  
Upper  
5/8"-18 Nut



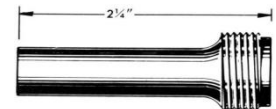
**HF123**  
Lower Extension  
7/8"-18 Ext. Thd



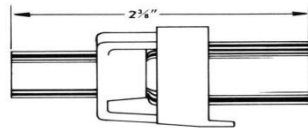
**HF152**  
Upper with Bushing  
With 5/8"-18 Nut



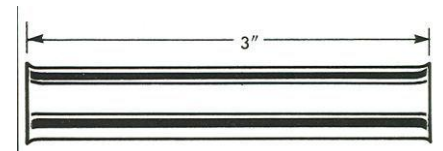
**HF147**  
Lower Extension  
5/8"-18 Ext. Thd.



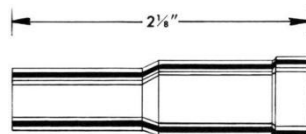
**HF140**  
Ford Quick  
Connect



**HF138**  
Sleeve

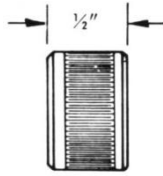


**HF141**  
GM Quick  
Connect

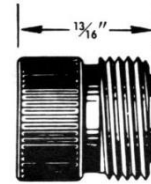


# Ferrule Nuts

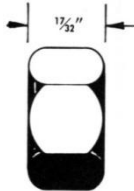
**HN101**  
 $\frac{5}{8}$ "-18 Thd.  
 Use on Ferrules  
 HF104, HF113 & HF117



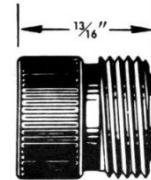
**HN104**  
 $\frac{3}{4}$ "-20  
 Use with HF104



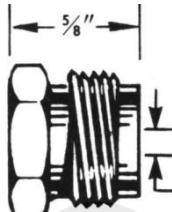
**HN103**  
 HEX  
 $\frac{3}{4}$ "-20 Thd.



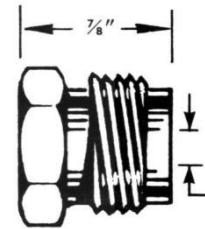
**HN104**  
 ANTIQUE USE  
 $\frac{3}{4}$ "-20



**HN105**  
 $\frac{5}{8}$ "-18 Thd.  
 Use with HF131



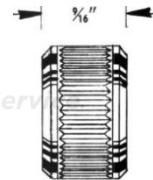
**HN106**  
 $\frac{7}{8}$ "-18 Thd.  
 Use with HF104



**HN111**  
 Hex Nut  $\frac{7}{8}$ "-18  
 Use with HF108,  
 HF111, HF119,  
 HF125, HF126



**HN112**  
 $\frac{3}{4}$ "-20 Thd.

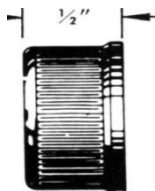


**HN113**  
 Hex Nut  $\frac{5}{8}$ "-18  
 Use with HF104,  
 HF113, HF117

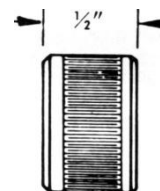


## METRIC NUT

**HN102**  
 $\frac{7}{8}$ "-18 Thd.  
 Knurled  
 Use on Ferrules  
 HF102, HF108  
 HF119 & HF124



**HN109**  
 M18-1.5



# Washers, Rings and Clips

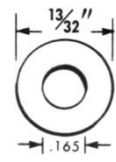
**HH103** – Grey, Flat,  
Fibre Washer  
Use on HF131, HF135, HF136



**HH104** - Black/Flat Washer



**HH105** - Retaining Thrust  
Use on HF131, HF133



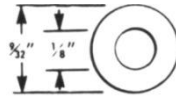
**HM130** – Crimping Ring  
For Plastic Tips



**HM133** - Crimping Ring  
For Plastic Ferrules



**HH106** - Nylon washer  
For plastic tips



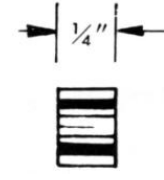
**HH107** - Metal Washer  
For 800 Series Adapter



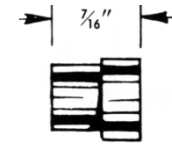
**HH108** – Metal Ring  
For 600 Series Adapter



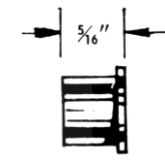
**HM108**



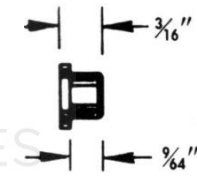
**HM112**



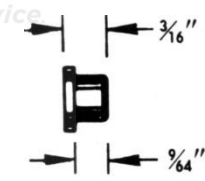
**HM115**



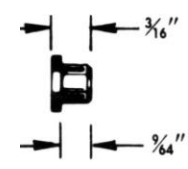
**HM107**



**HM142**



**HM104**

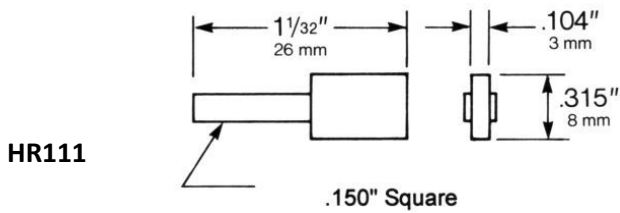
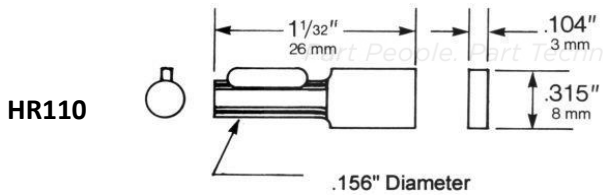
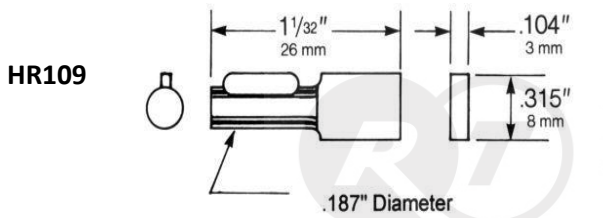
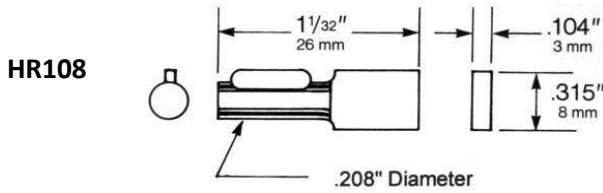
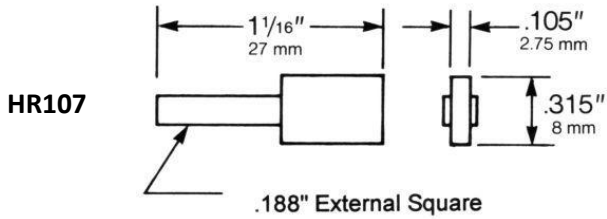


**HM101**  
C-Clip

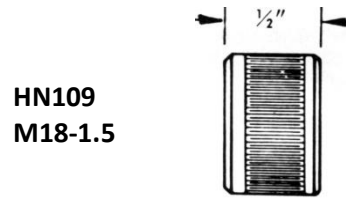


# Metric Items

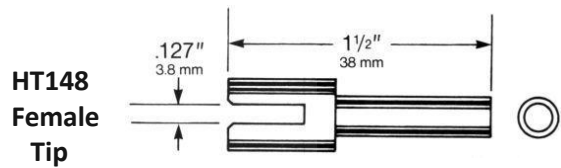
## UPPER



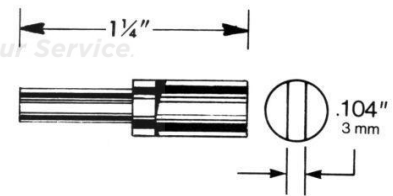
## LOWER



## METRIC TIPS



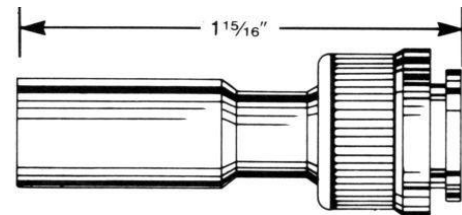
HT150 - Fits .150" dia. cable  
3mm spade



## METRIC FERRULES

HF146 - M16-1.5 \*\*\*

HF144 - M18-1.5 \*\*\*



\*\*\* Limited Quantities Available

# Tools

**HM126 - Crimping Pliers - Truck**



**HM224 - Crimping Pliers - Car**



**HM223 - Cable Cut-off Pliers**



**HM157 - Cable Swaging Tool**

Squares .130 core to .104" Sq.  
Squares .150 core to .124" Sq.

**HM116 - Replacement die set**  
**HH109 - Set Screw**



**HM143 Ratchet**  
Replacement For  
HM126

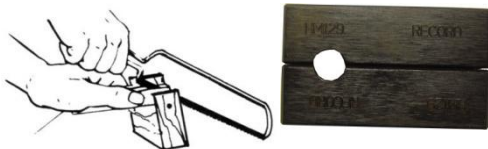


**HM118 - Ferrule Crimping Tool**

Designed for attaching ferrules to casing:  
.235", .265", .297", .330", .420", & .445".



**HM129 - Casing Cut-Off Block - .330"**



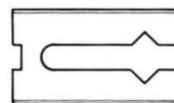
**HM119 - Casing Cut-Off Block - .445" & .297"**



**HM175 - Shaft Lubricant - 2 oz**



**HM106 .130 Disposable Swaging Die**  
**HM145 .150 Disposable Swaging Die**





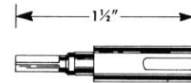
# 800 Series Items

HR220 - Short \*\*\*  
.160" dia.



HR222 - Short \*\*\*  
.213" dia. Input spindle

HR256 – (Discontinued, Limited stock) \*\*\*\*  
Metric Drive Shaft  
.150 Sq. with slot  
DUAL OUTPUT ONLY



## SINGLE ADAPTER KIT - HK112

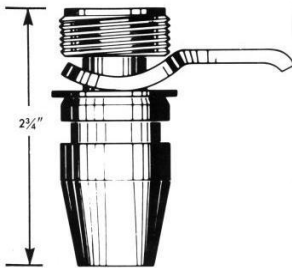
Contains enough hardware to build one (1) offset or straight thru ratio adapter. Gears & driven shafts are not included and must be purchased separately.



# Adapter Sleeves

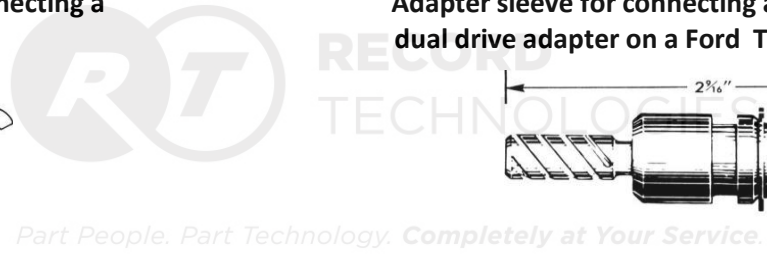
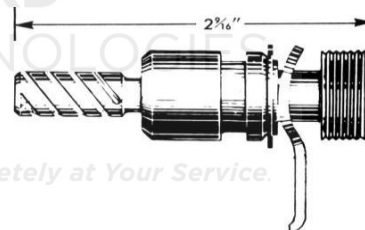
## HM171 – 7/8-18 Extention

Adapter sleeve for connecting a Ford Transmission



## HM172

Adapter sleeve for connecting a Dual drive adapter on a dual drive adapter on a Ford Transmission from 1957



## HM128 – Clamp Retainer (Ford)



## HM173 – Use with Ferrule HF109



## HM105

Adapter sleeve with 7/8"-18 external thread. 5/8-18 & 3/4"-20 internal thread.



## HM189

45° Elbow 1-1 Ratio. 5/8"-18 male & female - .104" to .105" respectively



## 400 SERIES

### RIGHT ANGLE ADAPTER

This heavy duty unit has the drive outlet 90 degrees from the drive end and comes with a selection of gear ratios. It is suitable for either speedometer or transmission installation with the proper key and sleeve. The housing is a rugged die casting with hardened bearings and precision gears.

Driven connection located here for drive, same as driven rotation. Optional Zerk cap is available.



B - .203" Diameter  
 F - .104" Square  
 X - .187" Diameter

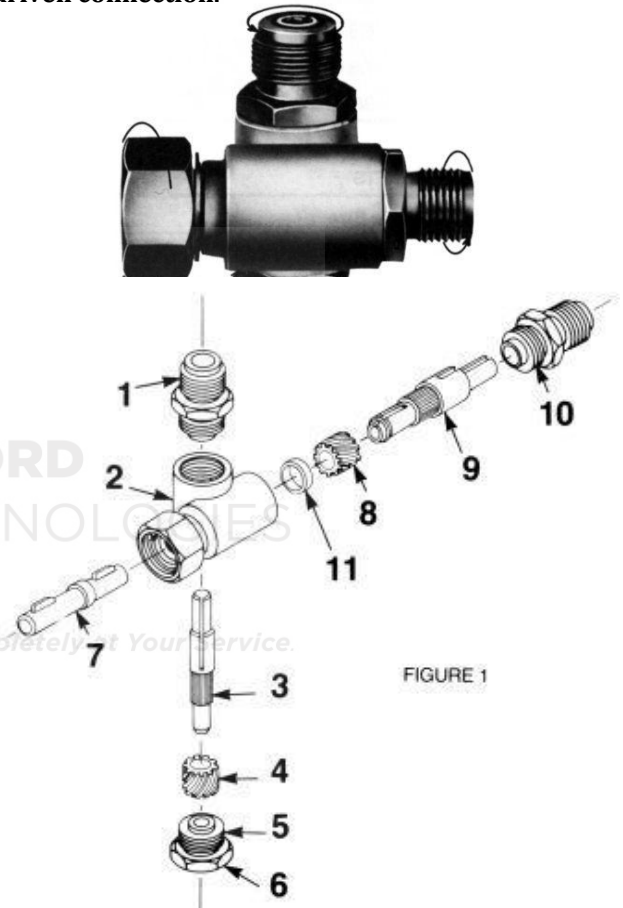
Part #	Description	No.
Chart 1 - Pg 28	Adapter Sleeve	1
HR223	Housing Assy. w/7/8"-18" -18 Nut	2
Chart 2 - Pg 28	Driven Shaft	3
Chart 3 - Pg 28	Gear "B"	4
HR114	End Cap 400/500 Series	5
Chart 4 - Pg 28	Drive Tip	6
Chart 5 - Pg 28	Drive Shaft	7
Chart 3 - Pg 28	Gear "A"	8
HR128	End Cap w/Zerk Fitting	9

## 500 SERIES

### DUAL DRIVE ADAPTER

This heavy duty unit provides two outlets to drive instruments from the same drive, and can have two ratios from the same take-off. It is adaptable to most trucks with the use of proper adapter key and sleeves. The housing is a rugged die casting with hardened bearings and precision gears.

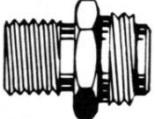
Driven connection located here for drive, same as driven connection.




Part #	Description	No.
Chart 1 - Pg 28	Adapter Sleeve	1
HR223	Housing Assy. w/7/8"-18" -18 Nut	2
Chart 2 Pg 28	Drive Shaft	3
Chart 3 Pg 28	Gear "B"	4
HR114	End Cap 400/500 Series	5
HR128	End Cap with Zerk Fitting	6
Chart 4 Pg 28	Drive Tip	7
Chart 3 Pg 28	Gear "A"	8
Chart 6 Pg 28	Drive Shaft	9
Chart 1 Pg 28	Sleeve	10
HR143	Spacer - Gear, 500 Series	11

# 400 & 500 Series Adapter Parts

## Chart 1 - Sleeves

Part #	Large Thread	Illustration
HR122	5/8-18"	
HR127	7/8-18"	
HR121	3/4" -20	



## Chart 2 - Driven Shafts

Part #	Hole Size	Illustration
HR138	.160" Dia.	
HR139	.196" Dia.	
HR140	.213" Dia.	
HR141	.105" Int. Sq.	
HR142	.151" Int. Sq.	


## Chart 3 - Gears

Ratio	Drive Gear 'A' Part Number	Drive Gear 'B' Part Number
.500	HR209	HR199
.666	HR207	HR208
.800	HR205	HR204
1.000	HR203	HR203
1.250	HR204	HR205
1.500	HR208	HR207
2.000	HR199	HR209

## Chart 4 - Drive Tips



Part #	Drive End	Illustration
HR176	.104" Sq.	
HR177	.150" Sq.	
HR178	.156" Sq.	
HR179	.187" Dia.	
HR180	.203" Dia.	

## Chart 5 - Drive Shafts - 400 Series

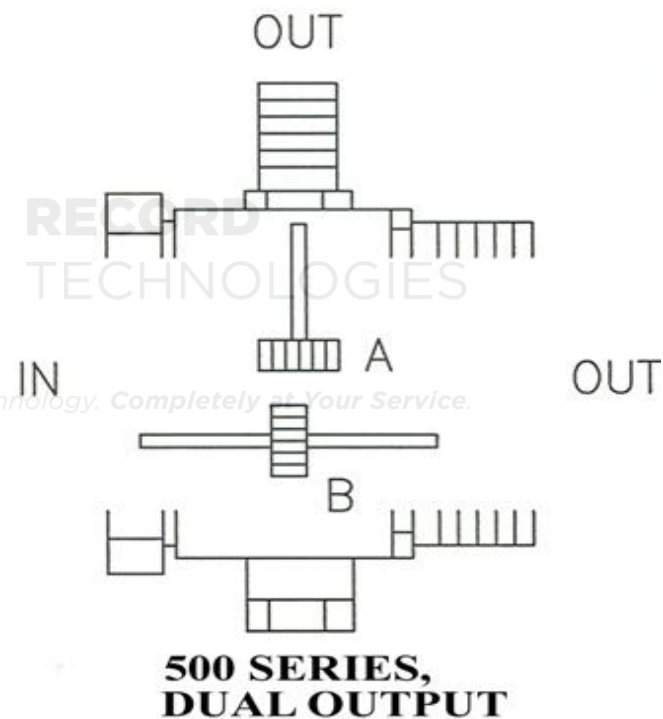
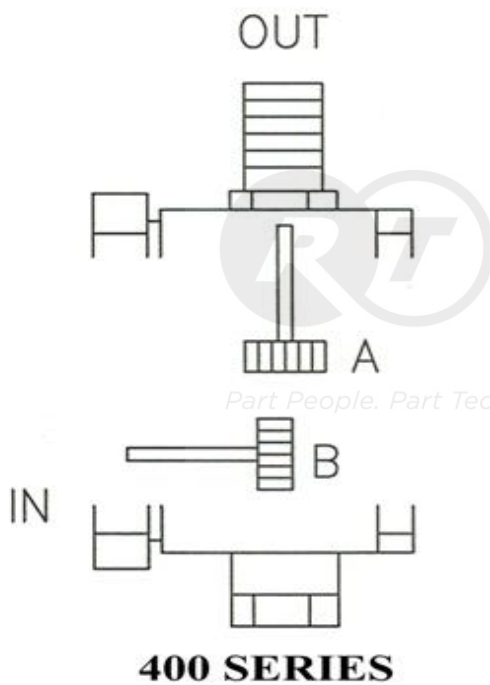
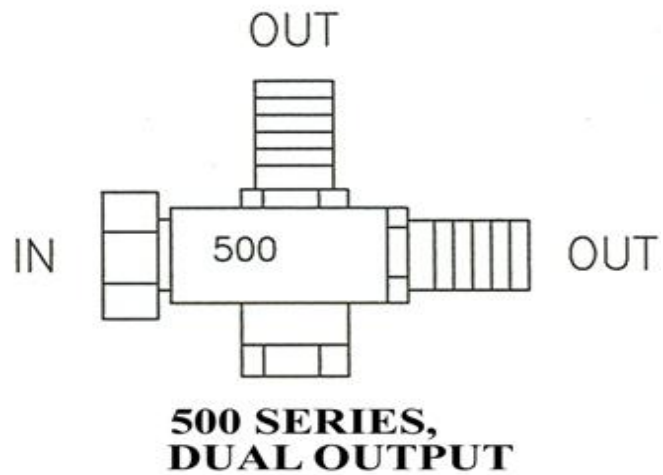
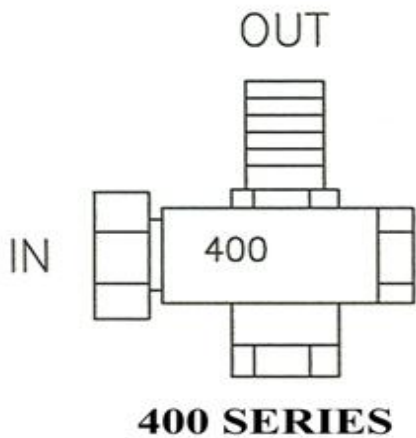
Part #	Hole Size	Illustration
HR133	.160" Dia.	
HR135	.196" Dia.	
HR137	.213" Dia.	

## Chart 6 - Driven Shafts - 500 Series - Dual Drive

\*\* Use Retaining Ring

Part #	Hole Size	Illustration
HR215	.160" Dia.	
HR216	.191" Dia.	
HR217	.213" Dia.	
HR218	.105" Int. Sq.	
HR219	.151" Int. Sq.	

# 400 & 500 Series Gear Ratio Selection Chart

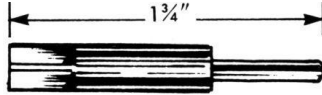


RATIO	DRIVE GEAR 'A' PART #	DRIVE GEAR 'B' PART #
0.500	HR209	HR199
0.666	HR207	HR208
0.800	HR205	HR204
1.000	HR203	HR203
1.250	HR204	HR205
1.500	HR208	HR207
2.000	HR199	HR209

# Adapter Keys

## HR101

For Short Extension, .105" int.  
Square to .104" square



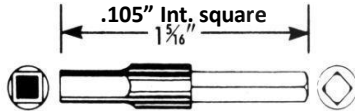
## HR102

Use with dual drive adapters  
.156" and .203" dia. tangs



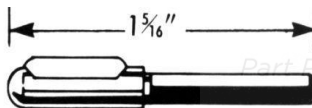
## HR103

For short extension .104" sq.  
.105" Int. square



## HR104

For adapting .105" dia. to  
.104" square



## HR105

With Collar .187" to .187"



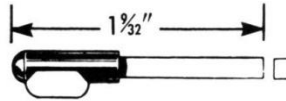
## HR106

No Collar, .187" to .187"



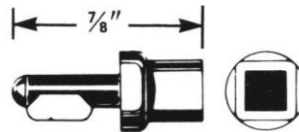
## HR115

.156" dia. to .104" square



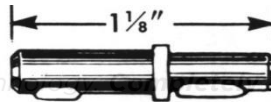
## HR117

For adapters .156" dia. to  
.187" internal square



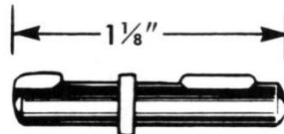
## HR118

.187" dia. to .203" dia.



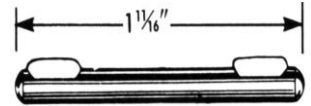
## HR119

For short extension of .187 dia tang



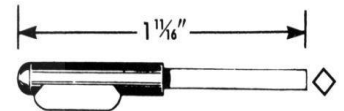
## HR120

.156" dia. to .156" dia



## HR124

.156" dia. to .104 Square



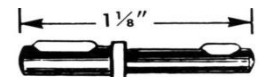
## HR129

For short extension of .156"  
Use with dual drive adapters

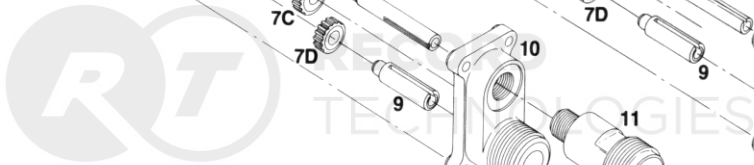
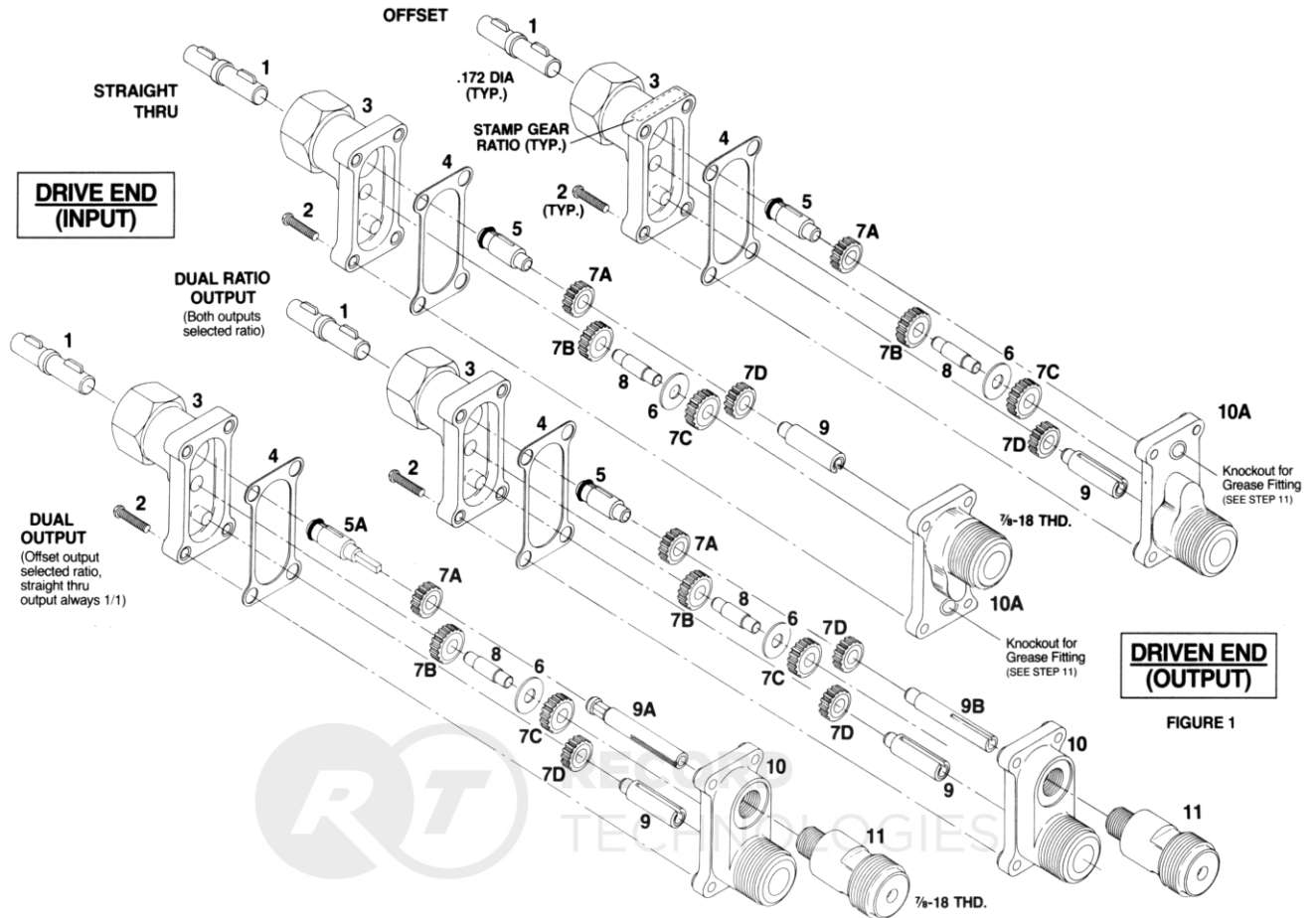


## HR131

For adapting .156" dia. tang  
To .187" dia. tang



# 800 Series Ratio Drive Adapter





Part People. Part Technology. Completely at Your Service.



Part #	Description	Item #
See Chart 11	Drive Tips	1
HH101	Self-Tapping Screw 5/8 type	2
HR251	Housing Assembly, 7/8 Drive End	3
HR245	Gasket – 800 Series	4
HR174	Drive Shaft with Retaining ring .189	5
HR238	Drive Shaft – DUAL OUTPUT ONLY .191	5A
HH107	Large Washer	6
See Page	Gear A, B, C, D	7
HR172	Intermediate Shaft	8
See Chart 12	Driven Shaft	9
See Chart 13	Driven Shaft - DUAL OUTPUT ONLY	9A
See Chart 14	Driven Shaft - DUAL RATIO OUTPUT ONLY	9B
HR236	Housing & Sleeve Assembly – DUAL DRIVE – Driven End	10
HR252	Housing Assembly, 7/8 Driven End	10A
HR255	Housing Assembly – with Zerk	
HR244	Sleeve - DUAL OUTPUT	11
HR257	Grease Fitting - (not shown)	
HR237	Plug	





**CHART 11 - DRIVE TIPS - with .172" diameter internal end 800 SERIES**

Part #	Drive End	Illustration
HR176	.104" Square	
HR177	.150" Square	
HR178	.156" Diameter	
HR179	.187" Diameter	
HR180	.203" Diameter	



**CHART 12 - DRIVEN SHAFT - 800 Series**

Part #	Drive End	Illustration
HR167	.105" int. sq.	
HR168	.151" int. sq.	
HR170	.196" dia.	
HR171	.213" dia.	

**CHART 13 - DRIVEN SHAFT - 800 Series DUAL OUTPUT ONLY**

Part #	Drive End	Illustration
HR239	.105" Internal square	
HR243	.213" Diameter	

**CHART 14 - DRIVEN SHAFT - 800 SERIES DUAL OUTPUT ONLY**

Part #	Drive End	Illustration
HR246	.105" Internal Square	
HR247	.151" Internal Square	
HR248	.160" Diameter	
HR249	.196" Diameter	
HR250	.213" Diameter	



# Adapter Ordering

## Information for ordering assembled 800 series adapters

1. Select model type
2. Select input shaft – Table 1
3. Select output shaft – Table 2
4. Select Ratio

Table 1

Input – (Drive) Tip Size
#1 = .104 Square
#2 = .150 Square
#3 = .156 Dia./Tang
#4 = .187 Dia./Tang
#5 = .203 Dia./Tang
#6 = .124 Square *
#7 = .183 Square ****
#8 = .160 Dia/Slot **
#9 = .213 Dia/Slot ***
#A = .196 Dia/Tang*
#B = .160 Dia/Slot (400/500 Series Only)

Table 2

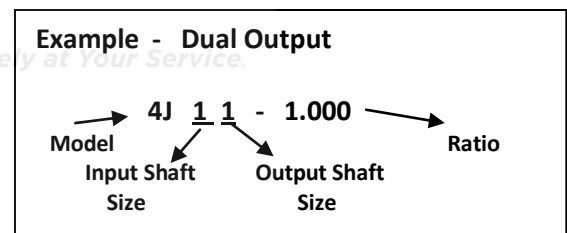
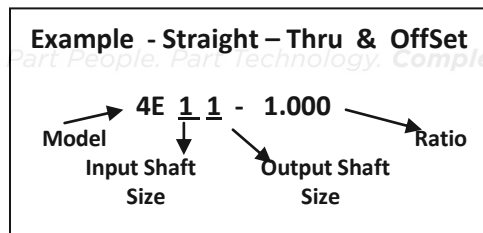
Output – (Driven) Tip Size
#1 = .105 Internal Square
#2 = .151 Internal Square
#3 = .160 Dia/Slot (For use w /.156 Tang Tip
#4 = .196 Dia/Slot (For use w/.187 Tang Tip
(500 series = .191 Dia. Slot)
(600 series = .191 Internal Square)
#5 = .213 Dia/Slot (For use w/.203 Tang Tip

Table 3

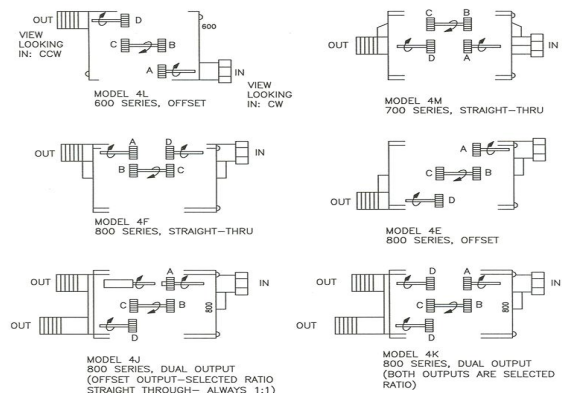
End Connector
3 = ¾-20 Thread
7 = ⅝-18 Thread



\*\*700 & 800 Series Only    \*\*800 Series Only    \*\*\*600/700/800 Series Only    \*\*\*\*600 Series Only



Please note..We are also familiar with the old Stewart-Warner style, such as 777F and can accept your order from that description.



# Decreasing Ratio and Gear Drive Selection

Ratio	Gear A	Gear B	Gear C	Gear D	Mile-O-Meter Reading
0.3352	11A	19A	11A	19A	2983
0.3474	11A	19A	12D	20	2879
0.3600	12D	20	12D	20	2778
0.3746	11A	19A	11	17A	2669
0.3860	11A	19A	12	18A	2591
0.3882	12D	20	11	17D	2576
0.3961	11A	19A	13	19	2525
0.4000	12D	20	12	18A	2500
0.4105	12D	20	13	19	2436
0.4135	11A	19A	10	14	2418
0.4187	11	17A	11	17A	2388
0.4286	12D	20	10	14	2333
0.4314	11	17A	12	18A	2318
0.4342	11A	19A	12A	16	2303
0.4428	11	17A	13	19	2259
0.4445	12	18A	12	18A	2250
0.4500	12D	20	12A	16	2222
0.4505	11A	19A	14A	18	2220
0.4562	12	18A	13	19	2192
0.4622	11	17A	10	14	2164
0.4667	12D	20	14A	18	2143
0.4681	13	19	13	19	2136
0.4762	12	18A	10	14	2100
0.4825	11A	19A	10A	12B	2073
0.4853	11	17A	12A	16	2061
0.4887	13	19	10	14	2046
0.5000	12	18A	12A	16	2000
0.5018	11A	19A	15	17	1993
0.5033	11	17A	14A	18	1987
0.5102	10	14	10	14	1960
0.5108	11A	19A	15	17	1958
0.5132	13	19	12A	16	1949
0.5185	12	18A	14A	18	1929
0.5200	12D	20	13A	15A	1923
0.5294	12D	20	15	17	1889
0.5322	13	19	14A	18	1879
0.5337	10	14	12A	16	1867
0.5392	11	17A	10A	12B	1855
0.5555	12	18A	10A	12B	1800
0.5608	11	17A	13A	15A	1783
0.5625	12A	16	12A	16	1778
0.5702	13	19	10A	12B	1752
0.5710	11	17A	15	17	1751
0.5778	12	18A	13A	15A	1731
0.5789	11A	19A	12C	12C	1727
0.5833	12A	16	14A	18	1714
0.5883	12	18A	15	17	1700
0.5930	13	19	13A	15A	1686
0.5952	10	14	10A	12B	1680
0.6000	12D	20	12C	12C	1667
0.6037	13	19	15	17	1656
0.6050	14A	18	14A	18	1653
0.6191	10	14	13A	15A	1615

Ratio	Gear A	Gear B	Gear C	Gear D	Mile-O-Meter Reading
0.6250	12A	16	10A	12B	1600
0.6303	10	14	15	17	1557
0.6471	11	17A	12C	12C	1545
0.6482	14A	18	10A	12B	1543
0.6500	12A	16	13A	15A	1538
0.6561	11A	19A	17	15	1524
0.6618	12A	16	15	17	1511
0.6667	12	18A	12C	12C	1500
0.6680	11A	19A	15A	13A	1497
0.6741	14A	18	13A	15A	1484
0.6800	12D	20	17	15A	1471
0.6842	13	19	12C	12C	1462
0.6863	14A	18	15	17	1457
0.6923	12D	20	15A	13A	1444
0.6944	10A	12B	10A	12B	1440
0.6947	11A	19A	12B	10A	1439
0.7143	10	14	12C	12C	1400
0.7200	12D	20	12B	10A	1389
0.7222	10A	12B	13A	15A	1385
0.7334	11	17A	17	15	1364
0.7353	10A	12B	15	17	1360
0.7444	11A	19A	18	14A	1343
0.7467	11	17A	15A	13A	1339
0.7500	12A	16	12C	12C	1333
0.7511	13A	15A	13A	15A	1331
0.7556	12	18A	17	15	1324
0.7647	13A	15A	15	17	1308
0.7693	12	18A	15A	13A	1300
0.7714	12D	20	18	14A	1296
0.7719	11A	19A	16A	12A	1296
0.7754	13	19	17	15	1290
0.7765	11	17A	12B	10A	1288
0.7778	14A	18	12C	12C	1286
0.7786	15	17	15	17	1284
0.7895	13	19	15A	13A	1267
0.8000	12	18A	12B	10A	1250
0.8095	10	14	17	15	1235
0.8105	11A	19A	14	10	1234
0.8210	13	19	12B	10A	1218
0.8242	10	14	15A	13A	1213
0.8319	11	17A	18	14A	1202
0.8333	10A	12B	12C	12C	1200
0.8400	12D	20	14	10	1191
0.8462	11A	19A	19	13	1182
0.8500	12A	16	17	15	1176
0.8571	12	18A	18	14A	1167
0.8628	11	17A	16	12A	1159
0.8654	12A	16	15A	13A	1156
0.8667	13A	15A	12C	12C	1154
0.8684	11A	19A	18A	12	1152
0.8769	12D	20	19	13	1140
0.8797	13	19	18	14A	1137
0.8815	14A	18	17	15	1134

Ratio	Gear A	Gear B	Gear C	Gear D	Mile-O-Meter Reading
0.8824	15	17	12C	12C	1133
0.8889	12	18A	16	12A	1125
0.8947	11A	19A	17A	11	1118
0.8975	14A	18	15A	13A	1114
0.9000	12A	16	12B	10A	1111
0.9059	11	17A	14	10	1104
0.9123	13	19	16	12A	1096
0.9184	10	14	18	14A	1089
0.9273	12D	20	17A	11	1078
0.9334	14A	18	12B	10A	1071
0.9444	10A	12B	17	15	1059
0.9458	11	17A	19	13	1057
0.9524	10	14	16	12A	1050
0.9579	13	19	14	10	1044
0.9615	10A	12B	15A	13A	1040
0.9643	12A	16	18	14A	1037
0.9649	11A	19A	20	12D	1036
0.9706	11	17A	18A	12	1030
0.9743	12	18A	19	13	1026
0.9288	13A	15A	17	15	1018
1.0000	10A	12B	12B	10A	1000

HOW TO ORDER INDIVIDUAL GEARS	
Part #	Gear Teeth
HR144	10
HR145	10A
HR146	11
HR147	11A
HR148	12
HR149	12A
HR150	12B
HR151	12C
HR152	12D
HR153	13
HR154	13A
HR155	14
HR156	14A
HR157	15
HR158	15A
HR159	16
HR160	17
HR161	17A
HR162	18
HR163	18A
HR164	19
HR165	19A
HR166	20

# Increasing Ratio & Gear Drive Selection

Ratio	Gear A	Gear B	Gear C	Gear D	Mile-O-Meter Reading
1.0000	10A	12B	12B	10A	1000
1.0181	15	17	15A	13A	0982
1.0263	13	19	18A	12	0974
1.0303	12	18A	17A	11	0971
1.0364	12D	20	19A	11A	0965
1.0370	14A	18	16	12A	0964
1.0400	13A	15A	12B	10A	0962
1.0439	10	14	19	13	0958
1.0500	12A	16	14	10	0952
1.0574	13	19	17A	11	0946
1.0588	15	17	12B	10A	0944
1.0714	10A	12B	18	14A	0933
1.0784	11	17A	20	12D	0927
1.0888	14A	18	14	10	0918
1.0961	12A	16	19	13	0912
1.1038	10	14	17A	11	0906
1.1110	10A	12B	16	12A	0900
1.1143	13A	15A	18	14A	0898
1.1177	11	17A	19A	11A	0895
1.1250	12A	16	18A	12	0889
1.1333	12C	12C	17	15	0881
1.1344	15	17	18	14A	0882
1.1367	14A	18	19	13	0880
1.1404	13	19	20	12D	0877
1.1515	12	18A	19A	11A	0868
1.1538	12C	12C	15A	13A	0867
1.1555	13A	15A	16	12A	0865
1.1590	12A	16	17A	11	0863
1.1666	14A	18	18A	12	0857
1.1763	15	17	16	12A	0850
1.1818	13	19	19A	11A	0846
1.1905	10	14	20	12D	0840
1.2000	12C	12C	12B	10A	0833
1.2020	14A	18	17A	11	0831
1.2133	13A	15A	14	10	0824
1.2180	10A	12B	19	13	0821
1.2338	10	14	19A	11A	0811
1.2352	15	17	14	10	0810
1.2500	10A	12B	18A	12	0800
1.2666	13A	15A	19	13	0790
1.2844	17	15	17	15	0779
1.2857	12C	12C	18	14A	0778
1.2878	10A	12B	17A	11	0777
1.2895	15	17	19	13	0775
1.2955	12A	16A	19A	11A	0772
1.2963	14A	18	20	12D	0771
1.3000	13A	15A	18A	12	0769
1.3077	17	15	15A	13A	0765
1.3235	15	17	18A	12	0756
1.3313	15A	13A	15A	13A	0751
1.3333	12C	12C	16	12A	0750
1.3393	13A	15A	17A	11	0747

Ratio	Gear A	Gear B	Gear C	Gear D	Mile-O-Meter Reading
1.3434	14A	18	19A	11A	0744
1.3600	17	15	12B	10A	0735
1.3636	15	17	17A	11	0733
1.3846	15A	13A	12B	10A	0722
1.3888	10A	12B	20	12D	0720
1.4000	12C	12C	14	10	0714
1.4395	10A	12B	19A	11A	0695
1.4400	12B	10A	12B	10A	0694
1.4444	13A	15A	20	12D	0692
1.4571	17	15	18	14A	0686
1.4616	12C	12C	19	13	0684
1.4706	15	17	20	12D	0680
1.4835	15A	13A	18	14A	0674
1.4970	13A	15A	19A	11A	0668
1.5000	12C	12C	18A	12	0667
1.5111	17	15	16	12A	0662
1.5242	15	17	19A	11A	0656
1.5384	15A	13A	16	12A	0650
1.5428	12B	10A	18	14A	0648
1.5454	12C	12C	17A	11	0647
1.5867	17	15	14	10	0630
1.6000	12B	10A	1216	12A	0625
1.6152	15A	13A	14	10	0619
1.6530	18	14A	18	14A	0605
1.6564	17	15	19	13	0604
1.6667	12C	12C	20	12D	0600
1.6800	12b	10a	14	10	0595
1.6863	15A	13A	19	13	0593
1.7000	17	15	18A	12	0588
1.7142	18	14A	16	12A	0583
1.7274	12C	12C	19A	11A	0579
1.7307	15A	13A	18A	12	0578
1.7515	17	15	17A	11	0571
1.7536	12B	10A	19	13	0570
1.7777	16	12A	16	12A	0563
1.7831	15A	13A	17A	11	0561
1.8000	12B	10A	18A	12	0556
1.8545	12B	10A	17A	11	0539
1.8666	16	12A	14	10	0536
1.8792	18	14A	19	13	0532
1.8889	17	15	20	12D	0529
1.9231	15A	13A	20	12D	0520
1.9285	18	14A	18A	12	0519
1.9487	16	12A	19	13	0513
1.9577	17	15	19A	11A	0511
1.9600	14	10	14	10	0510
1.9870	18	14A	17A	11	0503
1.9928	17	15	19A	11A	0502
2.0000	16	12A	18A	12	0500
2.0461	14	10	19	13	0489
2.0606	16	12A	17A	11	0484
2.0725	12B	10A	19A	11A	0483

Ratio	Gear A	Gear B	Gear C	Gear D	Mile-O-Meter Reading
2.1000	14	10	18A	12	0476
2.1360	19	13	19	13	0468
2.1427	18	14A	20	12D	0467
2.1636	14	10	17A	11	0462
2.1923	19	13	18A	12	0456
2.2198	18	14A	19A	11A	0451
2.2222	16	12A	20	12D	0450
2.2500	18A	12	18A	12	0445
2.2587	19	13	17A	11	0443
2.3030	16	12A	19A	11A	0434
2.3181	18A	12	17A	11	0431
2.3333	14	10	20	12D	0429
2.3884	17A	11	17A	11	0419
2.4184	14	10	19A	11A	0414
2.4359	19	13	20	12D	0411
2.5000	18A	12	20	12D	0400
2.525	19	13	19A	11A	0396
2.576	17A	11	20	12D	0388
2.591	18A	12	19A	11A	0386
2.669	17A	11	19A	11A	0375
2.778	20	12D	20	12D	0360
2.879	20	12D	19A	11A	0347
2.983	19A	11A	19A	11A	0335

HOW TO ORDER INDIVIDUAL GEARS	
Part #	Gear Teeth
HR144	10
HR145	10A
HR146	11
HR147	11A
HR148	12
HR149	12A
HR150	12B
HR151	12C
HR152	12D
HR153	13
HR154	13A
HR155	14
HR156	14A
HR157	15
HR158	15A
HR159	16
HR160	17
HR161	17A
HR162	18
HR163	18A
HR164	19
HR165	19A
HR166	20

# Mechanical Counters

## Veeder Root



0195316051



095316051K



HM149



0116425-007

Counters can be supplied with or without couplers depending on your needs

## Hubodometers - Analog & Digital



# Speedometer Repairs & Calibrations

## Calibration -

When you change tires, transmissions or rear-end differentials, the accuracy of your speedometer is affected. The speedometer can be calibrated by changing the driven gear at the transmission, or by installing an adapter, where the cable is attached at the transmission.

Four (4) variables are required to determine which is required:

- 1) # of teeth on the driven gear (in transmission)
- 2) # of teeth on the drive gear (in transmission)
- 3) Rear-end differential ratio
- 4) Rolling distance in inches of the tires (NOT TIRE SIZE!)

By changing the gear, or installing an adapter with the correct ratio, this will give the gauge the correct information of 1,000 cable turns per mile for it to be accurate and then your odometer will also be recording the correct mileage.

## Gauge Repairs -

We are able to repair GM speedometers which are cable driven. If your gauge is noisy, or if the needle is bouncing around, give us a call and let us determine how we can help you. We do not have any parts for imports. We have had much success with repairs to Ford Windstars speedometers, when they start to bounce.

## Cable & Adapter Manufacturing -

We make cables and adapters every day, either from sample, or from description, all for North American vehicles only.

## Other Info:

### Tire Revolutions Per Mile Calculation -

$$\frac{63,360 \text{ (inches in a mile)}}{\text{Rolling Distance in inches of tire}} = \text{Tire Revolutions per mile}$$

## **DISCONTINUED, WITH LIMITED STOCK AVAILABLE.**

- HF112 - Ferrule, Lower for .235" Casing
- HF120 - Ferrule, Upper for .420" Casing, with 5/8-18 Hex Nut
- HF127 - Lower plug for .330" Casing for 1977 Chrysler, 3-9/16" long
- HF128 - Lower plug for .330" Casing for AMC, 2-5/8" long
- HF129 - Lower plug for .330" Casing for 1977 Chrysler, 2-3/4" long
- HG112 - Ammeter, -100/+100
- HG202 - Mechanical, Manifold Pressure, 0 - 30 psi, Black Bezel
- HM110 - Adapter Sleeve for Chrysler Snap-On Ferrules to 5/8"-18 Male Thd
- HM179 - Bushing Assy tool "A" for 6/700 Series Adapters
- HM180 - Sleeve Assy tool "B" for 6/700 Series Adapters
- HM181 - Pin Assy tool "C" for 6/700 Series
- HM187 - Intermediate Shaft Gear Pressing Tool for 6/7/800 Series
- HR130 - Gasket - 600 Series Adapters
- HR183 TO HR190 - Drive tips for 600 Series Adapters
- HR240 - Driven Shaft for Dual (4J) 800 Series .151" Int. Square
- HR242 - Driven Shaft for Dual (4J) 800 Series .196" ID Slotted

- **PURCHASING-** Please provide a purchase order for your order. These may be mailed in, faxed, or emailed.
- **TERMS -** Standard terms are net 30 days from date of invoice. A late charge of 2% per month will be assessed against delinquent balances. Billing errors should be reported within 30 days of invoice date. Statements are not usually issued – pay off the invoice.
- **INVOICING -** Invoices are shipped with the orders. No statement will be mailed, unless you are delinquent, and then interest will be charged. Please supply your email address and invoices can be sent that method.
- **MINIMUM ORDER POLICY -** Minimum value for a factory direct order is \$50.00 (net). Orders not meeting this minimum will be assessed a \$10.00 service charge.
- **FREIGHT POLICY -** All orders are shipped by the most cost effective means available to us. Orders that are shipped **PREPAID**, we have established a substantial discount rate with UPS and FEDEX for small packages and we pass this discount onto you. Extremely light packages may be sent by Canada Post and the United States Postal Service. If you prefer, and have a UPS or FEDEX account, please advise us and we will ship on your account. Minimum postage charge of \$10.00 for orders sent by 'mail'.
- **WARRANTY -** Hard parts are warranted to be free of defects in material and workmanship for a period of two years from the date of original retail purchase. At our discretion, defective product shall be repaired, replaced or credited to your account. All defective products must be returned pre-paid to Mr. Speedometer Inc., along with a copy of the dated invoice of purchase. Please allow 30 days for processing of this claim. This warranty shall not apply to any product that, upon inspection, shows evidence of improper storage or installation, unintended use, accident, abuse or unauthorized repairs, modifications or alterations. Mr. Speedometer Inc. shall not be responsible for any direct or indirect costs associated with a defective product including, but not limited to, the cost of diagnosis, removal, installation of replacement, vehicle/equipment downtime, inconvenience, or any consequential damage whatsoever resulting from the use and/or failure of Record Technologies product.  
*Part People. Part Technology. Completely at Your Service.*
- **ANNUAL STOCK ADJUSTMENT -**
  1. The value of the return shall not exceed 5% of the net purchased in a calendar year. You should contact us to obtain the maximum net amount allowed for an adjustment return. All product returned will be individually valued and credited at either the pricing that was in effect on January 1 of the prior year or at the current pricing, whichever is lower.
  2. A firm off-setting order is required before a stock adjustment return will be approved. The off-setting order must be of a net value equal to or greater than the value of the return request.
  3. Stock adjustment requests may be faxed, mailed or emailed to Mr. Speedometer Inc. during the months of January and February **ONLY**. Once the request has been approved and the off-setting order has been submitted, an RMA number will be issued. Approval to return product, however, is no guarantee that any credit will be issued.
  4. All product being returned must have been purchased from Mr. Speedometer Inc. during the previous 18 months and must be in "like new" restockable condition. Custom products (assembled ratio adapters, cable assemblies) and products that have been discontinued or phased out will not be accepted.
  5. All returned items must be shipped prepaid and the box/container should have the RMA number included with it.

Record Technologies  
Mr. Speedometer Inc

#19 5030 13 ST SE  
Calgary, Alberta, Canada  
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1-800-661-1649 toll free  
1-403-258-2909 local  
1-403-255-4953 fax

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