

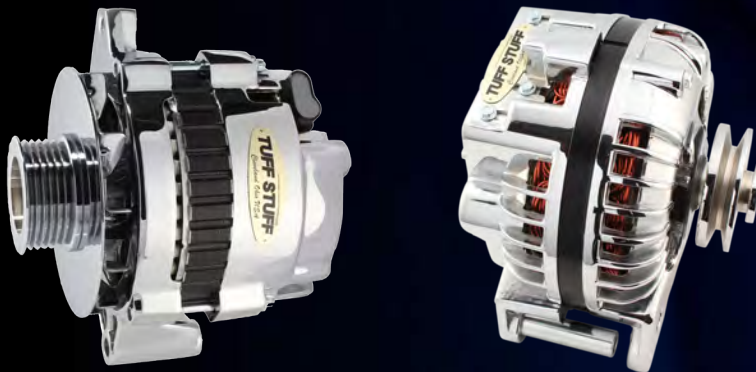


**PREMIUM QUALITY  
BUILT IN AMERICA  
PERFORMANCE ACCESSORIES**



Alternators • Starters • Water Pumps • Power Steering Pumps  
Master Cylinders • Power Brake Boosters • A/C Compressors

# What's NEW!



## HIGH AMP ALTERNATORS

Many alternator have been upgraded to higher amp output and have a custom voltage regulator for use with OEM wiring or as a 1-wire hookup. Pages 3-12.



## FINISHES

The new **Black Chrome** finish provides a distinctive look and the **Factory Cast PLUS+** finish will never oxidize or discolor and will look like NEW forever!



## CHROME PLATED ALUMINUM TYPE II POWER STEERING PUMPS

Great looking, compact size with a variety of port and mounting options. Pages 38-39.9.

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## ALTERNATOR ACCESSORIES

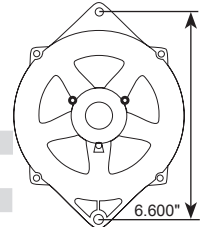
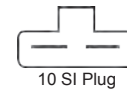
Solid state external voltage regulators, fan & pulley kits, heavy gauge charge wires and more. Pages 13-14.

## UNIVERSAL FIT 10SI GM STYLE ALTERNATORS w/INTERNAL REGULATOR 7127 7139 7140

Most 1971-86 GM cars and light trucks, 1-Wire or OEM hookup, 10-32 grounding tab

*Silver Bullet*

Finish	Pulley	65 AMP	80 AMP	100 AMP	140 AMP	100 AMP	140 AMP
Chrome	V	7127NG* 7127NJ	7127NB	7127ND	7127NK	7139ABULL	7140ABULL
Chrome	6G		7127NB6G	7127ND6G	7127NK6G	7139ABULL6G	7140ABULL6G
Polished	V	7127NJP	7127NBP	7127NDP	7127NKP	7139BBULL	7140BBULL
Polished	6G		7127NBP6G	7127NDP6G	7127NKP6G	7139BBULL6G	7140BBULL6G
Black chrome	V		<NEW> 7127ND7	7127ND7	7127NK7	7139ABULL7	7140ABULL7
Black chrome	6G		<NEW> 7127ND6G7	7127ND6G7	7127NK6G7	7139ABULL6G7	7140ABULL6G7
Stealth black	V	7127NH*	7127NE	7127NF	7127NKB	7139FBULL	7140FBULL
Stealth black	6G		7127NE6G	7127NF6G	7127NKB6G	7139FBULL6G	7140FBULL6G
Black wrinkle	V			7127NFBW	7127NKBW		
Black wrinkle	2V			7127NFBWDP	7127NKBWDP		
Black wrinkle	6G			7127NFBW6G	7127NKBW6G		
Black primer	V			7127RATBLK			
Gray primer	V			7127RATGRAY			
Yellow	V			7127NFYELLOW		7139FBULLY	
Orange	V			7127NFORANGE		7139FBULLOR	
Red	V			7127NFRED		7139FBULLRED	
Red oxide	V			7127RATRED			
Blue	V			7127NFBBLUE		7139FBULLBLU	
Cast PLUS+	V		7127	7127D	7127K	NEW> 7127DBULL	7127KBULL
Cast PLUS+	6G			7127D6G	7127K6G	NEW> 7127DBULL6G	7127KBULL6G



\* 6 Volt negative ground with a 1-wire voltage regulator - not an OEM hookup. Case depth: 4.85", lower mount boss: 2.00" long.

## DIRECT FIT 10SI GM STYLE ALTERNATORS w/INTERNAL REGULATOR 7127 7139 7140

Finish	Pulley	6 o'Clock		9 o'Clock		12 o'Clock	
		100 AMP	140 AMP	100 AMP	140 AMP	100 AMP	140 AMP
Chrome	1G	7127ND6	7127NK6	7127ND9	7127NK9	7127ND12	7127NK12
Chrome	6G					7127ND6G12	7127NK6G12
Polished	1G	7127NDP6	7127NKP6	7127NDP9	7127NKP9	7127NDP12	7127NKP12
Polished	6G					7127NDP6G12	7127NKP6G12
Stealth Black	1G	7127NF6	7127NKB6	7127NF9	7127NKB9	7127NF12	7127NKB12
Stealth Black	6G					7127NF6G12	7127NKB6G12
Cast PLUS+	1G	7127D6	7127K6	7127D9	7127K9	7127D12	7127K12
Cast PLUS+	6G					7127D6G12	7127K6G12

*"Silver Bullet"*

Chrome	1G	7139ABULL6	7140ABULL6	7139ABULL9	7140ABULL9	7139ABULL12	7140ABULL12
Chrome	6G					7139ABULL6G12	7140ABULL6G12
Polished	1G	7139BBULL6	7140BBULL6	7139BBULL9	7140BBULL9	7139BBULL12	7140BBULL12
Polished	6G					7139BBULL6G12	7140BBULL6G12
Stealth Black	1G	7139FBULL6	7140FBULL6	7139FBULL9	7140FBULL9	7139FBULL12	7140FBULL12
Stealth Black	6G					7139FBULL6G12	7140FBULL6G12

## 10DN GM STYLE EXTERNAL REGULATOR

Most 1963-70 GM cars and light trucks

Must be used with a solid state external voltage regulator like Tuff Stuff 7635. OEM wire hookup. 10-32 grounding tab.

Finish	Pulley	80 AMP	100 AMP	140 AMP
Chrome	V	7102NA	7102NC	7102NK <NEW>
Polished	V	7102NAP	7102NCP	7102NPK <NEW>
Stealth black	V	7102NF	7102NE	7102NFK <NEW>
Black wrinkle	V	7102BW	7102NFBW	7102NKBW
Yellow	V	7102NFYELLOW		
Orange	V	7102NFORANGE		
Red	V	7102NFRED		
Blue	V	7102NFBLUE		
Cast PLUS+	V	7102	7102C	7102K <NEW>



# GM Alternators



*Kool  
Charger*

## CS130 GM STYLE ALTERNATORS INTERNAL REGULATOR

Fits most 1987-94 GM cars and light trucks, 1-wire or OEM hookup.  
Features internal and external cooling fans.



7860F6G

Finish	Pulley	105 AMP	160 AMP	160A Silver Bullet	NEW
					160 AMP Bullet
Chrome	V	7860D	7860F	7860ABULL	<b>Fan &amp; Pulley</b>
Chrome	6G	7860D6G	7860F6G	7860ABULL6G	7860F6G22
Polished	V	7860DP	7860FP	7860BBULL	
Polished	6G	7860DP6G	7860FP6G	7860BBULL6G	7860FP6G22
Stealth black	V	7860E	7860G	7860CBULL	
Stealth black	6G	7860E6G	7860G6G	7860CBULL6G	7860G6G22
Cast PLUS+	6G	7860-16G	7860K-16G		7860K-16G22



7861K-16G22

Finish	Pulley	105 AMP	160 AMP	160A Silver Bullet	NEW
					160 AMP Bullet
Chrome	V	7861D	7861F	7861ABULL	<b>Fan &amp; Pulley</b>
Chrome	6G	7861D6G	7861F6G	7861ABULL6G	7861F6G22
Polished	V	7861DP	7861FP	7861BBULL	
Polished	6G	7861DP6G	7861FP6G	7861BBULL6G	7861FP6G22
Stealth black	V	7861E	7861G	7861CBULL	
Stealth black	6G	7861E6G	7861G6G	7861CBULL6G	7861G6G22
Cast PLUS+	V		7861K1G		
Cast PLUS+	6G	7861-16G	7861K-16G		7861K-16G22



7866-16G

Finish	Pulley	105 AMP	160 AMP	160A Silver Bullet	NEW
					160 AMP Bullet
Chrome	V	7866D	7866F	7866ABULL	<b>Fan &amp; Pulley</b>
Chrome	6G	7866D6G	7866F6G	7866ABULL6G	7866F6G22
Polished	V	7866DP	7866FP	7866BBULL	
Polished	6G	7866DP6G	7866FP6G	7866BBULL6G	7866FP6G22
Stealth black	V	7866E	7866G		
Stealth black	6G	7866E6G	7866G6G		7866G6GS22
Cast PLUS+	6G	7866-16G	7866K-16G		7866K-16G22



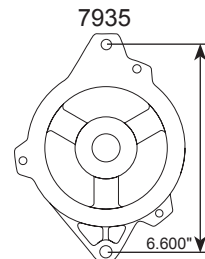
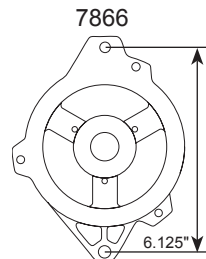
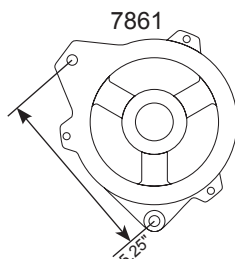
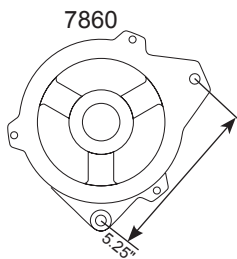
7935CBULL6G

Finish	Pulley	105 AMP	160 AMP	160A Silver Bullet	NEW
					160 AMP Bullet
Chrome	V	7935D	7935F	7935ABULL	<b>Fan &amp; Pulley</b>
Chrome	6G	7935D6G	7935F6G	7935ABULL6G	7935F6G22
Polished	V	7935DP	7935FP	7935BBULL	
Polished	6G	7935DP6G	7935FP6G	7935BBULL6G	7935FP6G22
Stealth black	V	7935E	7935G	7935CBULL	
Stealth black	6G	7935E6G	7935G6G	7935CBULL6G	7935G6G22
Cast PLUS+	V	7935-11G	7935K-11G		
Cast PLUS+	6V	7935-16G	7935K-16G		7935K-16G22
Cast PLUS+	V		7935H16V <16 volt 1-wire regulator)		

All CS130 alternators can be used as a 1-wire or OEM hookup!

### MORE CLEARANCE!

Silver Bullet 160 amp 1-wire alternators have a smooth, flat back and a side post battery terminal for tight, against the block applications. Case depth is 4.36" and the lower mounting boss is 2.00" long.



## CS144 GM STYLE INTERNAL REGULATOR

1984-90 GM Cars & light trucks, incl pigtail, OEM wiring  
 Include a universal wire harness that converts a CS144 connector to a 10SI connector

Finish	Pulley	170 AMP	250 AMP
Chrome	V	7290NA	7290NE
Chrome	6G	7290NA6G	7290NE6G
Polished	V	7290NAP	7290NEP
Polished	6G	7290NAP6G	7290NEP6G
Stealth black	V	7290NB	7290NF
Stealth black	6G	7290NB6G	7290NF6G
Cast PLUS+	V	7290NC	7290ND <NEW>
Cast PLUS+	6G	7290NC6G	7290ND6G <NEW>

## 1990-96 Corvette ZR1 350, OEM wiring

Finish	Pulley	170 AMP	250 AMP
Chrome	6G	7864A	7864D
Polished	6G	7864AP	7864DP
Stealth black	6G	7864B	7864C
Cast PLUS+	6G	7864ND	7864NK <NEW>

## 1994-96 Corvette 350 LT1, OEM wiring

Finish	Pulley	170 AMP	250 AMP
Chrome	6G	8173NA	8173NE
Polished	6G	8173NAP	8173NEP
Stealth black	6G	8173NB	8173NF
Cast PLUS+	6G	8173ND	8173NK <NEW>

## 1994-96 Impala 350 LT1, OEM wiring

Finish	Pulley	170 AMP	250 AMP
Chrome	6G	8112NA	8112NE
Polished	6G	8112NAP	8112NEP
Stealth black	6G	8112NB	8112NF
Cast PLUS+	6G	8112ND	8112NK <NEW>

## 1998-00 GM light trucks & SUV, OEM wiring

Finish	Pulley	170 AMP	250 AMP
Chrome	6G	8219NA	8219NE
Polished	6G	8219NAP	8219NEP
Stealth black	6G	8219NB	8219NF
Cast PLUS+	6G	8219ND	8219NK <NEW>

## REPLACEMENT ALTERNATOR PLUG

Fits CS130 and CS144 alternators

Ideal replacement for worn or damaged plug

7520C



CS144 Plug



7520C

### TECH TIP

If your alternator plug is damaged or missing, Tuff Stuff offers new replacements, complete with color coded wire pigtails. See page 14 for details.



7290NA6G



7864C



8173NA



8112NB



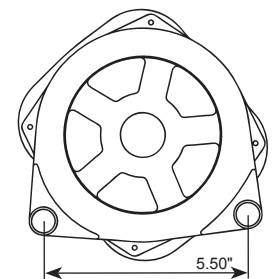
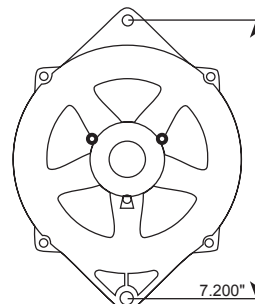
8112NA



8219ND



8219NA



7290, 7864, 8112, 8173  
 Note that the top hole is not threaded on 7864 & 8112

# GM Alternators



7721



7721NB



7722NA & 7723NA  
Clutch Style Pulley



7724NB



7937A



7937A6G

## CORVETTE LATE MODEL

Valeo style alternator, OEM wiring  
1997-00 all, 2001 w/manual trans

Internal voltage regulator, 6" bolt spacing.

Finish	Pulley	110 AMP
Chrome	6G	7721NA
Polished	6G	7721NAP
Stealth black	6G	7721NB
Cast Plus+	6G	7721

2001 w/auto trans, OEM wiring

Finish	Clutched pulley	110 AMP
Chrome	6GC	7723NA
Stealth black	6GC	7723NB
Cast Plus+	6GC	7723N

2002-04 w/auto trans, 2005-09 all, OEM

Finish	Clutched pulley	150 AMP
Chrome	6GC	7722NA
Polished	6GC	7722NAP
Stealth black	6GC	7722NB
Cast Plus+	6GC	7722N

2002-04 w/manual trans, OEM wiring

Finish	Pulley	150 AMP
Chrome	6G	7724NA
Stealth black	6G	7724NB

## CS121 GM STYLE MINI

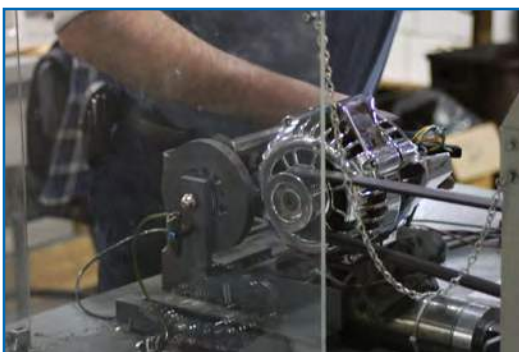
Designed for tight configurations such as high performance, street rods or race cars. Internal and external cooling fans, internal voltage regulator. *Note that the 12 volt alternators can be used as a 1-wire or OEM hookup, the 16 volt alternators are a 1-wire only.*

Finish	Pulley	12 Volt	16 Volt*
		110 AMP	110 AMP
Chrome	V	7937A	7937A16V
Chrome	V	7937AST	<NEW
Chrome	6G	7937A6G	
Polished	V	7937AP	7937AP16V
Polished	V	7937APST	<NEW
Stealth black	V	7937B	7937B16V
Stealth black	V	7937BST	<NEW
Stealth black	6G	7937B6G	
Cast PLUS+	V	7937	793716V
Cast PLUS+	V	7937ST	<NEW
Cast PLUS+	6G	79376G	<NEW

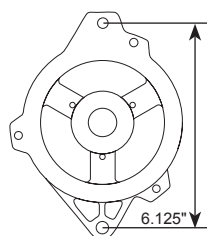
A slightly larger CS130 alternator with a Factory Cast PLUS+ finish and a 16 volt regulator, 160 amp output, 1-wire with a single groove pulley is available, part number 7935H16V.

### TECH TIP

A 1-wire alternator requires a single wire to connect the alternator to the battery. It does away with the factory alternator wiring harness and cleans up under hood wiring.



**16 VOLT VERSION  
ALSO AVAILABLE!**



Every alternator is load tested to meet or exceed stated output!

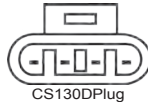
## CS130D LATE MODEL GM STYLE INTERNAL REG

1996-02 GM pickup trucks & vans, 1-wire or OEM hookup

Finish	Pulley	Back Post		Side Post <NEW	
		125 AMP	175 AMP	125AMP	175 AMP
Chrome	6G	8206NA	8206NC	8206NA1	8206NC1
Polished	6G	8206NAP	8206NCP	8206NAP1	8206NCP1
Stealth black	6G		8206NB		8206NB1
Cast PLUS+	6G	8206	8206ND	82061	8206ND1

1998-02 Camaro & Firebird 350, 1-wire or OEM hookup, std back post

Finish	Pulley	125 AMP	175 AMP
Chrome	6G	8242NA	8242NC
Polished	6G	8242NAP	8242NCP
Stealth black	6G		8242NB
Cast PLUS+	6G	8242	8242ND



1998-03 GM pickup trucks & vans, standard back post

Finish	Pulley	OEM wiring		1-wire <NEW	
		125 AMP	175 AMP	125 AMP	175 AMP
Chrome	6G	8233NA	8233NC	8233NA1	8233NC1
Polished	6G	8233NAP	8233NCP	8233NAP1	8233NCP1
Stealth black	6G		8233NB		8233NB1
Cast PLUS+	6G	8233	8233ND	82331	8233ND1

2001-05 GM pickup trucks, standard back post

Finish	Pulley	OEM wiring		1-wire <NEW	
		125 AMP	175 AMP	125 AMP	175 AMP
Chrome	6G	8283NA	8283NC	8283NA1	8283NC1
Polished	6G	8283NAP	8283NCP	8283NAP1	8283NCP1
Stealth black	6G		8283NB		8283NB1
Cast PLUS+	6G	8283	8283ND	82831	8283ND1

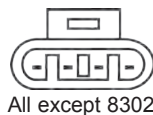
## AD230 & AD244 GM TRUCK & SUV INTERNAL REG

1999-04 GM Truck & SUV, 1-wire or OEM, back post, 4 pin regulator

Finish	Pulley	180 AMP	230 AMP	230 AMP S-BULLET
Chrome	6G	8237A	8237C	8237CBULL
Polished	6G	8237AP	8237CP	8237CPBULL
Stealth black	6G		8237B	
Cast PLUS+	6G	8237	8237D	

1999 Silverado, 1-wire or OEM hookup

Finish	Pulley	105 AMP
Chrome	6G	8238A
Polished	6G	8238AP
Stealth black	6G	8238B
Cast PLUS+	6G	8238



2004-05 GM SSR all, 2006 manual only, OEM wire

Finish	Pulley	180 AMP	230 AMP
Chrome	6G	8292A	8292D
Polished	6G	8292AP	8292DP
Cast PLUS+	6G	8292B	8292C

2006 GM SSR w/automatic trans & clutch pulley, OEM wire

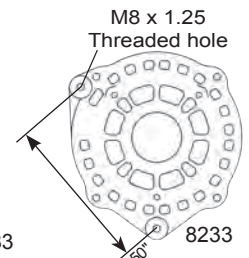
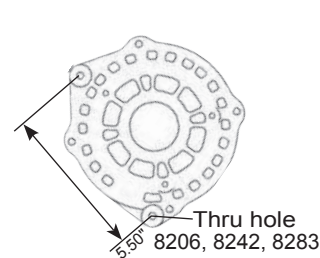
Finish	Pulley	180 AMP	230 AMP
Chrome	6GC	8299A	8299D
Polished	6GC	8299AP	8299DP
Stealth black	6GC	8299E	8299F
Cast PLUS+	6GC	8299B	8299C <NEW

2005-07 GM Truck & SUV, OEM wiring w/2 pin regulator

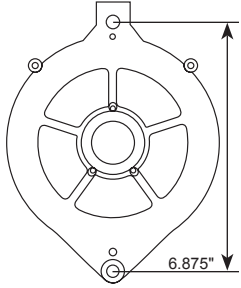
Finish	Pulley	180 AMP	230 AMP	230 AMP S-BULLET
Chrome	6G	8302A	8302C	8302CBULL6G
Polished	6G	8302AP	8302CP	
Stealth black	6G	8302B	8302D	
Cast PLUS+	6G	8302	<NEW	



For trucks, SUV's, high performance street machines, street rods, show cars, extreme stereo/ video, RV's and hydraulics



# Ford Alternators



Use 7771 for 150 or 200 amp upgrade

## FORD "SMOOTH BACK" 1-WIRE HYBRID INTERNAL REGULATOR

Most 1961-85 small case applications

Finish	Pulley	100 AMP	140 AMP	100 AMP Silver Bullet	140 AMP Silver Bullet
Chrome	V	7068RD		7068ABULL	7069ABULL
Chrome	6G	7068RD6G		7068ABULL6G	7069ABULL6G
Polished	V	7068RDP		7068BBULL	7069BBULL
Polished	6G	7068RDP6G		7068BBULL6G	7069BBULL6G
Black chrome	V	7068RD7	<NEW>	7068ABULL7	7069ABULL7
Black chrome	6G	7068RD6G7	<NEW>	7068ABULL6G7	7069ABULL6G7
Stealth black	V	7068RF		7068FBULL	7069FBULL
Stealth black	6G	7068RF6G		7068FBULL6G	7069FBULL6G
Black wrinkle	V	7068NGBW	7068NKBW		
Yellow	V	7068RDYELLOW		7068FBULLY	
Yellow	6G	7068RF6GY		7068FBULL6GY	
Red	V	7068RFRED		7068FBULLRED	
Red	6G	7068RF6GRED		7068FBULL6GR	
Blue	V	7068RDBLUE		7068FBULLBLU	
Blue	6G	7068RF6GBLUE		7068FBULL6GB	
Cast PLUS+	V	7068	7068K	7068BULL	7068KBULL <NEW>
Cast PLUS+	6G	70686G	7068K6G	7068BULL6G	7068KBULL6G <NEW>



## FORD 1G SMALL CASE/HYBRID

7078

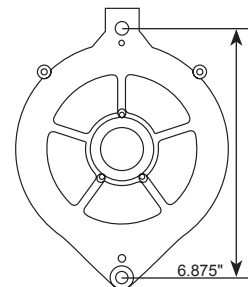
Most 1961-85 small case alternators

Finish	Pulley	OEM Wire	1-Wire Hybrid		OEM Wire Hybrid	
		70 AMP	70 AMP	100 AMP	100 AMP	140 AMP
Chrome	V	7078NA	7078NB	7078ND	7078NC	7078NK
Chrome	6G				7078NC6G	
Polished	V	7078NAP	7078NBP	7078NDP	7078NCP	7078NKP
Stealth black	V	7078NH	7078NE	7078NF	7078NG	7078NKB
Stealth black	6G			7078NF6G		
Black wrinkle	V				7078NGBW	7078NKBW
Yellow	V	7078NHYELLOW				
Red	V	7078NHRED				
Blue	V	7078NHBLUE				
As cast	V	7078				7078NJ

1-Wire alternators have an internal voltage regulator, OEM wire style require the use of an external regulator, not included. Hybrid alternators feature a case that is 1/4" longer than the stock Ford small OE case. Can substitute 7068 or 7069 for 1-wire applications. 7078NC and 7078NC6G include wiring harness.



Use 7771 for 150 or 200 amp upgrade

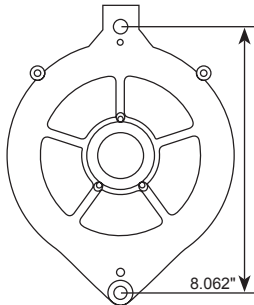




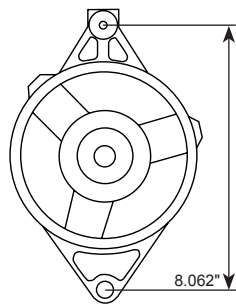
## FORD 1G - 3G LARGE CASE 7074

Most 1973-91 large case alternators, OEM wiring

Internal regulator	1G Series	3G Series	
<b>Finish</b>	<b>Pulley</b>	<b>100 AMP</b>	<b>225 AMP</b>
Chrome	V	7074RA	7074RD
Stealth black	V	7074RI	7074RK <NEW>
Cast PLUS+	V	7074RF	7074RG <NEW>



1Gen Series  
Requires External  
Regulator  
7074RA, RF, RI



3Gen Series  
Internal regulator  
7074RD, RG, RK



7074RA



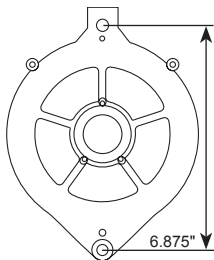
7074RD

## FORD 2G INTERNAL REGULATOR 7716

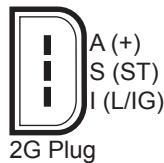
1987-95 5.0L, OEM wiring

Finish	Pulley	75 AMP	100 AMP
Chrome	6G Bullet	7716ABULL	
Chrome	6G	7716A	7716B
Polished	6G	7716AP	7716BP
Stealth black	6G		7716C
Cast PLUS+	6G	7716	7716E <NEW>

See 7771 for 150 or 200 amp upgrade - see page 9  
See 7068 or 7069 for 1 wire version - see page 8



7716 & 7771



2G Plug



7716E

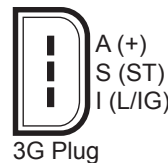


7716B

## FORD 3G INTERNAL REGULATOR 7771

Most 1993-00 5.0L, OEM wiring - includes early model harness

Finish	Pulley	150 AMP	225 AMP	225 AMP SILVER BULLET
Chrome	V	7771A	7771D	7771DBULL
Chrome	6G	7771A6G	7771D6G	7771DBULL6G
Polished	V	7771AP		7771DPBULL
Polished	6G	7771AP6G		7771DPBULL6G
Stealth black	V	7771B	7771C	7771CBULL
Stealth black	6G	7771B6G	7771C6G	7771CBULL6G
Stealth black	6G	7771BW <1-wire regulator>		
Yellow	V	7771AYELLOW	7771DYELLOW	
Yellow	6G	7771A6GY	7771D6GY	
Red	V	7771ARED	7771DRED	
Red	6G	7771A6GRED	7771D6GRED	
Blue	V	7771ABLUE	7771DBLUE	
Blue	6G	7771A6GBLUE	7771D6GBLUE	
Cast PLUS+	V	7771	7771F	7771FBULL <NEW>
Cast PLUS+	6G	77716G	7771F6G	7771FBULL6G <NEW>



3G Plug



7771DBULL6G



7771B

# Ford Alternators



7764A



7764



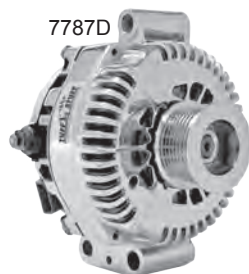
7791F



7768CBULL



7787B



7787D



7773D



8251C



7781A



7781B



8436B

Clutch  
Style  
Pulley



8436E

## FORD 3G INTERNAL REGULATOR

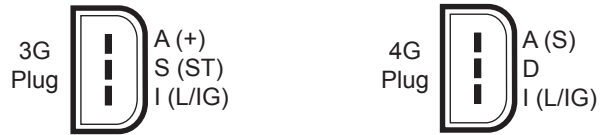
		4.6L, 5.4L & 6.8L, OEM wiring		SILVER BULLET
Finish	Pulley	150 AMP	225 AMP	225 AMP
Chrome	7G	7764A	7764D	7764DBULL
Polished	7G	7764AP	7764DP	7764DPBULL
Stealth black	7G	7764B	7764C	7764CBULL
As cast	7G	7764	7764E	7764EBULL <NEW

## 1997-02 Pick up trucks, vans & SUV's, OEM wiring

Finish	Pulley	150 AMP	225 AMP	225 AMP
Chrome	8G	7791A	7791D	7791DBULL
Polished	8G	7791AP	7791DP	7791DPBULL
Stealth black	8G	7791B	7791C	7791CBULL
Cast PLUS+	8G	7791E	7791F	7791FBULL <NEW

## 1992-04 Pick up trucks, vans & SUV's, OEM wiring

Finish	Pulley	150 AMP	225 AMP	225 AMP
Chrome	8G	7768A	7768D	7768DBULL
Polished	8G	7768AP	7768DP	7768DPBULL
Stealth black	8G	7768B	7768C	7768CBULL
Cast PLUS+	8G	7768E	7768F	<NEW



## FORD 4G INTERNAL REGULATOR

### 1996-03 4.0 & 5.0L Explorer, OEM wiring

Finish	Pulley	130 AMP	225 AMP
Chrome	6G	7787A	7787D
Polished	6G	7787AP	7787DP
Stealth black	6G	7787B	7787C
Cast PLUS+	6G	7787E	7787F <NEW

### 1995-04 4.6L Full size cars & SUV's, OEM wiring

Finish	Pulley	150 AMP	225 AMP
Chrome	6G	7773A	7773D
Polished	6G	7773AP	7773DP <NEW
Stealth black	6G	7773B	7773C
Cast PLUS+	6G	7773	<NEW

### 1999-04 5.4L F-series Lightening only, OEM wiring

Finish	Pulley	130 AMP	225 AMP
Chrome	8G	8251A	8251D
Polished	8G	8251AP	8251DP
Stealth black	8G	8251B	8251C
Cast PLUS+	8G	8251	8251E <NEW

### 1996-02 4.6L DOHC and Bullitt GT, OEM wiring

Finish	Pulley	150 AMP	225 AMP
Chrome	6G	7781A	7781D
Polished	6G	7781AP	7781DP
Stealth black	6G	7781B	7781C
Yellow	6G	7781AYELLOW	7781DYELLOW
Red	6G	7781ARED	7781DRED
Blue	6G	7781ABLUE	7781DBLUE
Cast PLUS+	6G	7781	7781N

### 2003-04 Cobra & Mach 1 4.6L DOHC

#### w/o supercharger, w/clutched pulley, OEM wiring

Finish	Pulley	135 AMP	225 AMP
Chrome	6GC	8436A	8436D
Polished	6GC	8436AP	8436DP
Stealth black	6GC	8436B	8436C
Cast PLUS+	6GC	8436E	8436K <NEW

## FORD 6G INTERNAL REGULATOR

1999-02 Ford F series diesel w/single or dual alternators, top position

2000-03 Ford Excursion w/7.3L diesel, OEM wiring

Finish	Pulley	150 AMP	200 AMP
Chrome	8G	7796A	7796D <NEW
Polished	8G	7796AP	7796DP <NEW
Stealth black	8G	7796B	7796C <NEW
Cast PLUS+	8G	7796	7796F <NEW



7796A

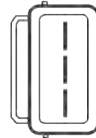


7796C

1999-04 4.6L SOHC, OEM wiring

Finish	Pulley	135 AMP	225 AMP
Chrome	6G	8252A	8252D
Polished	6G	8252AP	8252DP
Stealth black	6G	8252B	8252C
Yellow	6G	8252AYELLOW	8252DYELLOW
Red	6G	8252ARED	8252DRED
Blue	6G	8252ABLUE	8252DBLUE
Cast PLUS+	6G	8252	8252E <NEW

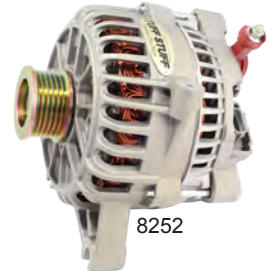
6G Plug



7796, 8252, 8266



8252B



8252

2001-04 Mustang 3.8L w/o supercharger, OEM wiring

Finish	Pulley	110 AMP	225 AMP
Chrome	6G	8266A	8266D
Polished	6G	8266AP	8266DP
Stealth black	6G	8266B	8266C
Cast PLUS+	6G	8266E	8266F <NEW



8266AP



8266E

2003-04 Mustang 4.6L Cobra Supercharged DOHC, OEM wiring

Finish	Pulley	110 AMP	225 AMP
Chrome	8G	8266A8G	8266D8G
Polished	8G	8266AP8G	8266DP8G
Stealth black	8G	8266B8G	8266C8G
Cast PLUS+	8G	8266E8G ▲	8266F8G <NEW

▲ Bullet nose pulley



8266F8G



8266B8G

2004-06 F-series 4.6L, 5.4L & Lincoln 5.4L Mark Series, OEM wiring

Finish	Pulley	135 AMP	225 AMP
Chrome	6G	8318A	8318D
Polished	6G	8318AP	8318DP
Stealth black	6G	8318B	8318C
Cast PLUS+	6G	8318	8318E <NEW



8318B



8318A

2005-08 Mustang 4.0L V6 and others, OEM wiring

Finish	Pulley	135 AMP	225 AMP
Chrome	6G	8437A	8437D
Polished	6G	8437AP	8437DP
Stealth black	6G	8437B	8437C
Cast PLUS+	6G	8437E	8437F <NEW



8437A



8437C

2005-08 Mustang 4.6L V8 and others w/clutch pulley, OEM wiring

Finish	Pulley	135 AMP	225AMP
Chrome	6GC	8438A	8438D
Chrome Roush SC	6GC	8438ASC	8438DSC
Polished	6GC	8438AP	8438DP
Stealth black	6GC	8438B	8438C
Cast PLUS+	6GC	8438E	8438F

6G Plug



8318, 8437, 8438



8438C



8438D

# Chrysler Alternators



## CHRYSLER OEM STYLE ALTERNATORS 8509/9509

Early 1960-88	OEM Wire	1-Wire	OEM Wire	1-Wire	OEM Wire	1-Wire	
Finish	Pulley	60 AMP	60 AMP	100 AMP	100 AMP	130 AMP	130 AMP <NEW>
Chrome	1G	8509RASP	8509RBSP	8509RCSP	8509RDSP	9509RCSP	9509RDSP
Chrome	2G	8509RADP	8509RBDP	8509RCDP	8509RDDP	9509RCDP	9509RDDP
Polished	1G	8509RAPSP	8509RBPSP	8509RCPSP	8509RDPSP	9509RCPSP	9509RDPSP
Polished	2G	8509RAPDP	8509RBDPDP	8509RCPDP	8509RDPDP	9509RCPDP	9509RDPDP
Black chrome	1G	<NEW>	8509RBSP7	8509RCSP7	8509RDSP7		9509RDSP7
Black chrome	2G	<NEW>	8509RBDP7		8509RDDP7		9509RDDP7
Stealth black	1G	8509RJSP	8509RGSP	8509RFSP	8509RESP	9509RFSP	9509RESP
Stealth black	2G	8509RJDP	8509RGDP	8509RFDP	8509REDP	9509RFDP	9509REDP
Cast PLUS+	1G	8509SP		8509CSP	8509DSP	9509CSP	9509DSP
Cast PLUS+	2G	8509		8509DP	8509DDP	9509DP	9509DDP



8509RASP

OEM wire hookup requires an external voltage regulator, not included, see page 14 for regulators.  
1-Wire alternators include regulator.



8509DDP



8509REDP



8509SP



1-Wire regulator



OEM hookup

## CHRYSLER INTERNAL REGULATOR 7510

1988-96 Dodge Dakota, Ram Charger, Ram pickup & B-series van  
1991-98 Cherokee, Grand Cherokee & Grand Cherokee Limited  
1991-96 Jeep Wrangler, Denso style, OEM wiring

Finish	Pulley	90 AMP	175 AMP
Chrome	7G	7510A	7510C
Polished	7G	7510AP	7510CP
Stealth black	7G	7510F	7510E <NEW>
Cast PLUS+	7G	7510B	7510D



7510E



7510D

## DODGE/JEEP INTERNAL REGULATOR 7511

1999-01 Dodge & Jeep, Denso style, OEM wiring

Finish	Pulley	90 AMP	175 AMP
Chrome	7G	7511A	7511C
Stealth black	7G	7511F	7511E <NEW>
Cast PLUS+	7G	7511B	7511D



7511B

Jeep CJ w/2.2L, 3.7L, 3.8L, 4.2L, 5.0L, Hybrid style, 1-wire

Finish	Pulley	100 AMP	140 AMP
Black Wrinkle	1G	7091NFBW	7091NKBW

## MINI ALTERNATOR INTERNAL REGULATOR 7512

Performance cars, street rods and show cars with low amp requirements

Denso style, compact design, lightweight 6 lb, 1-wire hookup

Finish	Pulley	75 AMP
Chrome	1G	7512A
Stealth black	1G	7512B
Cast PLUS+	1G	7512C <NEW>



7512C



7512B

## CHROME ALTERNATOR CASE KITS

Use our famous "Tuff Stuff" finish on your own alternator. Kits include both front and rear housings, fan, pulley, nut, lockwashers and thru bolts

Application	Item
GM 10DN and Tuff Stuff 7102	7500B
GM 10SI and Tuff Stuff 7127	7500A
GM 12SI and Tuff Stuff 7294	7500J
GM CS130 w/6G pulley & TS 7860	7500I
GM CS130 w/6G pulley & TS 7861	7500F
GM CS130 w/6G pulley & TS 7866	7500G
GM CS130 w/6G pulley & TS 7935	7500H
GM CS130D w/6G pulley & TS 8206	7500L
GM CS144 and Tuff Stuff 8219	7500M
GM CS144 and Tuff Stuff 8173	7500P
Ford 1GEN and Tuff Stuff 7078	7500C
Ford 2GEN and Tuff Stuff 7716	7500E
Ford 3GEN and Tuff Stuff 7771	7500K
Ford 3GEN and Tuff Stuff 8252	7500N
Chrysler - early w/2G pulley & TS 8509	7500D

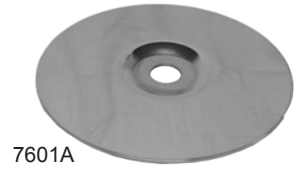


## FAN DISC - TURBO STYLE

Increases airflow through alternator to better cool the internal circuitry. 5.5" diameter with a .670" center hole.

Fits Tuff Stuff 10SI 7127, 7102, 7139, 7140, 7068, 7069

Finish	Item	Finish	Item
Chrome	7601A	Nickel	7601B
Stealth black	7601AB <NEW>	Cast PLUS+	7601AC <NEW>



## FAN AND PULLEY KITS

Fits Tuff Stuff 7102, 7127, 7139, 7140, 7068, 7069

Includes fan, pulley, lockwasher & nut

Finish	NEW			
	1 Groove	2 Groove	5 Groove	6 Groove
Chrome	7600A	7600B	7600C	7600D
Stealth black	7600AB	7600BB	7600CB	7600DB
Gold zinc	7600AD	7600BD	7600CD	7600DD
Cast PLUS+	7600AC	7600BC	7600CC	7600DC



## BULLET NOSE FAN AND PULLEY KITS

Billet aluminum construction, includes lockwasher and nut.

Fits Tuff Stuff CS130, CS144

Fits Tuff Stuff 7102, 7127

7860, 7861, 7866, 7935, 7290

7139, 7140, 7068, 7069

Finish/Pulley	NEW		NEW	
	1 Groove	6 Groove	1 Groove	6 Groove
Chrome	7666A	7666C	7679A	7679C
Polished	7666B	7666D	7679B	7679D
Stealth Black	7666BC	7666DC	7679BC	7679DC <NEW>
Cast PLUS+	7666BD	7666DD	7679BD	7679DD <NEW>



## BULLET NOSE PULLEY KITS

Fits Tuff Stuff 7102, 7127, 7139, 7140, 7068, 7069, CS130, CS144 & Hy-Brid

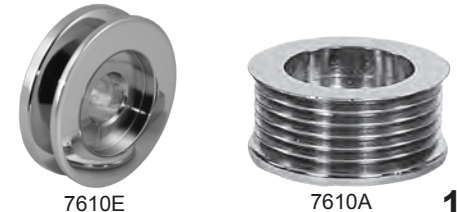
Finish	NEW!							
	1 Groove	2 Groove	5 Groove	6 Groove	7 Groove	8 Groove		
Chrome	7650A	7651A	7652A	7653A	7654A	7655A		
Polished	7650B	7651B	7652B	7653B	7654B	7655B	<NEW>	
Stealth black	7650C	7651C	7652C	7653C	7654C	7655C	<NEW>	
Cast PLUS+	7650D	7651D	7652D	7653D	7654D	7655D	<NEW>	



## INDIVIDUAL PULLEYS

Fits Tuff Stuff 7102, 7127, 7139, 7140, 7068, 7069, CS130, CS144 & Hy-Brid

Finish	NEW!							
	1 Groove	2 Groove	5 Groove	6 Groove	7 Groove	8 Groove		
Chrome	7610E	7610F	7610B	7610A	7610C	7610D		
Stealth black	7610EB	7610FB	7610BB	7610AB	7610CB	7610DB	<NEW>	
Gold zinc	7610ED	7610FD	7610BD	7610AD	7610CD	7610DD	<NEW>	
Cast PLUS+	7610EC	7610FC	7610BC	7610AC	7610CC	7610DC	<NEW>	



## NEW > HEAVY DUTY CHARGE WIRES

Premium quality 8-gauge finely stranded copper wire with 5/16" copper ring terminals. Bright red oil and water resistant wire covering. Ideal for high amp alternators. Made in USA.

Length	Item	Length	Item
24"	754624	36"	754636
48"	754648	60"	754660



## NEW > SOLID STATE VOLTAGE REGULATORS

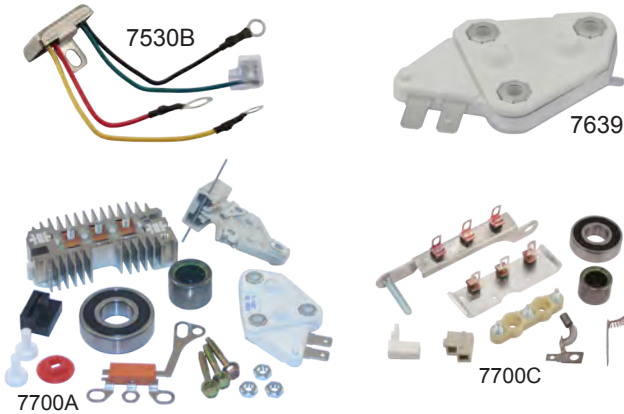
External solid state voltage regulators are far more accurate and dependable than old style mechanical regulators. Features OEM style plug in connectors.

Application	Years	Item
GM 10DN	1962 - 1972	7635
Chrysler Mechanical regulator	1970 - 1992	7524
Chrysler Electronic regulator	1969 - 1992	7545
Ford External	1963 - 1990	7540

## 1-WIRE VOLTAGE REGULATORS

Heavy duty voltage regulator resists voltage spikes

Description	Item
NEW > Fits GM 10SI 7127, 7139 & 7140, 1-wire or OEM	7639
Fits 7078 Ford 1-wire alternators	7530A
Fits 8509 & 9509 Chrysler 1-wire alternators	7530B



## ALTERNATOR REPAIR KITS

Includes all of the small parts needed to rebuild an alternator including bearings

Application	Tuff Stuff Alternator	Item
NEW > GM 10SI OEM or 1-wire	7127, 7139, 7140	7700A
GM CS130 OEM or 1-wire	7860, 7861, 7866, 7935	7700F
Chrysler - early	8509, 9509	7700C
Ford 1GEN	7078, 7078NA	7700D
Ford 2GEN	7716	7700E

## ALTERNATOR CONVERSION PIGTAILS

Allows the use of a GM CS alternator on a GM SI harness

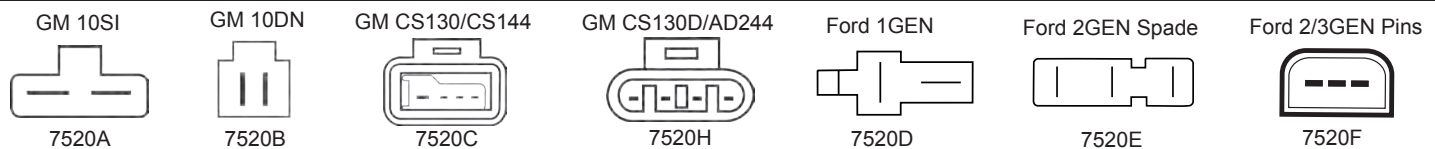
Description	Item
Converts 7127 to 7935 with indicator lamp	7625A
Converts 7127 to 7935 without indicator lamp	7625B
Adapts CS130 to a CS130D wire harness	7520G



## ALTERNATOR REPLACEMENT PIGTAILS

Replace worn or broken alternator connectors with Tuff Stuff's replacement pigtails to eliminate any electrical issues

Application	Tuff Stuff Alternator	Item
GM 10DN	7102, 7078NC (only)	7520B
GM 10SI	7127, 7139, 7140	7520A
GM CS130, CS144	7860, 7861, 7866, 7935, 8173	7520C
GM CS130D, AD244	8206, 8237	7520H
Ford 1GEN	7074	7520D
Ford 2GEN	7716 spade side	7520E
Ford 2GEN & 3GEN	7716 pin side	7520F
Ford 3GEN	7771	7520I



- Small Peanut and Sanden style compressors utilize R12 or R134A refrigerant depending upon series
- Dedicated-fit compressors replace factory OEM units
- Available finishes include chrome plated, polished aluminum, painted or Cast PLUS+
- Compressors include a 2V-groove, 4-groove or 6-groove pulley
- Optional chrome plated, polished or plain clutch cover and hard lines available below

### PEANUT STYLE R-134A SD7

Finish	Series	2V-Groove	6-Groove
Chrome	Peanut	4517NADP	4517NA6G
Polished	Peanut	4517NBDP	4517NB6G
<b>NEW</b> > Black chrome	Peanut	4517NADP7	4517NA6G7
Stealth black	Peanut		4517NC6GBLA
Cast PLUS+	Peanut	4517NCDP	4517NC6G

High pressure 1/2" male flare fitting, low pressure 5/8" male flare.  
Overall length is 6.75", requires 3.4 oz of 100 PAG oil



4517NCDP



4517NADP



4517NA6G7

### SANDEN STYLE SD508

Chrome	R12	4505NADP	4505NA6G
Polished	R12	4505NBDP	4505NB6G
Cast PLUS+	R12	4505NCDP	4505NC6G

Requires 6 oz of mineral oil



4505NCDP



4505NADP



4505NA6G

<b>NEW</b> > Chrome	R134A	4515NADP	4515NA6G
<b>NEW</b> > Black chrome	R134A	4515NADP7	4515NA6G7
<b>NEW</b> > Stealth black	R134A	4515NKDP	4515NK6G
Polished	R134A	4515NBDP	4515NB6G
Orange	R134A	4515NCDPOR	
Red	R134A	4515NCDPRED	
Cast PLUS+	R134A	4515NCDP	4515NC6G

Requires 7.2 oz of 100 PAG or Castrol ester oil



4515NCDP



4515NADP



4515NA6G

### CAMARO FIREBIRD w/LS

1998-02 Camaro & Firebird w/LS1 engine

Finish	Series	Pulley	Item
Chrome	LS1	4-Groove	4510NA
Polished	LS1	4-Groove	4510NB
Cast PLUS+	LS1	4-Groove	4510NC



4510NC



4510NA

### CAMARO FIREBIRD CAPRICE w/LT

1993-97 Camaro & Firebird w/LT1 engine

1994-96 Caprice & Impala w/LT1 engine

Chrome	LT1	6-Groove	4511NA
Polished	LT1	6-Groove	4511NB
Cast PLUS+	LT1	6-Groove	4511NC



4511NC



4511NA

### DODGE RAM

1994-01 OE style R-134A w/3.9, 5.2, 5.9, & 8.0L

Chrome	Ram	6-Groove	4605NA
Polished	Ram	6-Groove	4605NB
Cast PLUS+	Ram	6-Groove	4605NC



4605NC



4605NA

### HARD LINES FOR 4517 PEANUT COMPRESSOR

Chrome	Peanut SD7	8417A
Polished	Peanut SD7	8417B
Plain	Peanut SD7	8417C

10mm suction port, 8MM discharge port



8417C



8417A

### MACHINED ALUMINUM A/C CLUTCH COVER

Chrome	Sanden SD508	8490A
Polished	Sanden SD508	8490B
Plain	Sanden SD508	8490C



8490C



8490A

## Mini Gear Reduction & Full Size Starters



### HIGH TORQUE

Ideal for high horsepower muscle cars, hot rods, trucks and daily drivers.

### FINISHES

Include chrome plated, zinc plated, stealth black and powder coated in a variety of colors and Factory Cast PLUS+.

### INDEXABLE

Gear reduction starters are considerably smaller and lighter than OE starters and most incorporate a mounting block that can be indexed to gain additional clearance.

### HARDWARE

All starters include mounting bolts and shims where applicable.

#### TYPE

Full size GM starter  
Permanent Magnet Gear Reduction  
Hitachi gear reduction starter  
Full size Ford starter  
Tuff Torque Premium starter

#### SERIES

10MT  
PMGR  
HI-OSGR  
4.5"  
Mini Denso

**Tuff Stuff starters are hand made from premium quality new components - not remanufactured - and are quality built in USA**

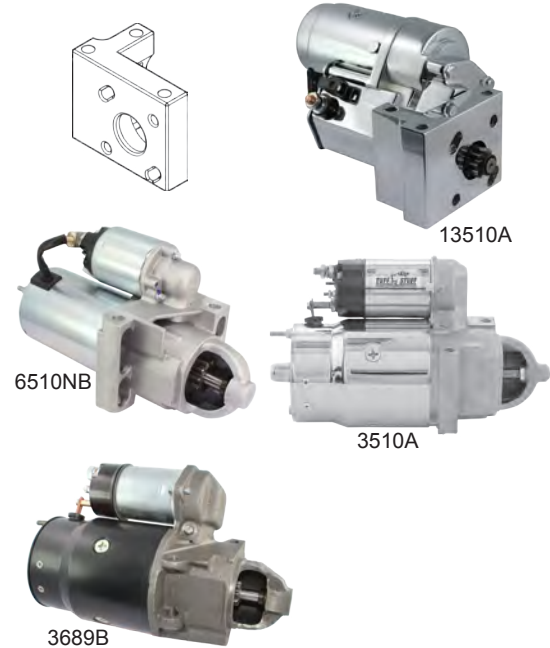


## CHEVROLET SMALL & BIG BLOCK

1955-2000 With OFFSET mounting and 168 tooth flywheel

Finish	Style	Series	HP	Index	Item
Chrome	GR 18:1	Mini denso	3	Y	13510A
Zinc	GR 18:1	Mini denso	3	Y	13510
Chrome	GR 4.4:1	PMGR 1.7kw	2.3	N	6510NA
Zinc	GR 4.4:1	PMGR 1.7kw	2.3	N	6510NB
Chrome	OEM	10MT 1.4kw	1.9	N	3510A
Chrome nose	OEM	10MT 1.4kw	1.9	N	3510AC
Stealth black	OEM	10MT 1.4kw	1.9	N	3510B
Blue	OEM	10MT 1.4kw	1.9	N	3510BBBLUE
Orange	OEM	10MT 1.4kw	1.9	N	3510BORANGE
Red	OEM	10MT 1.4kw	1.9	N	3510BRED
Yellow	OEM	10MT 1.4kw	1.9	N	3510BYELLOW

## OFFSET MOUNT



1957-81 With OFFSET mounting for manual transmission, 168 tooth flywheel, cast iron nose

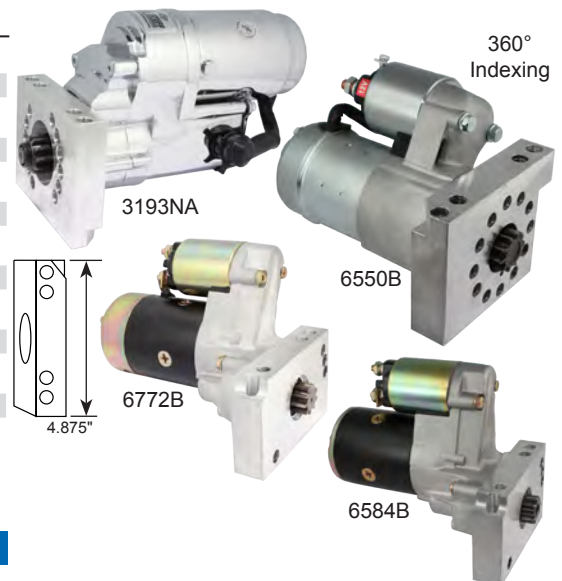
Finish	Style	Series	HP	Index	Item
Chrome	OEM	10MT 1.4kw	1.9	N	3689A
Stealth black	OEM	10MT 1.4kw	1.9	N	3689B

1955-2000 w/STRAIGHT mounting block & 153 or 168 tooth flywheel

Finish	Style	Series	HP	Index	Item
Chrome	GR 18:1	Mini denso	3	Y	3193NA
Zinc	GR 18:1	Mini denso	3	Y	3193NB
Chrome	GR 6.1:1	PMGR	1.6	Y	6550A
Zinc	GR 6.1:1	PMGR	1.6	Y	6550B
Chrome	GR 1.4KW	HI-OSGR	1.9	Y	6584A
Stealth black	GR 1.4KW	HI-OSGR	1.9	Y	6584B
Blue	GR 1.4KW	HI-OSGR	1.9	Y	6584BBBLUE
Orange	GR 1.4KW	HI-OSGR	1.9	Y	6584BORANGE
Red	GR 1.4KW	HI-OSGR	1.9	Y	6584BRED
Yellow	GR 1.4KW	HI-OSGR	1.9	Y	6584BYELLOW
Chrome	GR 18:1	HI-OSGR	3	Y	6772A
Stealth black	GR 18:1	HI-OSGR	3	Y	6772B

6584 has a 9-tooth pinion gear

## STRAIGHT MOUNT



## CHEVROLET & OLDSMOBILE

STRAIGHT mounting holes, 153 tooth flywheel, 1 long & 1 short bolt,

Chrome	OEM	10MT 1.4kw	1.9	N	3631A
Stealth black	OEM	10MT 1.4kw	1.9	N	3631B

## CAMARO & FIREBIRD

1993-95 w/5.7L, STRAIGHT mounting holes

Chrome	GR 4.4:1	PMGR 1.4kw	1.9	N	6631NA
Zinc	GR 4.4:1	PMGR 1.4kw	1.9	N	6631NB

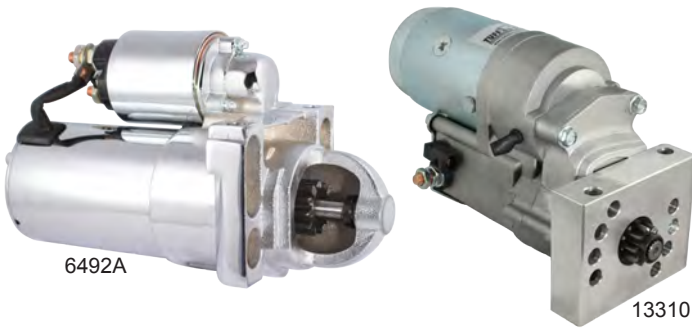
## CHEVROLET V8 & I-6

1957-63 V8 cars and 1962-82 I-6 & V8 trucks w/3 bolt mounting

Chrome	OEM	10MT 1.4kw	1.9	N	3686A
Stealth black	OEM	10MT 1.4kw	1.9	N	3686B



# GM-Chrysler Starters



## CORVETTE CAMARO & FIREBIRD

1998-01 Camaro & Firebird w/LS1, 168 tooth flywheel

1997-01 Corvette w/LS1 & LS6

Finish	Style	Series	HP	Index	Item
Chrome	GR	PMGR	1.9	N	6492A
Zinc	GR	PMGR	1.9	N	6492B
Chrome	GR	Mini denso	3	Y	13310A
Zinc	GR	Mini denso	3	Y	13310

13310 has an 11-tooth pinion gear



## CHEVROLET BUICK OLDS PONTIAC V6

1995-07 With 3.4 or 3.8L V6, 1 long and 1 short bolt

Finish	Style	Series	HP	Index	Item
Chrome	GR	PMGR 1.6kw	2.2	N	6431NA
Zinc	GR	PMGR 1.6kw	2.2	N	6431NB



## OLDSMOBILE PONTIAC

1965-80 With STRAIGHT mounting, 2 long bolts

168 tooth flywheel, driver side engine block mounting

Finish	Style	Series	HP	Index	Item
Chrome	OEM	10MT 1.4kw	1.9	N	3570A
Stealth black	OEM	10MT 1.4kw	1.9	N	3570B
Chrome	GR	Mini denso	3	Y	13186A
Zinc	GR	Mini denso	3	Y	13186

3570 has a 9-tooth pinion gear, 13186 has an 11-tooth pinion gear



## AMC JEEP

1976-77 AMC Gremlin, Hornet 3.8L, 4.2L, 5.0L

1976-77 AMC Matador 4.2L, 5.0L, 5.9L

1976-77 AMC Pacer 3.8L, 4.2L

1974-75 Jeep Grand Wagoneer 5.9L, 6.6L

1974-77 Jeep CJ Series 3.8L, 4.2L, 5.0L

1974-77 Jeep J Series Pickup 4.2L, 5.9L, 6.6L

1974-77 Jeep Cherokee 4.2L, 5.9L, 6.6L

1976-77 Jeep Wagoneer 5.9L, 6.6L

Finish	Style	Series	Index	Item
Chrome	OEM	4.5"	N	3211NA
Stealth black	OEM	4.5"	N	3211NB

9-tooth pinion gear



## CHRYSLER

1965-83 225, 273, 318, 340, 360, 361, 383, 400, 426, 440

Up to 15:1 compression, 9 tooth pinion gear

Finish	Style	Series	HP	Index	Item
Chrome	GR	4.4:1 Mini denso	1.61kw	2.5	N 6084A
Gray	GR	4.4:1 Mini denso	1.61kw	2.5	N 6084B

## FORD

### 1963-91 289, 302, 351 w/automatic transmission, 2 bolt mounting

Finish	Style	Series	HP	Index	Item
Chrome	OEM	4.5" 1.4kw	1.9	N	3124A
Stealth black	OEM	4.5" 1.4kw	1.9	N	3124B
Blue	OEM	4.5" 1.4kw	1.9	N	3124BBBLUE
Yellow	OEM	4.5" 1.4kw	1.9	N	3124BYELLOW
Chrome	GR	HI-PMGR 1.6kw	2.1	Y	6551A <NEW
Zinc	GR	HI-PMGR 1.6kw	2.1	Y	6551B <NEW

3124 has a 9-tooth pinion gear



3124B



6551A

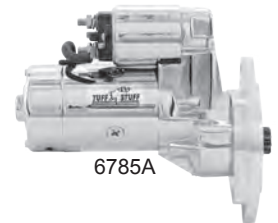
### 1963-91 289, 302, 351 w/automatic transmission, 2 bolt mounting and Arias/Root 429 big block

Finish	Style	Series	HP	Index	Item
Chrome	GR 3.75:1	HI-OSGR 1.4kw	1.9	Y	6585A
Stealth black	GR 3.75:1	HI-OSGR 1.4kw	1.9	Y	6585B
Blue	GR 3.75:1	HI-OSGR 1.4kw	1.9	Y	6585BBBLUE
Red	GR 3.75:1	HI-OSGR 1.4kw	1.9	Y	6585BRED
Yellow	GR 3.75:1	HI-OSGR 1.4kw	1.9	Y	6585BYELLOW
Chrome	GR 3.75:1	HI-OSGR 2.0kw	2.6	Y	6785A
Stealth black	GR 3.75:1	HI-OSGR 2.0kw	2.6	Y	6785B

6785 has a 9-tooth pinion gear



6585B



6785A

### 1963-91 289, 302, 351 w/automatic transmission, 2 bolt mounting 1991-93 Thunderbird 5.0L w/auto trans, 2 bolt mtg, 4.084" reg bore

Finish	Style	Series	HP	Index	Item
Chrome	GR	PMGR 1.4kw	1.9	N	6124A
Zinc	GR	PMGR 1.4kw	1.9	N	6124B

6124 has a 9-tooth pinion gear, upgrade to 6585 or 6785 - see above



6124B

### 1963-91 289, 302, 351 w/auto or manual transmission, 2 bolt mounting

Finish	Style	Series	HP	Index	Item
Chrome	GR	Mini denso	3	Y	13124A
Zinc	GR	Mini denso	3	Y	13124



13124A

### 1965-74 289, 302, 351 w/manual transmission, 2 bolt mounting

Finish	Style	Series	HP	Index	Item
Chrome	OEM	4.5" 1.4kw	1.9	N	3132A
Stealth black	OEM	4.5" 1.4kw	1.9	N	3132B
Chrome	GR	Mini denso	3	Y	13132A
Zinc	GR	Mini denso	3	Y	13132
Chrome	GR	PMGR 1.4kw	1.9	N	6132A
Stealth black	GR	PMGR 1.4kw	1.9	N	6132B



3132B



13132A



6132B

## FORD MUSTANG

### 1966-81 255 V8 & 1992-93 2.3L Mustang, 3 bolt mounting

Finish	Style	Series	HP	Index	Item
Chrome	GR	PMGR 1.4kw	1.9	N	6131A
Stealth black	GR	PMGR 1.4kw	1.9	N	6131B



6131B



6221B

## FORD

- 1992-09 Crown Victoria 4.6L
- 1996-04 Mustang 4.6L
- 1997-98 F Pickup 4.6L, 5.4L
- 1993-98 Lincoln Mark VIII 4.6L
- 1992-09 Lincoln Town Car 4.6L
- 1994-97 Mercury Cougar 4.6L
- 1994-97 Ford Thunderbird 4.6L
- 1997-98 Expedition 4.6L, 5.4L
- 1997-09 E Van 4.6L, 5.4L, 6.8L
- 1992-09 Grand Marquis 4.6L
- 2003-04 Mercury Marauder 4.6L
- 1998 Lincoln Navigator 5.4L

3 bolt mounting

Finish	Style	Series	HP	Index	Item
Chrome	GR 3.75:1	PMGR 1.4kw	1.9	N	6221A
Black	GR 3.75:1	PMGR 1.4kw	1.9	N	6221B



6646A

## FORD

- 2005-09 Ford Mustang 4.6L
- 1999-04 Ford Expedition 4.6L
- 2000-05 Ford Excursion 5.4L, 6.8L
- 1999-08 Ford F Series Pickup 4.6L
- 2002 Lincoln Blackwood 5.4L
- 2007-09 Ford Mustang 5.4L
- 1999-09 Ford Expedition 5.4L
- 2006-08 Lincoln Mark LT 5.4L
- 1999-09 F Pickup 5.4L, 6.8L
- 1999-09 Lincoln Navigator 5.4L

Noseless 3 bolt mounting

Finish	Style	Series	HP	Index	Item
Chrome	GR	PMGR 1.4kw	1.9	N	6646A
Zinc	GR	PMGR 1.4kw	1.9	N	6646B



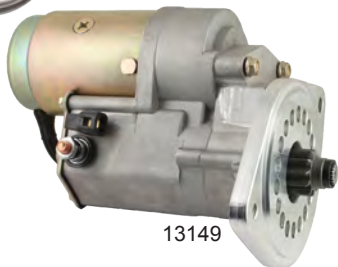
3160B

1978-80 L6 200 w/automatic transmission, 2 bolt mounting

Finish	Style	Series	HP	Index	Item
Stealth black	OEM	4.5" 1.4kw	1.9	N	3160B



3149A



13149

1969-77 351, 400, 429, 460

2 hole mounting, automatic or manual, one hole is threaded

Finish	Style	Series	HP	Index	Item
Chrome	OEM 4.5"	1.4kw	1.9	N	3149A
Stealth black	OEM 4.5"	1.4kw	1.9	N	3149B
Chrome	GR	Mini denso	3	Y	13149A
Zinc	GR	Mini denso	3	Y	13149

13149 has an 11-tooth pinion



3131B



13131

1968-81 255, 352, 390, 427, 428 FE

3 bolt mounting, automatic or manual

Finish	Style	Series	HP	Index	Item
Chrome	OEM 4.5"	1.4kw	1.9	N	3131A
Stealth black	OEM 4.5"	1.4kw	1.9	N	3131B
Chrome	GR	Mini denso	3	Y	13131A
Zinc	GR	Mini denso	3	Y	13131

## HOT START KIT

Give your starter an extra 12 volt boost. Eliminates slow cranking due to excessive engine heat. Ideal for Ford 6124 and GM full size OEM starters.

Description	Item
Complete hot start kit	7629
Remote solenoid side terminal	7311 <NEW
Remote solenoid top post	7312 <NEW



## CHROME PLATED STARTER KIT

Fits most Chevy, Buick, Cadillac, Olds & Pontiac OEM starters and Tuff Stuff 3510, 3570, 3631 & 3689

Chrome plate your original starter with that awesome Tuff Stuff chrome plated finish. Provides the look of a chrome plated starter without having to buy a new starter.

Description	Item
Chrome plated starter kit	7550A
Chrome plated starter solenoid only	7550C
Silver zinc (not chrome) starter solenoid	7310G
Chrome plated solenoid cover only	7624



## STARTER REPAIR KIT

Rebuild parts kit for Tuff Stuff 6584 mini starter  
Complete kit includes full-spline pinion

Description	Item
Complete rebuild kit, full spline	7584A
Full spline pinion	7584C
Clutch assembly	7584E
Mounting block	7584F
Solenoid - zinc plated	7584G
Chrome solenoid	7584GA



Rebuild parts for Tuff Stuff 6550 gear reduction starter <NEW>

Clutch/pinion gear assembly	7550D
Mounting block	7550F
Solenoid - zinc plated	7550G
Bolt and shim kit	7550E



## REPLACEMENT STARTER BOLT KITS

Fits most full size Chevy, Buick, Olds, Pontiac and Tuff Stuff 3510 & 3570 starters with 3/8-16" x 4-5/8" bolts.

Original style starter mounting bolts provides correct starter to engine alignment. Frequently eliminates chattering problems arising from worn-out bolts. 2 bolts per kit.

Finish	Item
Chrome	7623A
Gold zinc	7623B



## REPLACEMENT SHIM AND BOLT KIT

Same shim kit that is included with most Tuff Stuff mini starters. Ensures proper flywheel ring gear clearance on Chevrolet 6584 and 6772 starters. Includes 2 starter mounting bolts, 2 starter shims and 2 motor shims.

Description	Item
Shim and bolt kit	7633



## Every water pump is hand finished, assembled and individually tested to exceed OEM specifications

### **BUILT IN USA**

Tuff Stuff water pumps are hand made from premium quality new components – not remanufactured - and are quality built in the USA.

### **FINISHES**

Available in chrome plated, polished aluminum, black chrome, stealth black, powder coated, painted or Factory Cast PLUS+ finishes. Tuff Stuff has the widest assortment of water pump finishes available.

### **SUPERCOOL**

SuperCool option includes a custom water impeller that flows 30% more coolant to reduce water temperature by up to 20 degrees.

### **PREMIUM QUALITY**

Precision-made ball/roller bearings and spin-balanced fan hub sustain higher RPM's. Lightweight aluminum castings provide increased heat dissipation and are up to 50% lighter than cast iron.

### **LONG TERM DEPENDABILITY**

From muscle cars and hot rods to custom trucks and daily drivers, these pumps provide great looks, long term dependability and are a terrific value



**You can buy a cheaper pump  
but you cannot buy a better pump!**

## CHEVROLET SMALL BLOCK - SHORT STYLE PUMP

1955-1971 5.625" Hub Height, 5/8" Pilot

Finish	Casting	Flow	Style	Standard Rotation	Reverse Rotation
Chrome	Alum	SuperCool	Smoothie	1353NA	
Polished	Alum	SuperCool	Smoothie	1353NB	
Black chrome	Alum	SuperCool	Smoothie	1353NA7<NEW	
Stealth black	Alum	SuperCool	Smoothie	1353NC	
Cast PLUS+	Alum	SuperCool	Smoothie	1353	1353REV
Chrome	Alum	SuperCool	Platinum	1394NA	1394NAREV
Polished	Alum	SuperCool	Platinum	1394NB	1394NBREV
Blue	Alum	SuperCool	Platinum	1394NCBLUE	
Orange	Alum	SuperCool	Platinum	1394NCORANGE	
Red	Alum	SuperCool	Platinum	1394NCRED	
Yellow	Alum	SuperCool	Platinum	1394NCYELLOW	
Cast PLUS+	Alum	SuperCool	Platinum	1394NC	1394NCREV
Polished	Alum	Standard	Standard	1635EB	
Cast PLUS+	Alum	Standard	Standard	1635E	
Chrome	Iron	Standard	Standard	1354NA	1354NAREV
Chrome	Iron	Standard	Smoothie	1354NAS	1354NASREV
Chrome	Iron	SuperCool	Standard	1354NB	1354NBREV
Chrome	Iron	SuperCool	Smoothie	1354NBS	1354NBSREV
Stealth black	Iron	SuperCool	Standard	1354NC	1354NCREV
Stealth black	Iron	SuperCool	Smoothie	1354NCS	1354NCSREV
Blue	Iron	SuperCool	Standard	1354NCBLUE	
Orange	Iron	SuperCool	Standard	1354NCORANGE	
Red	Iron	SuperCool	Standard	1354NCRED	
Yellow	Iron	SuperCool	Standard	1354NCYELLOW	
As cast	Iron	SuperCool	Standard	1354N	
As cast	Iron	SuperCool	Smoothie	1354NS	

Smoothie pumps have a flat, smooth top and no top threaded water port. Standard pumps have a threaded water port. 1635 Pumps have a 3/8"-16 threaded hole.

**Part numbers ending in REV are for serpentine belt systems only!**



1635NG



1353NA



1394NC



1635E



1354NCORANGE



1394ND



1534NC

## CORVETTE SMALL BLOCK - SHORT STYLE PUMP

1984-91 5.812" Hub Height, 3/4" Pilot

Finish	Casting	Flow	Style	Standard Rotation	Reverse Rotation
Chrome	Alum	SuperCool	Platinum		1394NG
Polished	Alum	SuperCool	Platinum		1394NH
Cast PLUS+	Alum	SuperCool	Platinum		1394NI
Chrome	Alum	SuperCool	Standard		1635NG
Chrome	Alum	Standard	Standard		1635NE
Polished	Alum	SuperCool	Standard		1635ND
Polished	Alum	Standard	Standard		1635NB
Cast PLUS+	Alum	SuperCool	Standard		1635N
Cast PLUS+	Alum	Standard	Standard		1635NA

1971-82 5.843" Hub Height, 3/4" Pilot

Chrome	Alum	SuperCool	Platinum	1394ND	
Polished	Alum	SuperCool	Platinum	1394NE	
Cast PLUS+	Alum	SuperCool	Platinum	1394NF	

1972-1982 5.843" Hub Height, 3/4" Pilot

Chrome	Iron	SuperCool	Standard	1534NB	
Chrome	Iron	Standard	Standard	1534NA	1534NAREV
Stealth black	Iron	SuperCool	Standard	1534NC	
As cast	Iron	SuperCool	Standard	1534N	

**Part numbers ending in REV are for serpentine belt systems only!**

# Chevrolet Water Pumps



1511NA



1448NC



1449NC



1675AA



1496



1495AA



1494NCORANGE

## CHEVROLET SMALL BLOCK - LONG STYLE PUMP

**1969-95** NOT for use on 89-95 trucks 6.937" Hub Height, 5/8" Pilot

Finish	Casting	Flow	Style	Standard Rotation	Reverse Rotation
Chrome	Alum	SuperCool	Platinum	1511NA	1511NAREV
Polished	Alum	SuperCool	Platinum	1511NB	1511NBREV
Blue	Alum	SuperCool	Platinum	1511NCBLUE	
Orange	Alum	SuperCool	Platinum	1511NCORANGE	
Red	Alum	SuperCool	Platinum	1511NCRED	
Yellow	Alum	SuperCool	Platinum	1511NCYELLOW	
Cast PLUS+	Alum	SuperCool	Platinum	1511NC	1511NCREV

**1969-96** NOT for use on 87-95 trucks 6.937" Hub Height, 5/8" Pilot

Finish	Casting	Flow	Style	Standard Rotation	Reverse Rotation
Chrome	Alum	SuperCool	Smoothie	1448NA	
Polished	Alum	SuperCool	Smoothie	1448NB	<NEW
Black chrome	Alum	SuperCool	Smoothie	1448NA7	
Cast PLUS+	Alum	SuperCool	Smoothie	1448NC	
Chrome	Iron	Standard	Standard	1449NA	1449NAREV
Chrome	Iron	SuperCool	Standard	1449NB	1449NBREV
Stealth black	Iron	SuperCool	Standard	1449NC	1449NCREV
Blue	Iron	SuperCool	Standard	1449NCBLUE	
Orange	Iron	SuperCool	Standard	1449NCORANGE	
Red	Iron	SuperCool	Standard	1449NCRED	
Yellow	Iron	SuperCool	Standard	1449NCYELLOW	
As cast	Iron	SuperCool	Standard	1449N	

**1987-95 Truck** V6-V8TBI 6.937" Hub Height, 5/8" Pilot

Finish	Casting	Flow	Style	Standard Rotation	Reverse Rotation
Chrome	Alum	SuperCool	Smoothie		1675AA
Polished	Alum	SuperCool	Smoothie		1675AB
Stealth black	Alum	SuperCool	Smoothie		1675AC
Cast PLUS+	Alum	SuperCool	Smoothie		1675A
Chrome	Iron	Standard	Standard		1675NA
Chrome	Iron	SuperCool	Standard		1675NB
Stealth black	Iron	SuperCool	Standard		1675NC
As cast	Iron	SuperCool	Standard		1675N

**Part numbers ending in REV are for serpentine belt systems only!**

## CHEVROLET BIG BLOCK - SHORT STYLE PUMP

**1965-72** 5.750" Hub Height, 5/8" Pilot

Finish	Casting	Flow	Style	Standard Rotation	Reverse Rotation
Chrome	Alum	SuperCool	Smoothie	1496NA	
Polished	Alum	SuperCool	Smoothie	1496NB	
Black chrome	Alum	SuperCool	Smoothie	1496NA7	<NEW
Stealth black	Alum	SuperCool	Smoothie	1496NC	
Cast PLUS+	Alum	SuperCool	Smoothie	1496	
Chrome	Alum	SuperCool	Platinum	1495AA	1495AAREV
Polished	Alum	SuperCool	Platinum	1495AB	1495ABREV
Black chrome	Alum	SuperCool	Platinum	1495NA7	<NEW
Blue	Alum	SuperCool	Platinum	1495ACBLUE	
Orange	Alum	SuperCool	Platinum	1495ACORANGE	
Red	Alum	SuperCool	Platinum	1495ACRED	
Yellow	Alum	SuperCool	Platinum	1495ACYELLOW	
Cast PLUS+	Alum	SuperCool	Platinum	1495AC	1495ACREV
Chrome	Iron	Standard	Standard	1494NA	1494NAREV
Chrome	Iron	SuperCool	Standard	1494NB	1494NBREV
Stealth black	Iron	SuperCool	Standard	1494NC	1494NCREV
Blue	Iron	SuperCool	Standard	1494NCBLUE	
Orange	Iron	SuperCool	Standard	1494NCORANGE	
Red	Iron	SuperCool	Standard	1494NCRED	
Yellow	Iron	SuperCool	Standard	1494NCYELLOW	
As cast	Iron	SuperCool	Standard	1494N	

**Part numbers ending in REV are for serpentine belt systems only!**



## CORVETTE BIG BLOCK - SHORT STYLE PUMP

1965-72 5.750" Hub Height, 3/4" Pilot					
Finish	Casting	Rotation	Flow	Style	Item
Chrome	Iron	Standard	Standard	Standard	1484NA
Chrome	Iron	Standard	SuperCool	Standard	1484NB
Stealth black	Iron	Standard	SuperCool	Standard	1484NC
As cast	Iron	Standard	SuperCool	Standard	1484N
Chrome	Alum	Standard	SuperCool	Platinum	1485AA
Polished	Alum	Standard	SuperCool	Platinum	1485AB
As cast	Alum	Standard	SuperCool	Platinum	1485AC



## CHEVROLET BIG BLOCK - LONG STYLE PUMP

1969-96 Not for 87-95 trucks or Corvettes 7.281" Hub Height, 5/8" Pilot					
Finish	Casting	Flow	Style	Standard Rotation	Reverse Rotation
Chrome	Alum	SuperCool	Platinum	1461AA	
Polished	Alum	SuperCool	Platinum	1461AB	
As cast	Alum	SuperCool	Platinum	1461AC	
Chrome	Iron	Standard	Standard	1461NA	1461NAREV
Chrome	Iron	SuperCool	Standard	1461NB	1461NBREV
Stealth black	Iron	SuperCool	Standard	1461NC	1461NCREV
Blue	Iron	SuperCool	Standard	1461NCBLUE	
Orange	Iron	SuperCool	Standard	1461NCORANGE	
Red	Iron	SuperCool	Standard	1461NCRED	
Yellow	Iron	SuperCool	Standard	1461NCYELLOW	
As cast	Iron	SuperCool	Standard	1461N	



1969-94 7.281" Hub Height, 5/8" Pilot					
Chrome	Alum	SuperCool	Smoothie	1459NA	
Polished	Alum	SuperCool	Smoothie	1459NB	
Black chrome	Alum	SuperCool	Smoothie	1459NA7 <NEW>	
Stealth black	Alum	SuperCool	Smoothie	1459NC	
Cast PLUS+	Alum	SuperCool	Smoothie	1459	



1988-95 454 pick-up truck, 7.281" Hub Height, 5/8" Pilot					
Chrome	Alum	SuperCool	Smoothie		1493ANA
Polished	Alum	SuperCool	Smoothie		1493ANB
Stealth black	Alum	SuperCool	Smoothie		1493ANC
As cast	Alum	SuperCool	Smoothie		1493AN
Chrome	Iron	SuperCool	Smoothie		1493NB
Black	Iron	SuperCool	Smoothie		1493NC
As cast	Iron	SuperCool	Smoothie		1493N

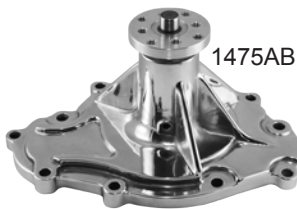


Part numbers ending in REV are for serpentine belt systems only!

## CHEVROLET 194 230 250 INLINE 6

1963-84 3.875" Hub Height, 5/8" Pilot					
Finish	Casting	Rotation	Flow	Style	Item
Chrome	Iron	Standard	Standard	Standard	1529A
Stealth black	Iron	Standard	Standard	Standard	1529B
As cast	Iron	Standard	Standard	Standard	1529N





## GM LS1 & LS6

1998-02 Camaro/Firebird

1997-04 Corvette

2004-06 GTO

Finish	Casting	Rotation	Flow	Style	Item
Chrome	Alum	Standard	Standard	Platinum	1310A
Polished	Alum	Standard	Standard	Platinum	1310B
Stealth black	Alum	Standard	Standard	Platinum	1310D
Cast PLUS+	Alum	Standard	Standard	Platinum	1310C

## GM LT1 5.7L

1993-97 Camaro/Firebird

1992-1996 Corvette

1994-96 Caprice/Impala

Finish	Casting	Rotation	Flow	Style	Item
Chrome	Alum	Standard	Standard	Platinum	1362A
Polished	Alum	Standard	Standard	Platinum	1362B
Cast PLUS+	Alum	Standard	Standard	Platinum	1362C

## OLDSMOBILE

1968-70 w/air, 1971-85 w/o air 5.562" Hub Height, 5/8" Pilot

Finish	Casting	Rotation	Flow	Style	Item
Chrome	Iron	Standard	Standard	Standard	1444NA
Stealth black	Iron	Standard	Standard	Standard	1444NB
As cast	Iron	Standard	Standard	Standard	1444N

1971-90 4.3, 5.0, 6.6, 7.5L w/air 5.937" Hub Height, 5/8" Pilot

Finish	Casting	Rotation	Flow	Style	Item
Chrome	Iron	Standard	Standard	Standard	1504NA
Stealth black	Iron	Standard	Standard	Standard	1504NB
As cast	Iron	Standard	Standard	Standard	1504N

1968-69 350, 400, 455 w/o air 5.109" Hub Height, 5/8" Pilot

Finish	Casting	Rotation	Flow	Style	Item
Chrome	Iron	Standard	Standard	Standard	1504NA-2

## PONTIAC

1969-81 4.3, 5.7, 6.6L & 455, 11 bolt 4.468" Hub Height, 5/8" Pilot

Finish	Casting	Rotation	Flow	Style	Item
Chrome	Alum	Standard	SuperCool	Platinum	1475AA
Polished	Alum	Standard	SuperCool	Platinum	1475AB
Stealth black	Alum	Standard	SuperCool	Platinum	1475AC
Cast PLUS+	Alum	Standard	SuperCool	Platinum	1475

Chrome	Iron	Standard	Standard	Standard	1475NA
Stealth black	Iron	Standard	Standard	Standard	1475NB
As cast	Iron	Standard	Standard	Standard	1475N

1966-69 5.7, 6.6L, 8 bolt 3.625" Hub Height, 5/8" Pilot

Finish	Casting	Rotation	Flow	Style	Item
Chrome	Iron	Standard	Standard	Standard	1445NA
Stealth black	Iron	Standard	Standard	Standard	1445NB
As cast	Iron	Standard	Standard	Standard	1445N

## FORD

**1965-73 289, 302, 351W w/pass side inlet** 5.437" Hub Height, 5/8" Pilot

Finish	Casting	Flow	Style	Standard Rotation	Reverse Rotation
Chrome	Alum	SuperCool	Platinum	1432AA	
Polished	Alum	SuperCool	Platinum	1432AB	
Stealth black	Alum	SuperCool	Platinum	1432AC	
Cast PLUS+	Alum	SuperCool	Platinum	1432	
Chrome	Iron	Standard	Standard	1432A	1432AREV
Chrome	Iron	SuperCool	Standard	1432B	
Stealth black	Iron	SuperCool	Standard	1432C	1432CREV
Blue	Iron	SuperCool	Standard	1432CBBLUE	
Red	Iron	SuperCool	Standard	1432CRED	
Yellow	Iron	SuperCool	Standard	1432CYELLOW	
As cast	Iron	SuperCool	Standard	1432N	

**Part numbers ending in REV are for serpentine belt systems only!**

**1970-78 Windsor w/driver side inlet** 5.687" Hub Height, 5/8" Pilot

Finish	Casting	Rotation	Flow	Style	Item
Chrome	Iron	Standard	Standard	Standard	1468A
Chrome	Iron	Standard	SuperCool	Standard	1468B
Stealth black	Iron	Standard	SuperCool	Standard	1468C
Blue	Iron	Standard	SuperCool	Standard	1468CBBLUE
Red	Iron	Standard	SuperCool	Standard	1468CRED
Yellow	Iron	Standard	SuperCool	Standard	1468CYELLOW
As cast	Iron	Standard	SuperCool	Standard	1468N

**1970-78 Cleveland w/driver side inlet,** 5.687" Hub Height, 5/8" Pilot

Chrome	Iron	Standard	Standard	Standard	1469A
Chrome	Iron	Standard	SuperCool	Standard	1469B
Stealth black	Iron	Standard	SuperCool	Standard	1469C
Blue	Iron	Standard	SuperCool	Standard	1469CBBLUE
Red	Iron	Standard	SuperCool	Standard	1469CRED
Yellow	Iron	Standard	SuperCool	Standard	1469CYELLOW
As cast	Iron	Standard	SuperCool	Standard	1469N

**1970-78 Windsor & Cleveland w/dvr side inlet** 5.687" Hub Height, 5/8" Pilot

Chrome	Alum	Standard	SuperCool	Platinum	1467AA
Polished	Alum	Standard	SuperCool	Platinum	1467AB
Cast PLUS+	Alum	Standard	SuperCool	Platinum	1467AC

**1994-95 5.0L** 4.125" Hub Height, 3/4" Pilot

Chrome	Alum	Standard	Standard	Platinum	1548NA
Stealth black	Alum	Standard	Standard	Platinum	1548NC
Cast PLUS+	Alum	Standard	Standard	Platinum	1548

## MUSTANG 5.0L

**1986-93 Mustang 5.0L w/driver side inlet,** 5.735" Hub Height, 5/8" Pilot, Reverse Rot

Finish	Casting	Rotation	Flow	Style	Item
Chrome	Alum	Reverse	SuperCool	Standard	1594NA
Chrome	Alum	Reverse	SuperCool	Platinum	1594ND
Polished	Alum	Reverse	SuperCool	Platinum	1594NE
Stealth black	Alum	Reverse	SuperCool	Standard	1594NC
Stealth black	Alum	Reverse	SuperCool	Platinum	1594NF
Blue	Alum	Reverse	SuperCool	Platinum	1594NCBLUE
Red	Alum	Reverse	SuperCool	Platinum	1594NCRED
Yellow	Alum	Reverse	SuperCool	Platinum	1594NCYELLOW
Cast PLUS+	Alum	Reverse	SuperCool	Standard	1594AC
Cast PLUS+	Alum	Reverse	SuperCool	Platinum	1594N

**1979-85 Mustang 5.0L w/driver side inlet,** 5.750" Hub Height, 5/8" Pilot, Standard Rot

Chrome	Alum	Standard	SuperCool	Standard	1625NA
Chrome	Alum	Standard	SuperCool	Platinum	1625ND
Polished	Alum	Standard	SuperCool	Platinum	1625NE
Stealth black	Alum	Standard	SuperCool	Standard	1625NC
Stealth black	Alum	Standard	SuperCool	Platinum	1625NF
Blue	Alum	Standard	SuperCool	Platinum	1625NCBLUE
Red	Alum	Standard	SuperCool	Platinum	1625NCRED
Yellow	Alum	Standard	SuperCool	Platinum	1625NCYELLOW
Cast PLUS+	Alum	Standard	SuperCool	Standard	1625AC
Cast PLUS+	Alum	Standard	SuperCool	Platinum	1625N



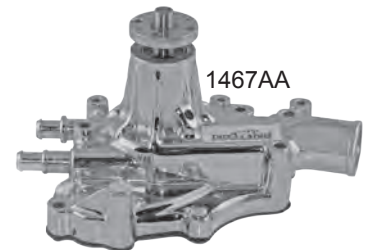
1432AB



1468C



1469N



1467AA



1548NA



1594NCBLUE



1625N

# Ford Chrysler Water Pumps



1625NG



1470NCBLUE



1421AA



1538N



1317NA



1465NA



1476MC



1700A

## FORD 5.0L 302 & 351W SHORTY

**1979-93 w/driver side inlet, 4.312" Hub Height, 3/4" Pilot**  
 Replaces Ford Racing water pump M-8501-E351S. Must use with long style (3.950") 4-bolt crankshaft damper and requires custom pulleys - not included. Provides up to 1.5" of additional water pump clearance for tight engine compartments.

Finish	Casting	Rotation	Flow	Style	Item
Chrome	Alum	Standard	SuperCool	Platinum	1625NG
Polished	Alum	Standard	SuperCool	Platinum	1625NH
Stealth black	Alum	Standard	SuperCool	Platinum	1625NI
Cast PLUS+	Alum	Standard	SuperCool	Platinum	1625NJ

## FORD

**1970-77 429, 460 5.562" Hub Height, 3/4" Pilot**

Finish	Casting	Rotation	Flow	Style	Item
Chrome	Iron	Standard	Standard	Standard	1470NA
Stealth black	Iron	Standard	Standard	Standard	1470NC
Blue	Iron	Standard	Standard	Standard	1470NCBLUE
Red	Iron	Standard	Standard	Standard	1470NCRED
Yellow	Iron	Standard	Standard	Standard	1470NCYELLOW
As cast	Iron	Standard	Standard	Standard	1470N

**1965-76 390, 427, 428 FE 7.578" Hub Height, 5/8" Pilot**

Chrome	Alum	Standard	SuperCool	Platinum	1421AA
Polished	Alum	Standard	SuperCool	Platinum	1421AB
Stealth black	Alum	Standard	SuperCool	Platinum	1421AC
As cast	Alum	Standard	SuperCool	Platinum	1421
Chrome	Iron	Standard	Standard	Standard	1421A
Chrome	Iron	Standard	Supercool	Standard	1421B
Stealth black	Iron	Standard	Supercool	Standard	1421C
As cast	Iron	Standard	Supercool	Standard	1421N

## FORD

**1974-82 2.3L 3/4" pilot**

Finish	Casting	Rotation	Item
As cast	Iron	Standard	1538N <NEW>

## CHRYSLER

**1958-79 383, 440 3.078" Hub Height, 5/8" Pilot**

Finish	Casting	Rotation	Flow	Style	Item
Chrome	Iron	Standard	Standard	Standard	1317NA
Chrome	Iron	Standard	SuperCool	Standard	1317NB
Stealth black	Iron	Standard	SuperCool	Standard	1317NC
As cast	Iron	Standard	SuperCool	Standard	1317N

**1970-88 318, 340, 360 5.562" Hub Height, 5/8" Pilot**

Cast PLUS+	Alum	Standard	SuperCool	Platinum	1465NA
Cast PLUS+	Alum	Reverse	SuperCool	Platinum	1465NAREV

**2005-08 5.7L Hemi, 2006-10 6.1L Hemi**

As cast	Alum	Standard	Standard	Platinum	1476MC
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## FORD AIR PUMP ELIMINATOR KIT

**1979-93 Ford Mustang w/302 or 351 engine**

This kit is a direct bolt-on replacement for the air (smog) pump found on 1979-93 Ford Mustangs with a 302 or 351 engine. For use with the stock serpentine belt. Kit includes an aluminum bracket, plastic idler pulley with bearing, pulley mounting bolt and special washer. May not be legal for sale or use in California on any pollution controlled motor vehicle.

Description	Item	Description	Item
Chrome	1700A	Stealth black	1700C
Polished	1700B	As cast	1700

## HIGH FLOW THERMOSTATS

Standard thermostats flow about 37 gallons of coolant per minute. With Tuff Stuff's High-Flow thermostat, that number jumps to 56 gallons per minute. That's almost a 50 percent increase in coolant flow! The increased coolant flow will reduce the delay in engine warm-up times, allows trapped air in the cooling system to escape and stabilizes the pressure of the cooling system overall. These thermostats also have a bypass valve that allows a small amount of coolant to circulate before fully opening.

Application	Temp Fahrenheit	Item
1946-1995 GM, Ford, AMC, Jeep	160°	900160
	180°	900180
	195°	900195
1953-1980 Chrysler	180°	910180



## GM CHROME HOSE NIPPLES

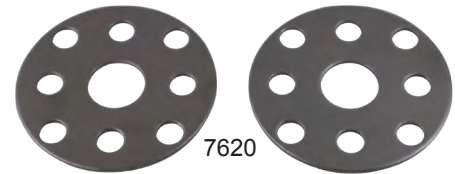
Description	Item
For 3/4" hose, 3" long, 1/2-14 NPT	4450A
For 3/4" hose, 1.5" long, 1/2-14 NPT	4450B
For 5/8" hose, 1.5" long, 1/2-14 NPT	4450C
3/4-14 NPT plug	4450D



## WATER PUMP SHIMS

Helps with belt alignment issues. For use on 1449 and 1461 water pumps. 1/16" thick, two shims per kit.

Description	Item
Water pump shims	7620



## SB CHEVY WATER PUMP EXTENSIONS

Changes a Chevy small block short pump such as a 1354 to the same height as a 1449 long pump hub height - from 5.625" to 6.937". Kit includes 2 extensions and 2 gaskets.

Finish	Item
Chrome plated	2254A
Polished aluminum	2254B
Plain aluminum	2254C



## CHEVY WATER PUMP BOLT KITS

Available in chrome plated or zinc finishes with hex or socket heads.

**Small block w/short water pump, 1354, 1534 & 1635 series**

Kit includes one 3/8"-16 x 1-3/4", two 3/8"-16 x 2", one 3/8"-16 x 2-3/4" bolts, 4 lock and 4 flat washers.

Chrome Hex	Zinc Hex	Chrome Socket	Zinc Socket
7675A	7675B	7675C	7675D



**Small block w/short water pump, 1394 series**

Kit includes two 3/8"-16 x 1-3/4", one 3/8"-16 x 2", one 3/8"-16 x 2-1/2" bolts, 4 lock and 4 flat washers.

Chrome Hex	Zinc Hex	Chrome Socket	Zinc Socket
7677A	7677B	7677C	7677D

**Small & big block w/long water pump, 1449, 1461 & 1511 series**

Kit includes four 3/8"-16 x 2-1/4" bolts, 4 lock and 4 flat washers.

Chrome Hex	Zinc Head	Chrome Socket	Zinc Socket
7678A	7678B	7678C	7678D

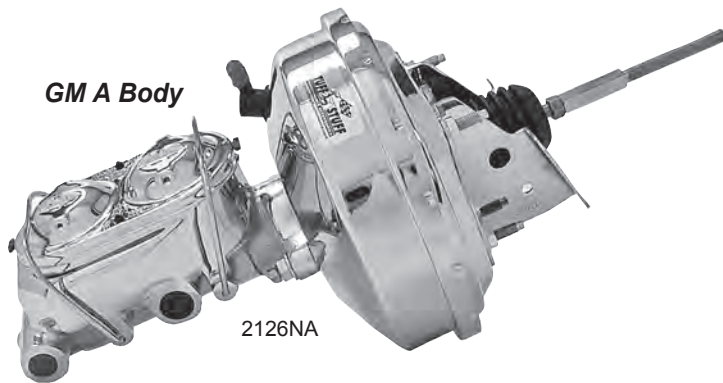


**Big block w/short water pump, 1484 & 1494 series**

Kit includes four 3/8"-16 x 2" bolts, 4 lock and 4 flat washers.

Chrome Hex	Zinc Hex	Chrome Socket	Zinc Socket
7676A	7676B	7676C	7676D

# Booster w/Master Cylinder



GM A Body

2126NA

Specific fit applications available in beautiful chrome plated, gold zinc or black powder coated finishes. 1" and 1-1/8" master cylinder bores work with disc/disc, disc/drum and drum/drum brake set-ups. Single and dual diaphragm styles available in 7", 8", 9" and 11" diameters to fit virtually all hot rods, customs and muscle cars. 100% all new components - and every unit is vacuum tested to insure reliability. Works with many stock mounting bracket set-ups and with Tuff Stuff bracket kits on page 36.

## GM A BODY 1964 - 66 2126

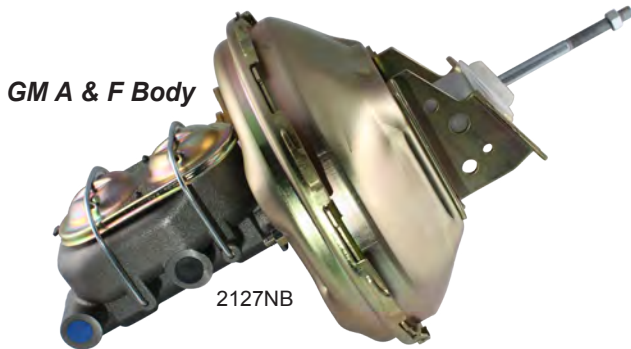
9" Single Diaphragm Booster Combo, 3/8"-16 studs  
7-1/8" long pedal rod, 1-1/2" vertical mount hole spacing

**Master Cylinder Bore Chrome Gold Zinc**

2071 Dual reservoir 1-1/8" 2126NA 2126NB

2020 Dual reservoir 1" 2126NA-1 2126NB-1

2018 Dual reservoir 1" 2126NA-2 2126NB-2



GM A & F Body

2127NB

## GM A & F BODY 1966 - 72 2127

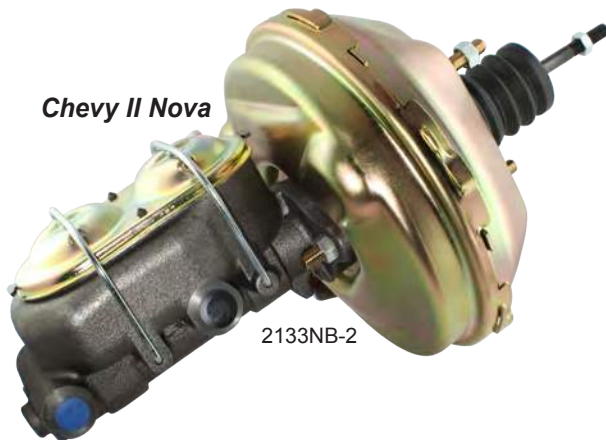
11" Single Diaphragm Booster Combo, 3/8"-16 studs

**Master Cylinder Bore Chrome Gold Zinc**

2072 Dual reservoir 1-1/8" 2127NA 2127NB

2021 Dual reservoir 1" 2127NA-1 2127NB-1

2019 Dual reservoir 1" 2127NA-2 2127NB-2



Chevy II Nova

2133NB-2

## CHEVY II NOVA 1962 - 67 2133

9" Single Diaphragm Booster Combo, three 3/8"-16 mounting studs

**Master Cylinder Bore Chrome Gold Zinc**

2071 Dual reservoir 1-1/8" 2133NA 2133NB

2020 Dual reservoir 1" 2133NA-1 2133NB-1

2018 Dual reservoir 1" 2133NA-2 2133NB-2

## GM TRUCK 1973 - 92 2132

11" Dual Diaphragm Combo, 10x1.5 metric studs,  
3/8" -16 pedal rod threads

**Master Cylinder Bore Chrome Stealth Black**

2071 Dual reservoir 1"-1/8" 2132NA 2132NB

2020 Dual reservoir 1" 2132NA-1 2132NB-1

2018 Dual reservoir 1" 2132NA-2 2132NB-2



GM Truck

2132NB

See page 43 for booster and master cylinder dimensions

**CORVETTE 1963 - 67 2130**

9" Single Diaphragm Booster Combo, 3/8"-16 studs

Master Cylinder	Bore	Chrome	Gold Zinc
2071 Dual reservoir*	1-1/8"	2130NA	2130NB
2020 Dual reservoir	1"	2130NA-1	2130NB-1
2018 Dual reservoir	1"	2130NA-2	2130NB-2

\*With four wheel disc brakes

**CORVETTE 1968 - 82 2129**

9" Dual Diaphragm Booster Combo, 10x1.5 metric studs

Master Cylinder	Bore	Chrome	Gold Zinc
2071 Dual reservoir	1-1/8"	2129NA	2129NB
2020 Dual reservoir	1"	2129NA-1	2129NB-1
2018 Dual reservoir	1"	2129NA-2	2129NB-2

With four wheel disc brakes, 3/8-24 pedal rod threads

**FORD MUSTANG 1967 - 70 2125**

9" Single Diaphragm Booster Combo, 3/8"-16 studs

Master Cylinder	Bore	Chrome	Gold Zinc
2071 Dual reservoir	1-1/8"	2125NA	2125NB
2020 Dual reservoir	1"	2125NA-1	2125NB-1
2018 Dual reservoir	1"	2125NA-2	2125NB-2
2017 Dual reservoir	1"	2125NA-3	2125NB-3

5 Mounting studs - one is offset

**JEEP CJ 1974 - 86 2131**

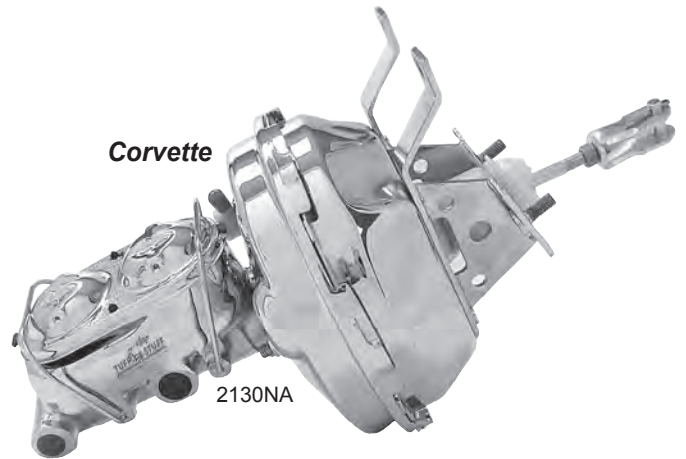
9" Single Slim Line Diaphragm Booster Combo

Master Cylinder	Bore	Chrome	Gold Zinc
2071 Dual reservoir	1-1/8"	2131NAJ	2131NB
2020 Dual reservoir	1"	2131NAJ-1	2131NB-1
2018 Dual reservoir	1"	2131NAJ-2	2131NB-2

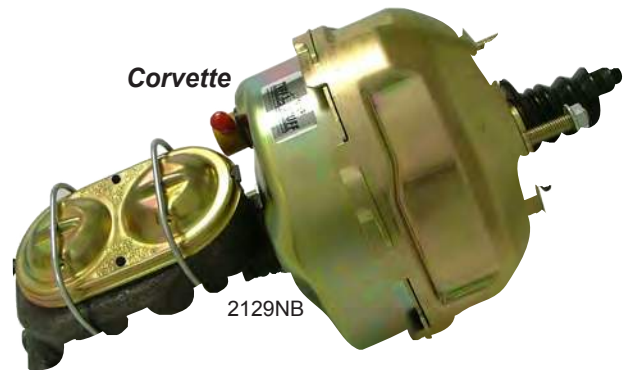
Includes mounting bracket

## 100% New Components

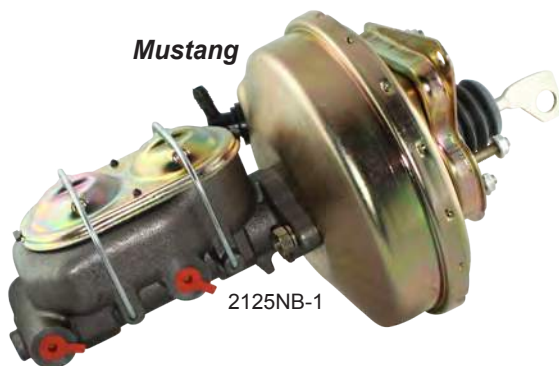
Corvette



Corvette



Mustang



Jeep CJ



**TECH TIP**

A vacuum operated power brake booster requires at least 18" of vacuum to work properly. Big cam engines may not make enough vacuum to safely operate a vacuum power booster and could require a vacuum assist pump for safety.

*Every power brake booster unit is hand assembled and tested to assure quality and long life dependability.*

# Booster w/Master Cylinder



Universal fit applications available in beautiful chrome plated or gold zinc finishes. 1" and 1-1/8" master cylinder bores work with disc/disc, disc/drum, and drum/drum brake set-ups. Single and dual diaphragm styles available in 7", 8", 9" and 11" diameters fit virtually all hot rods, customs and muscle cars. 100% all new components - and every unit is vacuum tested to insure reliability. Includes 3/8"-16 mounting studs and nuts. Works with many stock mounting bracket set-ups and with Tuff Stuff bracket kits on page 36.



2121NA

## 7" UNIVERSAL BOOSTER COMBO

Master Cylinder	Bore	Single Diaphragm		Dual Diaphragm	
		Chrome	Gold Zinc	Chrome	Gold Zinc
2071 Dual reservoir	1-1/8"	2121NA	2121NB	2122NA	2122NB
2020 Dual reservoir	1"	2121NA-1	2121NB-1	2122NA-1	2122NB-1
2018 Dual reservoir	1"	2121NA-2	2121NB-2	2122NA-2	2122NB-2



2122NB-1

## 8" UNIVERSAL BOOSTER COMBO

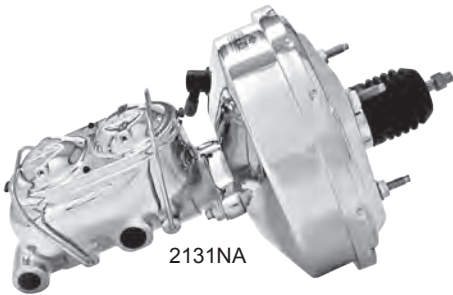
Master Cylinder	Bore	Dual Diaphragm	
		Chrome	Gold Zinc
2071 Dual reservoir	1-1/8"	2123NA	2123NB
2020 Dual reservoir	1"	2123NA-1	2123NB-1
2018 Dual reservoir	1"	2123NA-2	2123NB-2
2150 Single reservoir	1"	2123NA-4	



2123NB

## 9" UNIVERSAL BOOSTER COMBO

Master Cylinder	Bore	Single Slim Diaphragm		Dual Diaphragm	
		Chrome	Gold Zinc	Chrome	Gold Zinc
2071 Dual reservoir	1-1/8"	2131NA	2131NB	2124NA	2124NB
2020 Dual reservoir	1"	2131NA-1	2131NB-1	2124NA-1	2124NB-1
2018 Dual reservoir	1"	2131NA-2	2131NB-2	2124NA-2	2124NB-2



2131NA

## 11" UNIVERSAL BOOSTER COMBO

Master Cylinder	Bore	Single Diaphragm	
		Chrome	Gold Zinc
2072 Dual reservoir	1-1/8"	2128NA	2128NB
2021 Dual reservoir	1"	2128NA-1	2128NB-1
2019 Dual reservoir	1"	2128NA-2	2128NB-2

See page 43 for booster and master cylinder dimensions



2124NA



2128NB-2



Available in chrome plated, gold zinc and a variety of colors. Single and dual diaphragm styles available in 7", 8", 9" and 11" diameters fit virtually all hot rods and customs. Includes 3/8"-16 mounting studs & nuts where applicable. Works with many stock mounting brackets and with Tuff Stuff bracket kits on page 36. Most booster rods have a 3/8"-24 fine thread.

## 7" & 8" UNIVERSAL

Finish	7" Single	7" Dual	8" Dual
Chrome	2221NA	2222NA	2223NA
Black chrome	2221NA7	2222NA7	2223NA7 <NEW>
Gold zinc	2221NB	2222NB	2223NB
Stealth black	2221NC	2222NC	2223NC
Yellow		2222NCYELLOW	2223NCYELLOW
Orange		2222NCORANGE	2223NCORANGE
Red		2222NCRED	2223NCRED
Blue		2222NCBLUE	2223NCBLUE

## 9" UNIVERSAL

Finish	Single	Slim Line	Dual	Dual
Chrome	2226NA	2231NA	2224NA	2229NA
Gold zinc	2226NB	2231NB	2224NB	2229NB
Stealth black			2224NC	2229NC
Yellow	2226NBYELLOW		2224NCYELLOW	
Orange	2226NBORANGE		2224NCORANGE	
Red	2226NBRED		2224NCRED	
Blue	2226NBBLUE		2224NCBLUE	

## 11" UNIVERSAL

Finish	Single	Single w/studs
Chrome	2227NA	2228NA
Gold zinc	2227NB	2228NB
Stealth black	2227NC	<NEW>
Yellow	2227NBYELLOW	
Orange	2227NBORANGE	
Red	2227NBRED	
Blue	2227NBBLUE	

2227N includes booster mounting bracket

## 9" CORVETTE 1963 - 67

Finish	Single
Chrome	2230NA
Gold zinc	2230NB

Includes booster mounting bracket

## 9" CHEVY II NOVA 1962 - 67

Finish	Single
Chrome	2233NA
Gold zinc	2233NB

## 9" MUSTANG 1967 - 70

Finish	Single
Chrome	2225NA
Gold zinc	2225NB

Use with 2017 master cylinder, includes mounting bracket

## 9" JEEP CJ 1974 - 86

Finish	Single Slim
Chrome	2231NAJ
Gold zinc	2231NBj

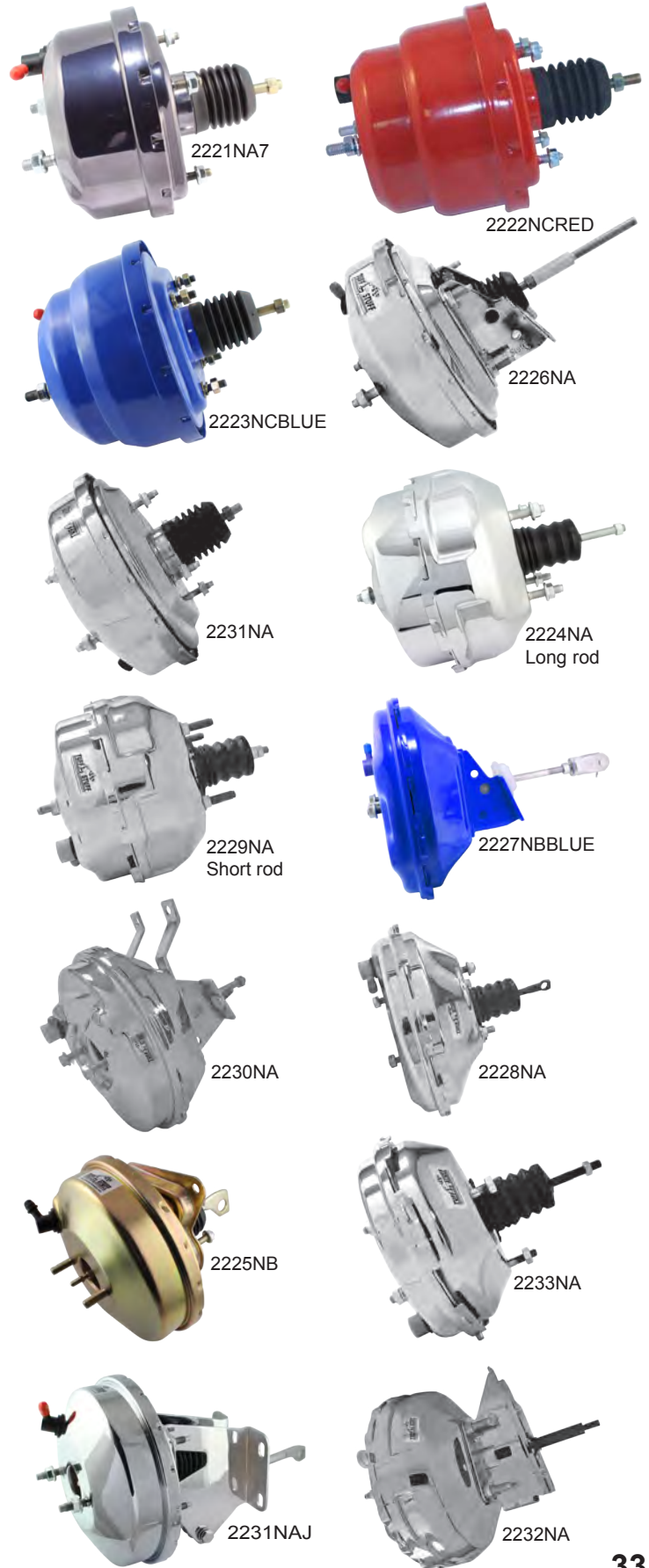
Includes booster mounting bracket

## 11" GM TRUCK 1973 - 93

Finish	Dual
Chrome	2232NA
Stealth black	2232NB

Includes booster mounting bracket

## 100% New Parts



# Master Cylinders



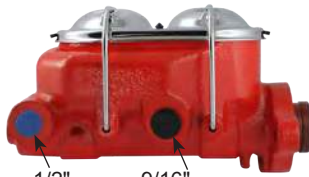
2018NA



2019NA7  
1/2" 9/16"

### TECH TIP

1" Bore recommended for disc/drum and drum/drum brake set-ups.  
1-1/8" Bore recommended for most disc/disc brake set-ups.



2071NCRED  
1/2" 9/16"



2020NA



2020NA7  
3/8" 3/8"



2020NC



2150NA



2150NB



To rear To front 2017NA



To rear To front 2017NBBLUE



2020123

## UNIVERSAL DUAL RESERVOIR

Stock style cast iron master cylinders fit virtually all hot rods, customs & muscle cars. Available in a variety of finishes including chrome plated, powder coated or as cast. 100% new components – not remanufactured. 3-3/8" mounting hole spacing.

1" bore, 9/16" rear & 1/2" front driver side ports

Finish	Shallow	Deep
Chrome	2018NA	2019NA
Black chrome	2018NA7	2019NA7 <NEW>
Stealth black	2018NC	2019NC
As cast	2018NB	2019NB

1-1/8" bore, 9/16" rear & 1/2" front driver side ports

Finish	Shallow	Deep
Chrome	2071NA	2072NA
Black chrome	2071NA7	2072NA7 <NEW>
Stealth black	2071NC	2072NC
Yellow	2071NCYELLOW	
Orange	2071NCORANGE	
Red	2071NCRED	
Blue	2071NCBLUE	
As cast	2071NB	2072NB

## HEAVY DUTY CORVETTE

1" bore, two 3/8"-24 inverted flare ports on both sides  
3-3/8" mounting hole spacing

Finish	Shallow	Deep
Chrome	2020NA	2021NA
Black chrome	2020NA7	2021NA7 <NEW>
Stealth black	2020NC	
Yellow	2020NCYELLOW	
Orange	2020NCORANGE	
Red	2020NCRED	
Blue	2020NCBLUE	
As cast	2020NB	2021NB

## GM 1955 - 64

Single reservoir for drum/drum brakes, fruit jar style

1" bore, two 7/16"-24 ports 3-3/8" mounting hole spacing

Finish	Shallow	Deep
Chrome	2150NA	
As cast	2150NB	

## MUSTANG 1967 - 74

1" bore, 3/8"-24 rear & 1/2"-20 front ports

3-1/8" mounting hole spacing

Finish	Shallow	Deep
Chrome	2017NA	
Yellow	2017NBYELLOW	
Red	2017NBRED	
Blue	2017NBBLUE	
As cast	2017NB	

## MASTER CYLINDER REBUILD KITS

Includes all of the seals, springs and small parts needed to rebuild Tuff Stuff master cylinders

Bore	Fits Master Cylinders	Item
1"	2018 thru 2021, 2023 thru 2026	2020123
1-1/8"	2071, 2072, 2027, 2028	2071123

## SMOOTHIE MASTER CYLINDERS

Aluminum Smoothie master cylinders fit virtually all hot rods, customs & muscle cars. Beautiful chrome plated or polished aluminum finish. Dual reservoir with 3-3/8" mounting bolt spacing. 100% New components – not remanufactured.

### 1" bore, 9/16" rear & 1/2" front driver side ports

Finish	Shallow hole	Deep hole
Chrome	2023NC	2024NC
Black chrome	2023NC7	2024NC7 <NEW
Polished	2023NA	2024NA

### 1" bore, two 3/8"-24 inverted flare ports on both sides

Chrome	2025NC	2026NC
Black chrome	2025NC7	2026NC7 <NEW
Polished	2025NA	2026NA

### 1-1/8" bore, 9/16" rear & 1/2" front driver side ports

Chrome	2027NC	2028NC
Black chrome	2027NC7	2028NC7 <NEW
Polished	2027NA	2028NA

## 100% New Components



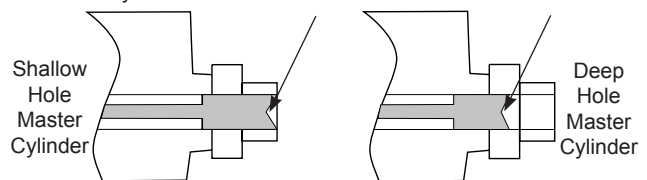
2023, 2024, 2027, 2028



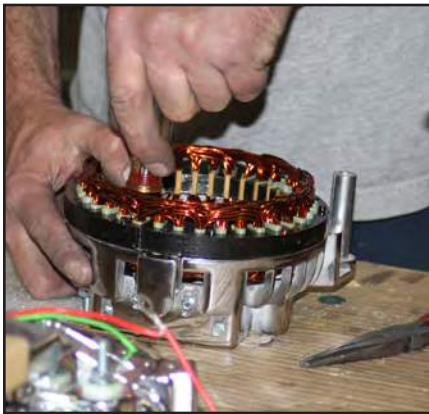
2025, 2026

### TECH TIP

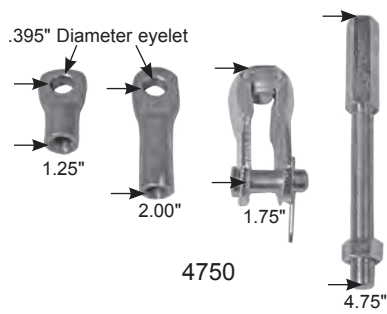
A **shallow hole** master cylinder, usually used with a power brake booster, refers to the piston end being nearly flush with the back end of the master cylinder. A **deep hole** master cylinder, usually used on non-power manual brake systems, has a recessed piston end allowing the brake pedal rod to be held securely in the hole.



*All polishing, chrome plating and powder coating are done in house by Matt Hurst and crew in Cleveland, Ohio, along with assembly and Tuff Testing of every unit!*



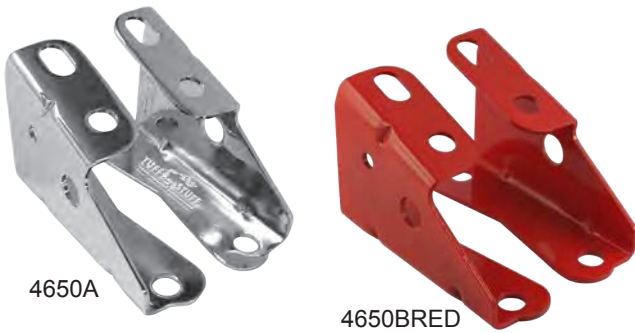
# Booster Brackets



## BOOSTER EXTENSION ROD & CLEVIS KIT

Universal kit adapts most factory brake setups to Tuff Stuff boosters. Rod length is 4.75" and has 3/8"-24 fine threads.

Finish	Item
Plain finish	4750



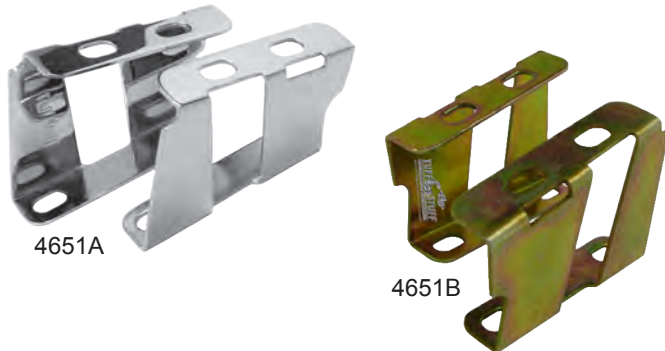
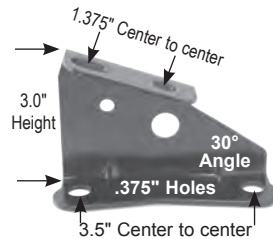
## GM 1967-72 BRAKE BOOSTER BRACKETS

1967-72 GM booster combos 2121, 2122, 2123 & 2124

1967-72 GM boosters 2221, 2222 & 2223, 2228, 2229, 2231

Available in chrome, black chrome, gold zinc and colors. Made from heavy gauge steel. Includes left and right brackets

Finish	Item
Chrome	4650A
Black chrome	4650A7 <NEW>
Gold zinc	4650B
Stealth black	4650C
Yellow	4650BYELLOW
Orange	4650BORANGE
Red	4650BRED
Blue	4650BBBLUE



## GM 1955-64 BRAKE BOOSTER BRACKETS

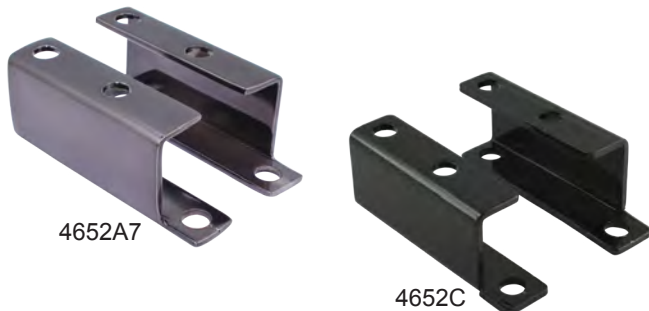
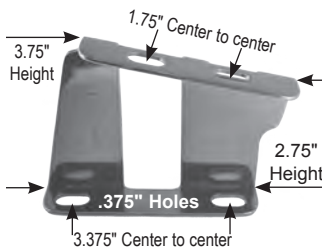
1955-64 GM booster combos 2121, 2122 & 2123

1955-64 GM power brake boosters 2221, 2222 & 2223

Available in chrome, black chrome, gold zinc and colors

Made from heavy gauge steel, includes left and right brackets

Finish	Item
Chrome	4651A
Black chrome	4651A7 <NEW>
Gold zinc	4651B
Stealth black	4651C
Yellow	4651BYELLOW
Orange	4651BORANGE
Red	4651BRED
Blue	4651BBBLUE



## GM 1955-58 BRAKE BOOSTER BRACKETS

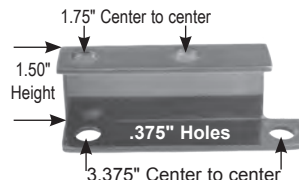
1955-58 GM booster combos 2121, 2122 & 2123

1955-58 GM power brake boosters 2221, 2222 & 2223

Available in chrome, black chrome, gold zinc and colors

Made from heavy gauge steel, includes left and right brackets

Finish	Item
Chrome	4652A
Black chrome	4652A7 <NEW>
Gold zinc	4652B
Stealth black	4652C
Yellow	4652BYELLOW
Orange	4652BORANGE
Red	4652BRED
Blue	4652BBBLUE



## GM TRUCK 1960-72 BRAKE BOOSTER BRACKETS

1960-72 GM truck booster combos 2122, 2123, 2124 & 2128  
 1960-72 GM truck power brake boosters 2222, 2223, 2224 & 2228  
 Works with 2 hole OEM bracket setups from late 1960 through 72  
 Includes pedal rod

Finish	Item
Chrome	4653A
Stealth black	4653B



## FORD MUSTANG BRAKE BOOSTER BRACKETS

1964 - 1966 Ford Mustang Includes pedal rod assembly

Finish	Item
Chrome	4655A
Stealth black	4655B



## JEEP CJ 1974-86 BRAKE BOOSTER BRACKETS

1974-86 Jeep CJ booster combo 2131  
 1974-86 Jeep CJ power brake booster 2231  
 Includes pedal rod assembly

Finish	Item
Chrome	4656A
Stealth black	4656B



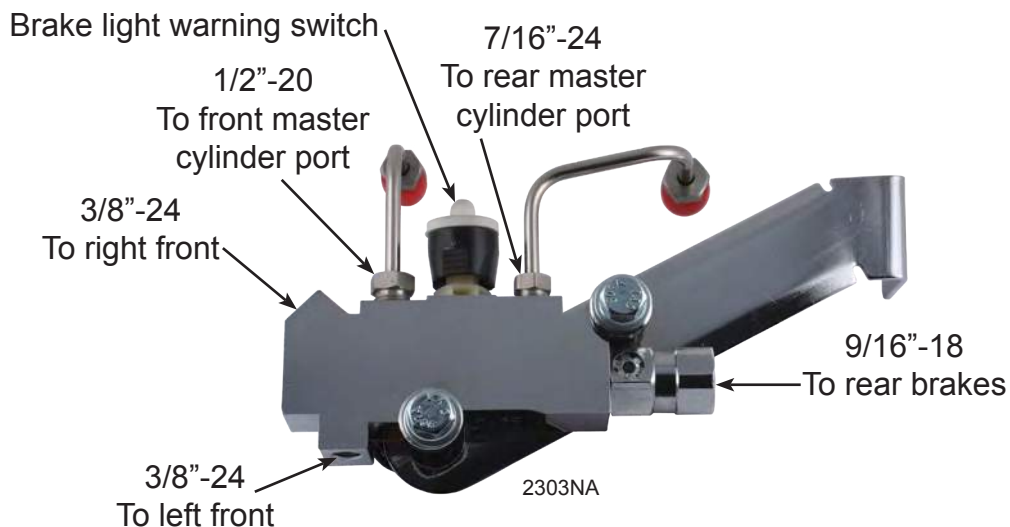
## PROPORTIONING VALVE KITS

Includes OE style mounting bracket, two short brake lines, proportioning valve with brake light switch, wire terminal and fasteners.  
 100% pressure front, 70% pressure rear.  
 Match your master cylinder number to the proportioning valve

Master Cylinders>	2020, 2021	2018, 2019	2027, 2028
	2025, 2026	2023, 2024	2071, 2072
Valve Ports	3/8"	1/2" & 9/16"	1/2" & 9/16"
Finish	Disc/Drum	Disc/Drum	Disc/Disc
Chrome	2301NA	2302NA	2303NA
Brass	2301NB	2302NB	2303NB



### Dimensions and Porting



# Power Steering Pumps



## TYPE II POWER STEERING PUMPS w/TOP PRESSURE PORT



6175ALRED

**NEW!**



6175ALD-6



6175ALB-4



6175AL-5



6169AL

**NEW!**

- Compact size aluminum pumps are ideal for tight installations.
- Available in chrome plated, polished aluminum, black chrome, stealth black, various colors and Factory Cast PLUS+ finishes.
- 1200 PSI rating, 3 GPM. Optional 850 PSI rating 2GPM valve sold separately.
- Top facing pressure port, clockwise rotation only.
- Pumps have a 17mm (0.669") shaft - except LS1 applications which have a 19mm (0.748") shaft. Overall pump height 4".
- For use with factory or remote reservoir tank depending upon part number.
- Overall pump height is 4".
- Press fit pulley installation kit included - requires a press on pulley, not included.
- Perfect for street rods and custom vehicles with limited engine space.
- 100% New - not remanufactured.

### Direct Fit Applications

	Chrome	Polished	Stealth Black	Cast PLUS +
1992-97 Corvette, Camaro, Impala, Caprice w/LT-1, stock replacement				6169AL <NEW>
1998-02 Camaro & Firebird w/LS1, stock replacement	6175ALD-6	6175ALP-6	6175ALB-6	6175AL-6
M16-1.5 & GM pressure slip port, M8 x 1.25 threaded mounting holes				

### Universal Fit Applications

Ports - Fittings	Mounting	NEW Chrome	Polished	Stealth Black	Cast PLUS+	NEW Black Chrome
AN-6 & AN-10	8mm through holes	6175ALD	6175ALP	6175ALB	6175AL	6175ALP77
AN-6 & AN-10	M8 x 1.25 threaded holes	6175ALD-2	6175ALP-2	6175ALB-2	6175AL-2	6175ALP-27
M16-1.50 & GM pressure slip	8mm through holes	6175ALD-7	6175ALP-7	6175ALB-7	6175AL-7	
M16-1.50 & GM pressure slip	M8 x 1.25 threaded holes	6175ALD-1	6175ALP-1	6175ALB-1	6175AL-1	
M16-1.5 & 5/8" OD return tube	8mm through holes	6175ALD-3	6175ALP-3	6175ALB-3	6175AL-3	
M16-1.5 & 5/8" OD return tube	M8 x 1.25 threaded holes	6175ALD-4	6175ALP-4	6175ALB-4	6175AL-4	
M16-1.5 & 5/8" OD 90° return	M8 x 1.25 threaded holes	6175ALD-5	6175ALP-5	6175ALB-5	6175AL-5	

### Universal Fit - Colors

Ports - Fittings	Mounting	Blue	Orange	Red	Yellow
AN-6 & AN-10	8mm through holes	6175ALBLUE	6175ALORANGE	6175ALRED	6175ALYELLOW



6175ARES



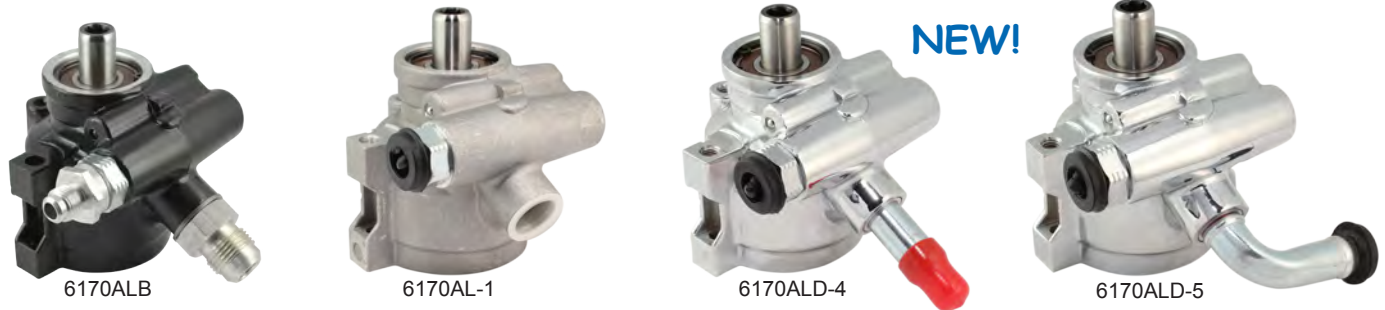
Reservoir shown mounted on Type II pump. Reservoir and pump are sold separately

### TYPE II POWER STEERING PUMP RESERVOIR

Fits Tuff Stuff 6170 and 6175 GM pressure slip series pumps  
 OE Style plastic reservoir includes a twist cap with a built-in dipstick, two mounting clips and an O-ring for quick, easy attachment. Return tube is 3/8" OD and mounts to the following pumps:

6170AL-1, ALB-1, ALP-1, ALD-1, AL-7, ALB-7, ALP-7, ALD-7  
 6175AL-1, ALB-1, ALP-1, ALD-1, AL-7, ALB-7, ALP-7, ALD-7  
 Type II power steering pump reservoir 6175ARES

## TYPE II POWER STEERING PUMPS w/BOTTOM PRESSURE PORT



Same pump specifications as the Type II pumps on page 38 except that these pumps have a bottom pressure port.

Ports - Fittings	Mounting	NEW	Chrome	Polished	Stealth Black	Cast PLUS+
AN-6 & AN-10	8mm through holes		6170ALD	6170ALP	6170ALB	6170AL
AN-6 & AN-10	M8 x 1.25 threaded holes		6170ALD-2	6170ALP-2	6170ALB-2	6170AL-2
M16-1.50 & GM pressure slip	8mm through holes		6170ALD-7	6170ALP-7	6170ALB-7	6170AL-7
M16-1.50 & GM pressure slip	M8 x 1.25 threaded holes		6170ALD-1	6170ALP-1	6170ALB-1	6170AL-1
M16-1.50 & 5/8" OD return tube	8mm through holes		6170ALD-3	6170ALP-3	6170ALB-3	6170AL-3
M16-1.50 & 5/8" OD return tube	M8 x 1.25 threaded holes		6170ALD-4	6170ALP-4	6170ALB-4	6170AL-4
M16-1.50 & 5/8" OD 90° return	M8 x 1.25 threaded holes		6170ALD-5	6170ALP-5	6170ALB-5	6170AL-5 <NEW

## TYPE II PRESSURE VALVES AND FITTINGS

Replacement AN fittings are CNC machined from billet aluminum and includes a washer with O-ring. Fittings sold individually. Low pressure valve reduces the pressure to 850PSI for use with Mustang II style rack and pinion steering systems. Pressure valves **do not fit** LS or LT pumps and are exclusively for use with Tuff Stuff aluminum Type II pumps.

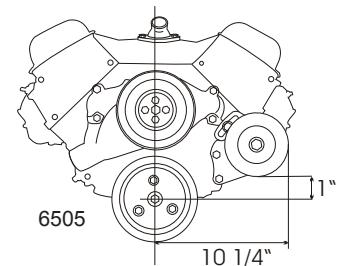
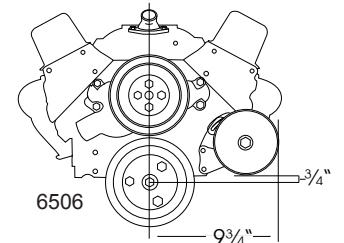
Description	Item
Pressure fitting, AN-6 x M16-1.5 x 1.25" long	5550P
Return fitting, AN-10 x 7/8"-14	5551P
850 PSI low pressure valve	5552
1200 PSI high pressure valve	5555 <NEW



## TYPE II PUMP BRACKETS

Fits all Tuff Stuff Type II power steering pumps. Eliminates the hassles of adapting stock mounting brackets. Laser cut from 1/4" plate steel. Pump not included with bracket kit.

Finish	Chevy SB Short	Chevy BB Short
Chrome	6506A	6505A
Stealth black	6506B	6505B
Yellow	6506BYELLOW	6505BYELLOW
Orange	6506BORANGE	6505BORANGE
Red	6506BRED	6505BRED
Blue	6506BLUE	6505BLUE



## FORD POWER STEERING PUMP

Fits 1990-99 Mustang, 1991-94 Explorer, 1990-97 Mercury Cougar and 1990-97 Thunderbird. OE style with reservoir. Requires a press-on pulley, not included. Three threaded hole mounts.

Finish	Power Steering Pump
As cast	6168N

NEW!



# Power Steering Pumps



## BANJO STYLE



## DIRECT FIT SAGINAW STYLE POWER STEERING PUMPS

- GM Saginaw style pump features all new components including reservoir and pump assembly.
- Includes billet chrome cap, dipstick and hardware. Pressure port is 5/8"-18 SAE inverted flare.
- Specific pumps include an AN-6 adapter fitting. Press fit shafts are 3/4" OD and requires a press fit pulley. 5/8" keyed shafts require a bolt-on pulley; pulley not included. Woodruff key for 5/8" shaft is 1/8" x 7/16".
- 3/4" press-fit pumps include a pulley installation kit. 1200 PSI rated to work with most gearbox systems.
- 850 PSI valve sold separately for Mustang II systems. Flows 1.6 to 2.1 GPM. Clockwise rotation only.

Direct Fit Applications	Shaft	Mounting	Chrome	S Black
1968-74 AMC, 1972-74 Jeep	5/8" keyed	3/8"-16	6196A	6196B
1961-66 Chevrolet V8 full size cars	5/8" keyed	3/8"-16	6190A	6190B
1961-69 Chevrolet cars and light trucks	5/8" keyed	3/8"-16	6198A	6198B
1965-74 Chevrolet Corvette big block	5/8" keyed	3/8"-16	6199A	6199B
1966-74 Chevrolet Corvette <NEW>	5/8" keyed	3/8"-16	6196A	6196B
1968 Camaro V8 & 1967-68 V8 Chevy II	5/8" keyed	3/8"-16	6197A	6197B
1969 Camaro & Nova V8	5/8" keyed	3/8"-16	6191A	6191B
1969 Camaro, Chevelle & Nova V8	5/8" keyed	3/8"-16	6195A	6195B
1969 Chevrolet V8	5/8" keyed	3/8"-16	6194A	6194B
1970 Chevrolet V8	5/8" keyed	3/8"-16	6193A	6193B
1970-74 Camaro, Chevelle, El Camino V8	5/8" keyed	3/8"-16	6183A	6183B
1970-74 Malibu, Monte Carlo V8	5/8" keyed	3/8"-16	6183A	6183B
1971-74 Vega and 1969-72 Buick	5/8" keyed	3/8"-16	6192A	6192B
1975-79 Corvette	3/4" press fit	3/8"-16	6178A	6178B
1978-79 Chevelle, El Camino	3/4" press fit	3/8"-16	6181A	6181B
1978-79 Malibu, Monte Carlo V8	3/4" press fit	3/8"-16	6181A	6181B
1978-79 Grand Prix, 305, 350 only	3/4" press fit	3/8"-16	6181A	6181B
1979 Camaro, Firebird, TransAm, all V8	3/4" press fit	3/8"-16	6181A	6181B
1980-81 Grand Prix all V8's (80-81 305, 350 only)	3/4" press fit	M10 x 1.5	6180A	6180B
1980-81 Grand Prix all V8's (80-81 305, 350 only)	3/4" press fit	3/8"-16	6182A	6182B
1980-82 Corvette	3/4" press fit	M10 x 1.5	6177A	6177B
1980-88 Chevelle, El Camino, Malibu, Monte Carlo	3/4" press fit	3/8"-16	6182A	6182B
1980-88 Chevelle, El Camino, Malibu, Monte Carlo	3/4" press fit	M10 x 1.5	6180A	6180B
1982-87 Camaro, Firebird, TransAm, all V8	3/4" press fit	M10 x 1.5	6179A	6179B
1988-92 Camaro, Firebird, TransAm, all V8	3/4" press fit	M10 x 1.5	6184A	6184B

## TEARDROP STYLE



## UNIVERSAL FIT SAGINAW STYLE PUMPS

Same features and benefits as the above pumps. Pumps have 5/8"-18 SAE inverted flare pressure fitting and have 3/8"-16 mounting holes/studs. Pulley not included.

Pressure	1200 PSI	850 PSI	1200 PSI
Shaft	5/8" Keyed	5/8" Keyed	3/4" Press-fit
Chrome	6176A	6174A	6188A
Black chrome	6176A7 <NEW>		
Stealth black	6176B	6174B	6188B
Yellow	6176BYELLOW		
Orange	6176BORANGE		
Red	6176BRED		
Blue	6176BLUE		
Pump unit only, does not include reservoir			6188

## ADAPTER FITTING FOR SAGINAW PUMPS

Adapts 5/8"-18 inverted flare to 9/16"-18 AN-6. This is the same fitting that is included in certain Saginaw style power steering pumps. Fitting sold individually.

Finish Chrome 5553A Plain 5553





## PULLEYS FOR SAGINAW POWER STEERING PUMPS

Bolt-on pulleys fit all Tuff Stuff Saginaw pumps with 5/8" keyed shaft, includes washer. Press-on pulleys fit all Tuff Stuff Saginaw pumps that require a 3/4" press fit pulley. Bolt-on pulleys are machined from aluminum, press on pulleys are steel construction. Pulleys require 3/8" wide V-belt(s).

Bolt-on style pulley		Press-on style pulley <NEW>		
5.80" Diameter, 0.625" ID		5.80" Diameter, 0.747" ID		
Finish	1-Groove	Finish	1-Groove	2-Groove
Chrome	8488A	Chrome	8485A	8486A
Polished	8488B	Black	8485B	8486B
Plain	8488C			



NEW!

## PRESSURE VALVES FOR SAGINAW PUMPS 850PSI

Low pressure valve reduces the pressure to 850PSI for use with Mustang II style rack and pinion steering systems. Exclusively for use with Tuff Stuff Saginaw pumps.

Description	Item
850 PSI low pressure valve (replaces 850PSI VALVE)	5556 <NEW>
1200 PSI high pressure valve	5554 <NEW>



Top Quality  
100% New  
Built in  
USA

## POWER STEERING PUMP CANS / RESERVOIRS

Replace your damaged Saginaw style Tuff Stuff reservoir instead of replacing the complete pump.

Fits Tuff Stuff 6174 & 6176 pumps w/tube on left, SAE

Finish	Item
Chrome	6501A
Stealth black	6501B
Raw steel	6501C

Fits Tuff Stuff 6177 & 6178 pumps w/center tube

Finish	Item
Chrome	6502A
Stealth black	6502B
Raw steel	6502C



## BILLET STYLE ALUMINUM POWER STEERING CAP & DIPSTICK

Fits all Tuff Stuff Saginaw style power steering pumps. Will not fit Type II pumps.

Finish	Item
Chrome	6500A
Polished	6500B

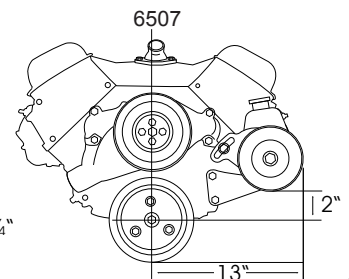
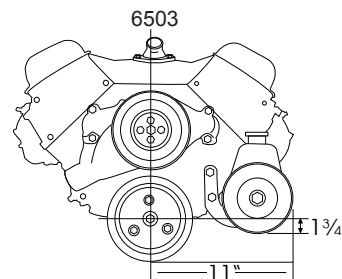
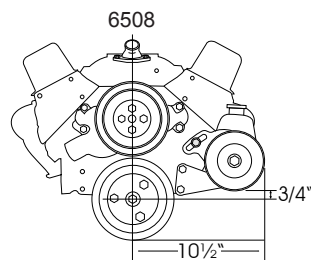
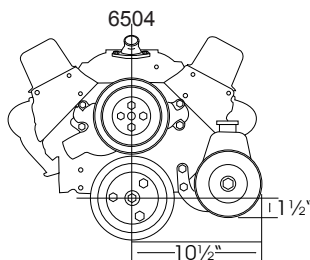


## POWER STEERING PUMP BRACKETS

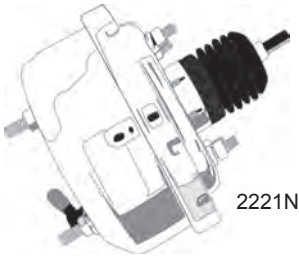
Bracket kits for Saginaw style pumps are laser cut from 1/4" plate steel. Eliminates the hassle of adapting stock mounting brackets. Chrome plated or 5 powder coated colors. Fits all Tuff Stuff Saginaw pumps except 6179, 6180 & 6181. Pump not included with bracket kit.

Water pump	Chevy Small Block		Chevy Big Block	
	Short	Long	Short	Long
Chrome	6504A	6508A	6503A	6507A
Stealth black	6504B	6508B	6503B	6507B
Yellow	6504BYELLOW	6508BYELLOW	6503BYELLOW	6507BYELLOW
Orange	6504BORANGE	6508BORANGE	6503BORANGE	6507BORANGE
Red	6504BRED	6508BRED	6503BRED	6507BRED
Blue	6504BBLUE	6508BBLUE	6503BBLUE	6507BBLUE

6504 Kits will NOT fit 1964-68 Chevelle, Malibu and El Camino due to steering linkage interference



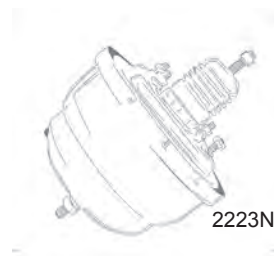
# Booster Dimensions



2221N



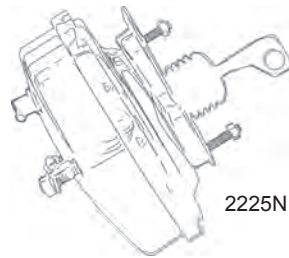
2222N



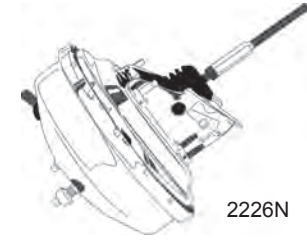
2223N



2224N



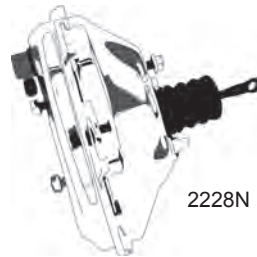
2225N



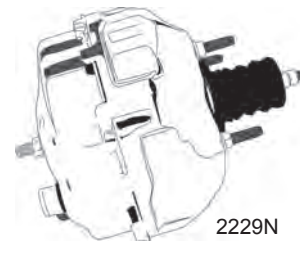
2226N



2227N



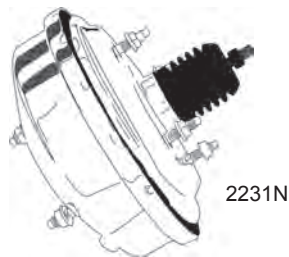
2228N



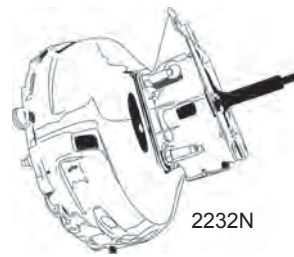
2229N



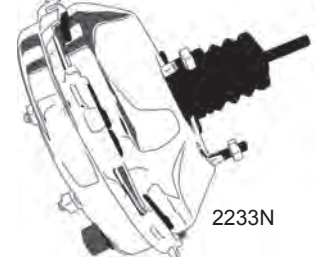
2230N



2231N



2232N

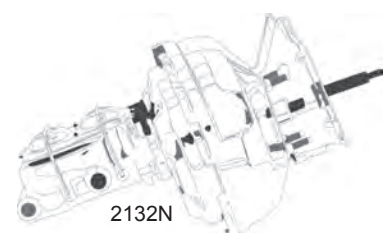
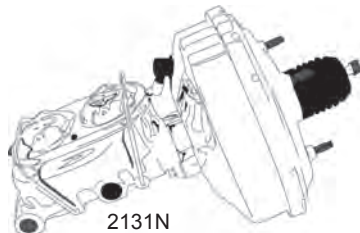
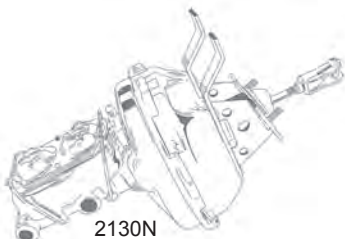
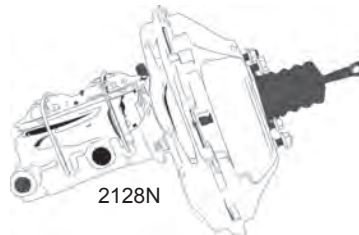
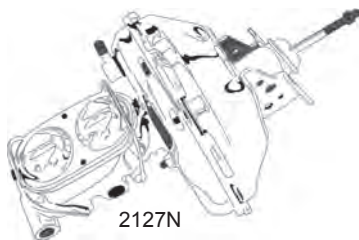
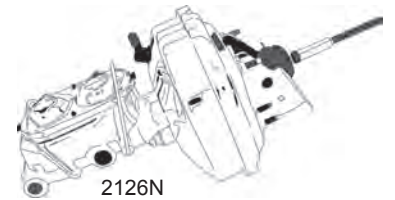
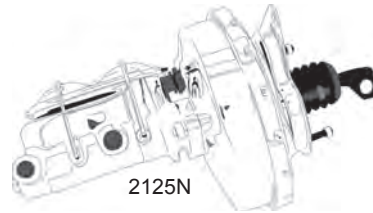
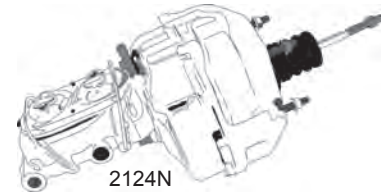
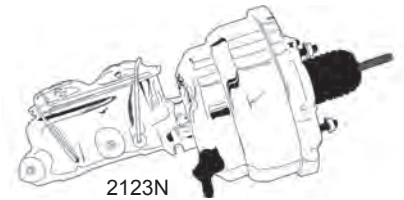


2233N

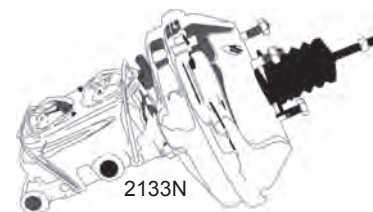
## POWER BOOSTER DIMENSIONS

All boosters have a 3-3/8" square mounting footprint except 2225N, 2230N and 2233N.

Item	Description	Booster		Rod		Mounting	Details
		Dia	Length	Length	Length		
2221N	7" Single diaphragm	7"	3.50"	4.00"	4 studs	M8-1.5 metric studs	
2222N	7" Dual diaphragm	7"	5.25"	4.00"	4 studs	M8-1.5 metric studs	
2223N	8" Dual diaphragm	8"	5.25"	4.00"	4 studs	M8-1.5 metric studs	
2224N	9" Dual diaphragm	9"	6.00"	5.25"	4 studs	1-1/2" long studs	
2225N	Ford Mustang 67-70, 9" single diaphragm	9"	3.75"	3.12"	4 studs	M6-1.0 x 1.25" offset studs	
2226N	GM A & F body 64-66, 9" single diaphragm	9"	6.50"	1.50"	4 holes	1.5" past bracket	
2227N	GM A & F body 66-72, 11" single, w/bracket	11"	6.50"	7.12"	4 holes	Angle booster bracket	
2228N	11" Single diaphragm w/studs	11"	4.25"	4.62"	4 studs	4.62" mounting surface to center of eyelet	
2229N	Corvette 68-82, 9" dual diaphragm	9"	6.00"	4.12"	4 studs	1-1/2" long studs	
2230N	Corvette 63-67, 9" single diaphragm	9"	6.25"	3.12"	2 studs	With bracket	
2231N	9" Single diaphragm Slim line	9"	4.00"	3.81"	4 studs		
2232N	GM Truck 73-92, 11" dual diaphragm	11"	8.50"	3.25"	4 holes	1-1/2" long studs	
2233N	Chevy II Nova 62-67, 9" single diaphragm	9"	4.25"	5.25"	3 studs		



**TECH TIP**  
All 4-stud booster and combo mounts feature a 3-3/8" square centerline mounting pattern



## BOOSTER / MASTER COMBO DIMENSIONS

### Universal master cylinder w/power brake booster combo

Item	Description	Dia	MC		Booster Rod		Mounting Details
			Length	Length	Length	Length	
2121N	7" Single diaphragm combo	7"	8.00"	3.50"	4.00"	4 studs	M8-1.5 metric studs
2122N	7" Dual diaphragm combo	7"	8.00"	5.25"	4.00"	4 studs	M8-1.5 metric studs
2123N	8" Dual diaphragm combo	8"	8.00"	5.25"	4.00"	4 studs	M8-1.5 metric studs
2124N	9" Dual diaphragm combo	9"	8.00"	6.00"	5.25"	4 studs	M10-1.5 x 1-1/2" long studs
2128N	11" Single w/studs diaphragm combo	11"	8.00"	4.25"	4.62"	4 studs	4.62" from mtg surface to center of eyelet
2131N	9" Single diaphragm Slim line w/studs combo	9"	8.00"	4.00"	3.81"	4 studs	

### Dedicated master cylinder w/power brake booster combo

2125N	Mustang 67-70, 9" single diaphragm w/bracket combo	9"	7.50"	3.75"	3.12"	4 studs	Offset studs
2126N	GM A & F body 64-66, 9" single diaphragm w/bracket combo	9"	8.00"	6.50"	1.50"	4 holes	1.5" past bracket
2127N	GM A & F body 66-72, 11" single diaphragm w/bracket combo	11"	8.00"	6.50"	7.12"	4 holes	Angle booster bracket
2129N	Corvette 68-82, 9" dual diaphragm	9"	8.00"	6.00"	4.12"	4 studs	1-1/2" long studs
2130N	Corvette 63-67, 9" single diaphragm w/bracket combo	9"	8.00"	6.25"	3.12"	bracket	With 2 studs
2132N	GM Truck 73-92, 11" dual diaphragm, 1-1/2" long studs	11"	8.00"	8.50"	3.25"	4 holes	Angled from 2.75" at top to 3.0" at bottom
2133N	Chevy II Nova 62-67, 9" single diaphragm combo	9"	8.00"	4.25"	3.25"	4 holes	

## ***How do I hook up a one wire alternator?***

Run a wire from the battery terminal on the alternator to the positive terminal on the battery. You may also consider running the wire to the starter solenoid (main lug). Your battery cable is connected to this lug. This may hide the charge wire for a cleaner look.

## ***When to use a one wire alternator?***

One wire alternators will simplify your build up. If you are starting a project from scratch, then there is no longer a need for the messy wiring harness from an externally mounted fender wall regulator. In many instances you can remove your existing external regulator and harness and replace it with a one wire. One wire alternators can be purchased for GM, Ford and Mopar applications. Please note: If your vehicle was originally equipped with a dash indicator lamp in some GM applications it will be necessary to remove the black rubber regulator cover and plug in your existing two spade plug. This procedure can be performed when installing our models 7127, 7139 and 7140.

## ***Is it true that one wire alternators don't charge at idle?***

Tuff Stuff's 40 years of experience have enabled us to develop alternator internal components that will keep your battery charged at a crawl. No other manufacturer in the industry has been able to produce more amps at low RPM's than us. There is no need to worry about the use of underdrive pulley systems or ignition regulator turn on with the use of a Tuff Stuff one wire alternator.

## ***Does chrome plating on a alternator retain heat?***

We have tested our alternators through the most rigorous conditions and there is no proven fact that we have been able to produce, that will support this rumor.

## ***What is the largest amp alternator I can install in my vehicle?***

The sky is the limit. The more amperage the better. As long as the alternator can fit into your brackets, you can put any size alternator on your vehicle. The voltage regulator will control the amount of amperage that the battery needs to run your accessories. Please Note: It is imperative that you increase the size of your charge wire if you are upgrading to a higher amp alternator. Insufficient wire gauge size can cause fire due to heat created by resistance.

## ***Do I need to buy a reverse rotation alternator for a serpentine system?***

No. Tuff Stuff alternators are bi-directional and will work properly if installed on the left or right side of the engine or with serpentine or "V" groove pulley systems.

## ***How do I know if my alternator is charging?***

If you have access to a multi meter, turn the dial to DCV. Hold the black probe on the negative battery terminal and the red probe on the right. With the vehicle's engine running, the battery voltage should read between 13.5 and 14 volts. Battery voltage without the engine running should read 12.6 volts.

***I installed a new water pump in my car but it's still running hot.***

Engines that have been modified for more horsepower generally run hotter than stock engines. SuperCool water pumps are designed to provide 30% more flow. If combined with the proper thermostat and radiator, your engine's overheating can be resolved.

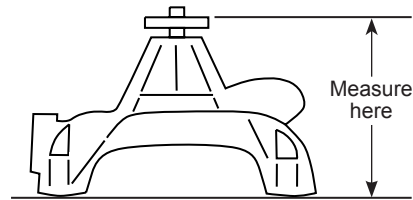
***How do I know when I need a reverse rotation water pump?***

If you are ordering a water pump by application, you will be certain that the water pump will be an exact replacement for your vehicle. In this case you need not worry about whether it is a reverse flow. If you are building an engine or upgrading from a "V" belt pulley to serpentine, you need to assess your situation. Most serpentine systems require a reverse water pump. You can determine this by how the belt travels around the water pump pulley. If the back of the serpentine belt travels around the water pump pulley you will require a reverse water pump. If the inside of the belt travels on the water pump pulley you will require a standard rotation water pump. Most pulley and bracket manufacturers can tell you what style of water pump you need for their system.

***Why should I install an aluminum water pump?***

Some water pumps are available as aluminum rather than cast iron. Aluminum pumps are much lighter than cast iron and can be polished to a high luster without rusting.

***How do you measure the height of a water pump?***



Measure from the top fan hub surface to the water pump mounting surface

The industry term for measuring a water pump height is the "hub height". The hub height is a critical belt alignment dimension determining where the water pump pulley belt groove(s) fall in relation to your crank, alternator, power steering pump and air conditioning pulley grooves. The dimension from the mounting gasket surface to the outside face of the hub (where the pulley is bolted) is the hub height. It is especially helpful to know what the hub height dimension is to determine if your Chevy water pump is a long or a short style. A long or short water pump may be used on any Chevy V8 (Gen I SB - Gen II BB) engine as long as the correct pulleys are used and the belts are in alignment. In the catalog "water pump" section you will find the hub height next to each model. Never attempt to press or pull the hub to change its dimension. This may result in an unbalanced fan blade that can explode the pump causing serious injury! Waterpumps can be special ordered with a specified hub height or #7620 shims can be purchased to adjust the pulley outward in 1/16" increments.

*The Custom Shop requests Tuff Stuff products by name for their project vehicles!*



Photos courtesy of John and Kim Wargo, The Custom Shop

## **Why does my starter make a whining or grinding noise?**

This could mean that your starter needs shimming. There are different methods of shimming a starter, depending on which direction the starter needs to be adjusted. If the starter to ring gear tolerance is too tight, you will need to shim the starter away from the ring gear. If the tolerance is loose, your ring gear may be worn or defective. Our industry has become familiar with brand new defective aftermarket flywheels. Don't rule this out as a possible cause. If the model #6584 or #6772 pinion is engaging in too far, the washer shim may need to be installed behind the mounting block. Refer to installation instructions (supplied with your new starter) for tolerances.

## **Why does the full size starter use the "R" terminal and the gear reduction does not?**

The "R" terminal sends 12V to the coil when a ballast resistor is part of your ignition system. In most cases the "R" terminal connection can be discarded. The gear reduction starter motor draws half the amperage of the full size starter, therefore it's not robbing the engine's spark. You may also want to consider upgrading to a modern ignition system that does not consist of a ballast resistor.

## **Why won't my starter crank when it's hot?**

This is common with full size starters. Excessive heat against the starter solenoid builds resistance in the coil. There are a few solutions for this problem. (1) You can install our Model #7629 hot start kit. (2) Install a heat shield on the solenoid. (3) Replace your full size starter with a gear reduction. The smaller body and variable clocking provides more clearance between the exhaust and the starter solenoid.

## **Why do I keep cracking noses on my full size starters?**

Refer to the first paragraph in this section. (whining and grinding noise) These can all be factors. If you are not installing the starter with original equipment bolts the starter will become loose causing misalignment. Install with Tuff Stuff #7623 knurled starter bolts. Backfire while starting causes backlash which creates sudden excessive impact to the aluminum casting. If your engine is not tuned properly do not continue to crank your engine until your timing is set. The Hitachi style gear reduction starters have a solid mounting block and pinion that will withstand backfire better than the full size starter. Full size starters are not recommended for high compression engines.

# Power Steering Pump FAQ'S

## **Is the PSI the same in all pumps?**

No, at Tuff Stuff we currently carry pumps that are valved at 1200-PSI and at 850-PSI. Most applications will accept the 1200-PSI pump, with exception of the Mustang II rack, which uses an 850 PSI valve. 850 PSI valves are sold separately or you can buy a Tuff Stuff #6174A or 6174B Saginaw style pump that is factory set to 850 PSI.

## **How do I mount the power steering pump when the bracketry is missing from my engine?**

Tuff Stuff has a wide variety of power steering pump mounting bracket kits for both the Saginaw and Type II pumps. The brackets are laser cut from 1/4" steel plate and are available in either chrome plated or a variety of powder coated colors and are complete with fasteners.

## **What is the difference between keyed shaft power steering pumps and press on power steering pumps?**

Most early vehicle pumps came with a keyed pulley which was nut retained. Most late vehicles were revised to a press fit pulley. The nut retained style pulley can be easily removed and reinstalled. Once the press fit pulley is installed, it is not recommended to remove it and reinstall it because the pulley I.D. becomes stretched and it may slide off the shaft. Car builders prefer the universal keyway fit #6176A because of its flexibility.

## **What is the difference between a metric pump and a SAE pump?**

There are two differences between these pumps. The SAE pumps use a flared fitting for the pressure line and the mounting bolts are Standard American Equipment. The metric pumps use an O-ring.

**What is the difference between a single and a dual diaphragm booster?**

Dual diaphragm booster provide more power assist to the brakes.

**Do I need a bracket to install the brake booster to the firewall?**

Your original booster may have had a bracket already attached to it. If you wish to install one of our universal boosters (#2221, #2222, #2223, #2224, #2231), then you may need to install a bracket (#4650, #4651, #4652) to most closely match your original booster setup or needs.

**Will I have to do any modifications when installing a universal brake booster?**

There is always a chance that you will have to make some modifications when installing a universal brake booster. Normally the pedal rod length will have to be adjusted and that is why purchasing a pedal rod extension kit (Tuff Stuff #4750) is always a wise choice.

**Do I need a proportioning valve if I am converting over to power brakes?**

Yes, when converting to power brakes you must use a proportioning valve (#2301, #2302, #2303). They come complete with bracket and the lines from the master cylinder to the proportioning valve.

**What if my engine has a radical cam?**

In this case you will have to check that you are producing at least 18" of vacuum. Your system may require a vacuum assist pump if your vacuum is inadequate, causing a hard pedal.

**Do I need a 1" bore or a 1-1/8" bore master cylinder?**

It all depends on the brakes you are running. If you are using a factory disc/disc application then you would use a 1-1/8" bore master cylinder, but if they are aftermarket calipers you would use a 1" bore master cylinder. Aftermarket calipers are bigger than original equipment and require more pressure to open. In most cases with disc/drum applications on earlier models you would use a 1" bore master cylinder. There are always exceptions when building a street rod. Tuff Stuff technicians can guide you through the process of ordering the proper brake booster and master cylinder to complete your project.

**Why would I need a dual ported master cylinder?**

We build our dual ported master cylinder so you can redirect your brake lines from the opposite side of the master cylinder. The ports on the other side of the master cylinder are then plugged.



Front

Back

## T-SHIRTS

Premium quality black T-shirt features a large Tuff Stuff logo on the front and a smaller logo on the back. 100% cotton.

Size	Item
Large	99007
X Large	99008
XX Large	99009



## BASEBALL CAPS

Available in black or white, both caps feature a black bill with the words Tuff Stuff printed around the front edge. The Tuff Stuff logo is direct embroidered on the front and the web address and phone number is embroidered on the back. Cap features cotton construction with an adjustable back strap. One size fits all

White	99003
Black	99010



## DECALS

Tuff Stuff decals are four color self adhesive and stick to any clean, dry surface. Nominal size is 2-1/2" X 5".

Sold individually	99004
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## BANNERS

Ideal for performance and custom shops, retailers and garages. Made from heavy gauge plastic material and measure 24" X 60". Designed for indoor or outdoor usage.

Tuff Stuff Logo banner	99005
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