













PREMIUM QUALITY BUILT IN AMERICA PERFORMANCE ACCESSORIES

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

Home CLEVELAND CHRONE!





All Tuff Stuff chrome products are polished and chrome plated IN HOUSE, in CLEVELAND, OHIO by skilled American workers.

Compare the shine and sheen to any imported chrome item and see for yourself that Tuff Stuff chrome has a superior look!

OUR GIROMEWILL GIYOU HOME



Contents

A/C Compressors	15
Alternators	
GM	3 - 7
Ford	8 -11
Chrysler/Jeep	
Accessories	. 13 - 14
Master Cylinders	
Power Brake Boosters	
Boosters	37
Booster Combos	.34 - 36
Dimensions	.42 - 43
Proportioning Valves	41
Accessories	.40 - 41
Power Steering Pumps	
Saginaw	.32 - 33
Type II	.30 - 31
Promotional Materials	
Starters	
GM	.17 - 18
Ford	
AMC/Chrysler/Jeep	
Accessories	
Technical	
FAQ's	.44 - 47
Water Pumps	
GM	.23 - 26
Ford	
Chrysler	28
Accessories	

TUFF MUDDER



ALTERNATORS and STARTERS FOR JEEP WRANGLER JK

With nearly 50% more amperage than stock, these alternators have VERY HIGH OUTPUT to power everything from winches to auxiliary lighting. See pages 12 and 18.

What's NEW!



POWER STEERING PUMPS FOR GM PICKUP TRUCKS

Available in chrome plated or stealth black, these direct fit pumps include a billet chrome cap and dipstick. New Hydro-Boost pumps for OEM and custom builds. See pages 32-33.



MAX AMP ALTERNATORS

175 or 250 AMPS MAX!
135 OR 211 AMPS at IDLE,
With nearly 50% more amperage than stock,
these alternators have VERY HIGH OUTPUT.
See page 10.



FINISHES

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

Alternators







PERFECT

For high horsepower muscle cars, hot rods, show cars, custom trucks and daily drivers.

OEM or 1-Wire

Whether you prefer an OEM plug-in or a clean 1-wire installation, most Tuff Stuff alternators are available in either configuration - or both!

FINISHES

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

ALL TUFF STUFF ALTERNATORS

Are built in USA and feature heavy duty copper wound coils, spike-resistant diodes, low idle cut-in internal voltage regulator - except where noted - cooling fan and pulley.

Why Tuff Stuff Alternators?

All Tuff Stuff alternators are hand built in Cleveland, Ohio and are tested to meet or exceed OEM specifications. All Tuff Stuff alternators are made from 100% new components and carry a one year limited warranty. Tuff Stuff has alternator applications for virtually all muscle cars, hot rods, customs and light trucks in just about every finish imaginable. Many enthusiasts prefer the clean, simple 1-wire alternator which features a low idle cut-in internal regulator that provides plenty of charging at low RPM's.

You can buy a cheaper alternator, but you cannot buy a better alternator!

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

Most 1971-86	GM cars	and light t	rucks, 1-Wi	re or OEM hool	kup, 10-32 groundi	ng tab	Silver Bullet		
Finish	Pulley	65 A	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				7127ND7	7127NK7	7139ABULL7	7140ABULL7	
Black chrome	6G				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		<u>~</u>	
Black wrinkle	2V				7127NFBWDP	7127NKBWDP		^	
Black wrinkle	6G				7127NFBW6G	7127NKBW6G	$\overline{}$		
Black primer	V				7127RATBLK		10 SI Plug		
Gray primer	V				7127RATGRAY		-		
Yellow	V				7127NFYELLOW		7139FBULLY		
Orange	V				7127NFORANGE		7139FBULLOR		
Red	V				7127NFRED		7139FBULLRED	6.600" ▼	
Red oxide	V				7127RATRED			7102, 7127, 7139, 7140	
Blue	V				7127NFBLUE		7139FBULLBLU	7102, 7127, 7139, 7140	
Cast PLUS+	V			7127	7127D	7127K	7127DBULL	7127KBULL	
Cast PLUS+	6G				7127D6G	7127K6G	7127DBULL6G	7127KBULL6G	
* 6 Volt ne	egative gro	und with a 1-	wire voltage	regulator - NOT a	in OEM hookup.	Case depth:	4.85", lower mount bo	ss: 2.00" long	

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

They are indexed to OEM specifications and are a direct fit OEM replacement. They can be used with the OEM wiring plug or as a 1-wire alternator.

Clocked		6 o'C	lock	9 0'0	Clock	<u> 12 o'</u>	Clock
Finish	Pulley	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
			Silven	r Bullet —			
01	40	7400 A DI II I O			74.40 A DI II I O	740040111140	744040111140
Chrome	1G	/139ABULL6	7140ABULL6	7139ABULL9	7140ABULL9	7139ABULL12	7140ABULL12
Chrome	6G					7139ABUL6G12	7140ABUL6G12
Polished	1G	7139BBULL6	7140BBULL6	7139BBULL9	7140BBULL9	7139BBULL12	7140BBULL12
Polished	6G					7139BBUL6G12	7140BBUL6G12
Stealth Black	1G	7139FBULL6	7140FBULL6	7139FBULL9	7140FBULL9	7139FBULL12	7140FBULL12
Stealth Black	6G					7139FBUL6G12	7140FBUL6G12

10DN Plug

10DN GM STYLE EXTERNAL REGULATOR

Most 1963-70 GM cars and light trucks

Blue

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

7102NFBLUE

Finish I	Pulley	80 AMP	100 AMP	140 AMP
Chrome	V	7102NA	7102NC	7102NK
Polished	V	7102NAP	7102NCP	7102NPK
Stealth blac	k V	7102NF	7102NE	7102NFK
Black wrink	le V	7102BW	7102NFBW	7102NKBW
Cast PLUS-	+ V	7102	7102C	7102K
Yellow	V	7102NFYELLOW		
Orange	V	7102NFORANGE		
Red	V	7102NFRED		













CS130 GM STYLE ALTERNATORS INTERNAL REGULATOR

Fits most 1987-94 GM cars and light trucks, 1-wire or OEM hookup Features both internal and external cooling fans Silver Bullet alternators have a side post battery terminal, all others have a back post battery terminal



			Back Post		Side Post
Finish	Pulley	105 AMP	160 AMP	160A Bullet	160A Silver Bullet
Chrome	V	7860D	7860F		7860ABULL
Chrome	6G	7860D6G	7860F6G	7860F6G22	7860ABULL6G
Polished	V	7860DP	7860FP		7860BBULL
Polished	6G	7860DP6G	7860FP6G	7860FP6G22	7860BBULL6G
Stealth blac	k V	7860E	7860G		7860CBULL
Stealth blac	k 6G	7860E6G	7860G6G	7860G6G22	7860CBULL6G
Cast PLUS+	+ 6G	7860-16G	7860K-16G	7860K-16G22	



7861KBULL6G

			Back Post		Side Post
Finish	Pulley	105 AMP	160 AMP	160A Bullet	160A Silver Bullet
Chrome	V	7861D	7861F		7861ABULL
Chrome	6G	7861D6G	7861F6G	7861F6G22	7861ABULL6G
Polished	V	7861DP	7861FP		7861BBULL
Polished	6G	7861DP6G	7861FP6G	7861FP6G22	7861BBULL6G
Stealth bla	ck V	7861E	7861G		7861CBULL
Stealth bla	ck 6G	7861E6G	7861G6G	7861G6G22	7861CBULL6G
Cast PLUS	S+ 6G	7861-16G	7861K-16G	7861K-16G22	7861KBULL6G NEW!



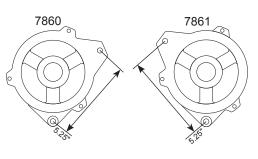
			Back Post		Side Post
Finish	Pulley	105 AMP	160 AMP	160A Bullet	160A Silver Bullet
Chrome	V	7866D	7866F		7866ABULL
Chrome	6G	7866D6G	7866F6G	7866F6G22	7866ABULL6G
Polished	V	7866DP	7866FP		7866BBULL
Polished	6G	7866DP6G	7866FP6G	7866FP6G22	7866BBULL6G
Stealth blac	k V	7866E	7866G		
Stealth blac	k 6G	7866E6G	7866G6G	7866G6GS22	
Cast PLUS-	+ 6G	7866-16G	7866K-16G	7866K-16G22	

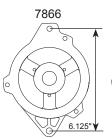


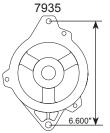
			Back Post		Side Post
Finish	Pulley	105 AMP	160 AMP	160A Bullet	160A Silver Bullet
Chrome	V	7935D	7935F		7935ABULL
Chrome	6G	7935D6G	7935F6G	7935F6G22	7935ABULL6G
Polished	V	7935DP	7935FP		7935BBULL
Polished	6G	7935DP6G	7935FP6G	7935FP6G22	7935BBULL6G
Stealth bla	ck V	7935E	7935G		7935CBULL
Stealth bla	ck 6G	7935E6G	7935G6G	7935G6G22	7935CBULL6G
Cast PLUS	S+ V	7935-11G	7935K-11G		
Cast PLUS	8+ 6G	7935-16G	7935K-16G	7935K-16G22	
Cast PLUS	S+ V		7935H16V <	16 volt 1-wire regul	ator)

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 INT REGULATOR

1984-90 GM Cars & light trucks, 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
Cast PLUS+	6G	7290NC6G	7290ND6G

1987 Buick Regal 3.8 w/Turbo, OEM Wiring 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

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

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

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

REPLACEMENT ALTERNATOR PLUG

Fits CS130 and CS144 alternators

Ideal replacement for worn or damaged plug 7520C





TECH TIP

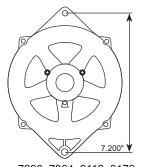
If your alternator plug is damaged or missing, Tuff Stuff offers new replacements, complete with color coded wire pigtails. See page 14 for details.











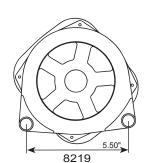
7290, 7864, 8112, 8173 Note that the top hole is not threaded on 7864 & 8112





















CORVETTE 1997 - 2004

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 p	ulley 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 wiringFinishPulley150 AMPChrome6G7724NAStealth black6G7724NB





CS121 GM STYLE MINI

7937

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.

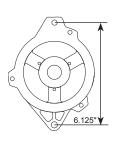
			12 VOIL	12 VOIL	16 VOIL
			Side Terminal	Back Terminal	Back Terminal
	Finish	Pulley	120 AMP	120 AMP	120 AMP
	Chrome	V	7937AST	7937A	7937A16V
NEW!	Chrome	6G	7937AST6G	7937A6G	
	Polished	V	7937APST	7937AP	7937AP16V
	7937APST6G				
	Stealth blac	k V	7937BST	7937B	7937B16V
NEW!	Stealth blac	k 6G	7937BST6G	7937B6G	
	Cast PLUS-	+ V	7937ST	7937	793716V
NEW!	Cast PLUS-	+ 6G	7937ST6G	79376G	

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.



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

16 VOLT VERSION ALSO AVAILABLE!



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.

CS130D LATE MODEL GM STYLE INTERNAL REG

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

		Back	Post	Side I	Post
Finish	Pulley	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**

1 1111311	i uney	IZUAIIII	II O AINI
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

		OEM V	Viring	1-Wi	re
Finish	Pulley	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

		OEM V	Viring	1-Wi	re
Finish	Pulley	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

AD244 GM TRUCK & SUV INTERNAL REGULATOR

2005-07 GM Truck & SUV w/2 pin regulator, OEM wire Finish Pulley 180 AMP 230 AMP 230 AMP S-BULLET

FIIIISII	runey	100 AIVIF	230 AINIP	230 AINIF 3-BULLET
Chrome	6G	8302A	8302C	8302CBULL6G
Polished	6G	8302AP	8302CP	
Stealth black	6G	8302B	8302D	()
Cast PLUS+	6G	8302		8302 Only
				000= 0,

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

				back poot, I pill rogali
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	(-)



2006 GM SSR w/auto 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	

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	

1999 Silverado, 1-wire or OEM wire

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

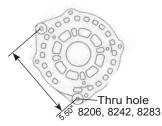
For trucks, SUV's, high performance street machines, street rods, show cars, extreme stereo/video, RV's and hydraulics

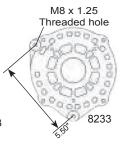




















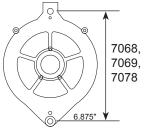




Ford Alternators







FORD "SM	ЮОТН	BACK" 1-WII	RE HYBRI	ID INTERNAL R	EGULATOR
Most 1961-85	small ca	se applications		Silver Bullet	Silver Bullet
<u>Finish</u>	Pulley	100 AMP	140 AMP	100 AMP	140 AMP
Chrome	V	7068RD		7068ABULL	7069ABULL
Chrome	6G	7068RD6G		7068ABULL6G	7069ABULL6G
Polished	V	7068RDP		7068BBULL	7069BBULL
Polished	6G	7068RDP6G		7068BBULL6G	7069BBULL6G
Black chrome	V	7068RD7		7068ABULL7	7069ABULL7
Black chrome	6G	7068RD6G7		7068ABULL6G7	7069ABULL6G7
Stealth black	V	7068RF		7068FBULL	7069FBULL
Stealth black	6G	7068RF6G		7068FBULL6G	7069FBULL6G
Black wrinkle	V	7068NGBW	7068NKBW		
Yellow	V	7068RDYELLOW	1	7068FBULLY	
Yellow	6G	7068RF6GY		7068FBULL6GY	Use 7771
Red	V	7068RFRED		7068FBULLRED	for 150 or 200
Red	6G	7068RF6GRED		7068FBULL6GR	\amp upgrade)
Blue	V	7068RDBLUE		7068FBULLBLU	
Blue	6G	7068RF6GBLUE		7068FBULL6GB	
Cast PLUS+	V	7068	7068K	7068BULL	7068KBULL
Cast PLUS+	6G	70686G	7068K6G	7068BULL6G	7068KBULL6G



TECH TIP

A HYBRID alternator uses a Ford style front case and GM style electronics and back case to provide up to double the factory amp output! Note that the Hybrid alternator is 1/4" longer than the stock small case Ford alternator.

FORD 1G SMALL CASE/HYBRID

7078

Most 1961-85 small case alternators

			OEM Wire	1-Wire	Hybrid	OEM Wir	e Hybrid
V	Finish	Pulley	70 AMP	70 AMP	100 AMP	100 AMP	140 AMP
þ	Chrome	V	7078NA	7078NB	7078ND	7078NC	7078NK
ı	Chrome	6G				7078NC6G	
	Polished	V	7078NAP	7078NBP	7078NDP	7078NCP	7078NKP
	Stealth black	(V	7078NH	7078NE	7078NF	7078NG	7078NKB
	Stealth black	6G			7078NF6G		
	Black wrinkle	e V				7078NGBW	7078NKBW
	Yellow	V	7078NHYELL	OW			
	Red	V	7078NHRED				
	Blue	V	7078NHBLUE				
	Cast PLUS+	V	7078				7078NJ

1-Wire alternators have an internal voltage regulator. OEM wire alternators require the use of an external regulator like Tuff Stuff 7540, 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.

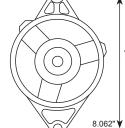


FORD 1G - 3G LARGE CASE 7074

Most 1973-91 large case alternators, OEM wiring

		1G Series	3G Series
Finish	Pulley	100 AMP	225 AMP
Chrome	V	7074RA	7074RD
Stealth black	V	7074RI	7074RK
Cast PLUS+	V	7074RF	7074RG

1Gen series requires an external regulator, 3Gen series has an internal regulator.



3Gen Series 7074RD, RG, RK has Internal regulator

Premium Quality

Ford Alternators

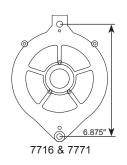
FORD 2G INTERNAL REGULATOR 7716

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

Use 7771 for 150 or 200 amp upgrade Use 7068 or 7069 for 1 wire version

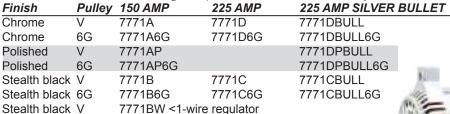






FORD 3G INTERNAL REGULATOR, OEM WIRING 777

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



Stealth black V 7771BW <1-wire regulator 7771BW6G <1-wire regulator NEW! Stealth black 6G Yellow 7771AYELLOW 7771DYELLOW Yellow 6G 7771A6GY 7771D6GY Red 7771ARED 7771DRED Red 6G 7771A6GRED 7771D6GRED Blue 7771ABLUE 7771DBLUE 6G Blue Cast PLUS+ V 7771F

Cast PLUS+ V 7771 7771F 7771FBULL
Cast PLUS+ 6G 77716G 7771F6G 7771FBULL6G







FORD 3G INT REGULATOR, OEM WIRING

4.6L, 5.4L 8	6.8L,	OEM wiring		SILVER BULLET
Finish F	Pulley	150 AMP	225 AMP	225 AMP
Chrome	7G	7764A	7764D	7764DBULL
Polished	7G	7764AP	7764DP	7764DPBULL
Stealth blac	k 7G	7764B	7764C	7764CBULL
As cast	7G	7764	7764E	7764EBULL

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

Chrome	8G	7791A	7791D	7791DBULL
Polished	8G	7791AP	7791DP	7791DPBULL
Stealth black	8G	7791B	7791C	7791CBULL
Cast PLUS+	8G	7791E	7791F	7791FBULL

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

1332-04 1 ICK	սբ նա	cks, valis &	00 V 3, OL	.ivi wiiiig
Chrome	8G	7768A	7768D	7768DBULL
Polished	8G	7768AP	7768DP	7768DPBULL
Stealth black	8G	7768B	7768C	7768CBULL
Cast PI IIS+	86	7768E	7768F	









Ford Alternators





High Amp Alternators

- 175 or 250 Amps at MAX!
- 135 or 211 Amps at IDLE
- 6-Phase, hairpin style stator design
- Super-duty electronics for Max Amps!



2011-17 5.0/5.2L Mustang, 6G clutched pulley, OEM Wiring				
175 Amps	250 Amps			
8439C	8440C			
8439P	8440P			
8439B	8440B			
8439A	8440A			
	175 Amps 8439C 8439P			





FORD 4G INT REGULATOR, OEM WIRING

1996-03 4.0 & 5.0L Explorer, 6G pulley, OEM wiring					
Finish	130 AMP	225 AMP			
Chrome	7787A	7787D			
Polished	7787AP	7787DP			
Stealth black	7787B	7787C			
Cast PLUS+	7787E	7787F			





1995-04 4.6L Full size cars/SUV's, 6G pulley, OEM wiring

Finish	150 AMP	225 AMP
Chrome	7773A	7773D
Polished	7773AP	7773DP
Stealth black	7773B	7773C
Cast PLUS+	7773	





1999-04 5.4L F-series Lightening only, 6G pulley, OEM wiring

Finish	130 AMP	225 AMP
Chrome	8251A	8251D
Polished	8251AP	8251DP
Stealth black	8251B	8251C
Cast PLUS+	8251	8251E



1996-02 4.6L DOHC & Bullitt GT, 6G pulley, OEM wiring

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





2003-04 Cobra & Mach 1 4.6L DOHC

w/o supercharger, 6G clutched pulley, OEM wiring						
Finish	135 AMP	225 AMP				
Chrome	8436A	8436D				
Polished	8436AP	8436DP				
Stealth black	8436B	8436C				
Cast PLUS+	8436E	8436K				

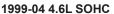
Premium Quality

Ford Alternators

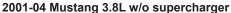
FORD 6G INTERNAL REG, OEM WIRING

1999-02 Ford F diesel w/single or dual alternators, top position 2000-03 Ford Excursion w/7.3L diesel

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



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



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

110 amp unit has a small case, 225 amp has a large case

2003-04 Mustang 4.6L Cobra Supercharged DOHC

Finish	Pulley	110 AMP	225 AMP
Chrome	8G	8266A8G	8266D8G
Polished	8G	8266AP8G	8266DP8G
Stealth black	8G	8266B8G	8266C8G
Cast PLUS+	8G	8266E8G▶	8266F8G
440		00= 1	

110 amp unit has a **small** case, 225 amp has a **large** case Bullet nose pulley▶

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

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

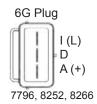
2005-08 Mustang 4.0L V6 and others

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

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

2000-00 Mustaring 4:00 to aria others wretater paricy				
Finish	Pulley	135 AMP	225AMP	
Chrome	6GC	8438A	8438D	
Polished	6GC	8438AP	8438DP	
Stealth black	6GC	8438B	8438C	
Cast PLUS+	6GC	8438E	8438F	
Chrome Roush SC	6GC	8438ASC	8438DSC	

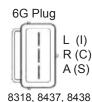














7796C













Chrysler Alternators





CHRYSLE	R OE	M STYLE A	ALTERNAT	ORS			8509/9509
Early 1960-88	3	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
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	8509RBPDP	8509RCPDP	8509RDPDP	9509RCPDP	9509RDPDP
Black chrome	1G		8509RBSP7	8509RCSP7	8509RDSP7		9509RDSP7
Black chrome	2G		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

OEM wire hookup requires a solid state external voltage regulator like Tuff Stuff 7524 or 7545, not included. 1-Wire alternators include external voltage regulator.



JEEP WRANGLER JK TUFF MUDDER

6-Phase square wire design provides maximum amperage output. Features dual plate rectifiers with 12 diodes and twin internal fans. External regulator.

2007-2011 w/3.8L V6, OEM wiring

Finish	Pulley	175 AMP	250 AMP
Chrome	6G	7513C	7515C
Army Green	6G	7513G	7515G
Black Wrinkle	6G	7513B	7515B

2012-2018 w/3.6L V6. OEM wiring

ZUIZ-ZUIU WIU.UZ					
Pulley	175 AMP	250 AMP			
6G	7514C	7516C			
6G	7514G	7516G			
6G	7514B	7516B			
	Pulley 6G 6G	Pulley 175 AMP 6G 7514C 6G 7514G			













DODGE/JEEP EXT REGULATOR							
1999-01 Dodge & Jeep, Denso style, OEM wiring							
Finish	Pulley	90 AMP	175 AMP				
Chrome	7G	7511A	7511C				
Stealth black	7G	7511F	7511E				
Cast PLUS+	7G	7511B	7511D				

JEEP CJ INTERNAL REGULATOR 7091

Jeep CJ w/2.2L, 3.7L, 3.8L, 4.2L, 5.0L, Hybrid 1-wire **Finish** Pulley 100 AMP 140 AMP Black Wrinkle 1G 7091NFBW 7091NKBW

DODGE/JEEP EXTERNAL REG

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		
Cast PLUS+	7G	7510B	7510D		

MINI DENSO ALTERNATOR

Denso style for performance cars, street rods and show cars with low amp requirements. Compact design with internal regulator, 55 amps, 1-wire, 1G pulley, 6lb

internal regulator, 55 amps, 1-wire, 16 pulley, 615.					
Finish	ltem .				
Chrome	7512A				
Stealth black	7512B				
Cast PLUS+	7512C				

Alternator Parts

CHROME ALTERNATOR CASE KITS

7500

Item 7500A

7500I

7500G

7500L

7500P

7500E

7500N

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

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



FAN DISC - TURBO STYLE

7601

Increases airflow through alternator to better cool the internal ircuitry 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	Cast PLU	JS+ 7601AC



FAN AND PULLEY KITS

7600

Fits Tuff Stuff 71	3, 7069							
Includes fan, pul	Includes fan, pulley, lockwasher & nut NEW							
Finish	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 nut and lockwasher.

Fits Tuff Stuff CS130, CS144 Fits Tuff Stuff 7102, 7127 7860, 7861, 7866, 7935, 7290 7139, 7140, 7068, 7069 6 Groove Finish/Pulley 1 Groove 1 Groove 6 Groove Chrome 7666A 7666C 7679A 7679C Polished 7679D 7666B 7666D 7679B Stealth Black 7666BC 7666DC 7679BC 7679DC Cast PLUS+ 7666BD 7666DD 7679DD 7679BD





BULLET NOSE PULLEY KITS

			 			
Fits Tuff Stuff	Fits Tuff Stuff					
7078, CS130,	kwasher.	Ford 3, 4 & 6Gen				
Finish	1G	2G	5 G	6 G	7 G	8G
Chrome	7650A	7651A	7652A	7653A	7654A	7655A
Polished	7650B	7651B	7652B	7653B	7654B	7655B
Stealth black	7650C	7651C	7652C	7653C	7654C	7655C
Cast PLUS+	7650D	7651D	7652D	7653D	7654D	7655D





7610

INDIVIDUAL PULLEYS	
Fits Tuff Stuff 7102, 7127, 7139, 7140, 7068, 7069.	Fits Tuff St

Fits Tuff Stuff 7102, 7127, 7139, 7140, 7068, 7069,					Fits Tutt St	uπ
7078, CS130,	Ford 3, 4 & 6Gen					
Finish	1G	2G	5G	6G	7G	8G
Chrome	7610E	7610F	7610B	7610A	7610C	7610D
Stealth black	7610EB	7610FB	7610BB	7610AB	7610CB	7610DB
Gold zinc	7610ED	7610FD	7610BD	7610AD	7610CD	7610DD
Cast PLUS+	7610EC	7610FC	7610BC	7610AC	7610CC	7610DC





13

Alternator Parts











7639





7520H













7520C



HEAVY DUTY CHARGE WIRES

Premium quality 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	8-Gauge Wire	Length	6-Gauge Wire
24"	754624	24"	754824
36"	754636		
48"	754648		
60"	754660		

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	on	Years	Item
GM	10DN	1962 - 1972	7635
Chrysler	Electronic 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** Fits GM 10SI 1-wire or OEM 7068, 7069, 7127, 7139, 7140 7639 Fits 7078 Ford 1-wire alternators 7530A Fits Tuff Stuff 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
GM 10SI 1-wire or OEM	7068, 7069, 7127, 7139, 7140	7700A
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 (no resistor) 7625A Converts 7127 to 7935 w/o indicator lamp - (resistor) 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 CS121,CS130, CS144	7860, 7861, 7866, 7935, 7937, 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	75201



7520D

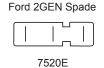


7520E







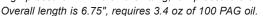




A/C Compressors

- Compact 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, 6 or 8-groove pulley
- Optional chrome plated, polished or plain clutch cover and hard lines available below

SANDEN STYLE SD7					
Finish	Refrig	2V-Groove	6-Groove	8-Groove	
Chrome	R-134A	4517NADP	4517NA6G	4517NA8G	
Polished	R-134A	4517NBDP	4517NB6G	4517NB8G	
Black chrome	R-134A	4517NADP7	4517NA6G7		
Stealth black	R-134A		4517NC6GBLA	4517NC8GBLA	
Cast PLUS+	R-134A	4517NCDP	4517NC6G	4517NC8G	
High pressure 1/	2" male flare	e fitting, low press	sure 5/8" male flare.		









CAAI		V CTV	I E CDEAO	
SAN	VEI	V	LE SD508	

Chrome	R12	4505NADP	4505NA6G	
Polished	R12	4505NBDP	4505NB6G	
Cast PLUS+	R12	4505NCDP	4505NC6G	
Requires 6 oz of mineral oil				

Chrome	R134A	4515NADP	4515NA6G
Polished	R134A	4515NBDP	4515NB6G
Black chrome	R134A	4515NADP7	4515NA6G7
Stealth black	R134A	4515NKDP	4515NK6G
Orange	R134A	4515NCDPOR	
Red	R134A	4515NCDPRED	
Cast PLUS+	R134A	4515NCDP	4515NC6G
Requires 7.2 oz	of 100 PAG of	r Castrol ester oil	



4505NCDP



4505NADP



4505NA6G



4515NADP



4515NADP7



4515NK6G

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		

CAMARO FIREBIRD CAPRICE w/LT

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

Sanden SD7

Sanden SD7

Sanden SD7

Ram

Ram

Ram

10mm suction port, 8mm discharge port

1993-97 Camaro & Firebird w/LT1 engine 1994-96 Caprice & Impala w/LT1 engine

DODGE RAM

Chrome

Polished

Chrome

Polished

Plain

Cast PLUS+

		· · · · · · · · · · · · · · · · · · ·	
Chrome	LT1	6-Groove	4511NA
Polished	LT1	6-Groove	4511NB
Cast PLUS+	IT1	6-Groove	4511NC

6-Groove

6-Groove

6-Groove

LINES FOR SANDEN COMPRESSORS 4517

4605NA

4605NB

4605NC

8417A

8417B

8417C





4510NC





4605NC



4605NA



8417A



8417C



	LO ALGINIINGINI A/G	CLUTCH COVER
Chrome	Sanden SD508	8490A
Polished	Sanden SD508	8490B
Plain	Sanden SD508	8490C



8490C



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	SERIES
Denso style gear reduction starter	Tuff Torque
Hitachi style gear reduction starter	HI-OSGR
Permanent Magnet Gear Reduction	PMGR
Full size GM style starter	10MT
Full size Ford sytle starter	4.5"

Tuff Stuff starters are hand made from premium quality new components - not remanufactured - and are quality built in Cleveland, Ohio

Chevrolet Starters

CHEVROLET SMALL & BIG BLOCK

1955-2000	With OFF	SET mountin	g and 168	tooth f	Tywheel
Finish	Style	Series	HP/KW	Index	Item
Chrome	GR 18:1	Tuff Torque	3.0/2.2	Υ	13510A
Zinc	GR 18:1	Tuff Torque	3.0/2.2	Υ	13510
Chrome	GR 4.4:1	PMGR	2.3/1.7	N	6510NA
Zinc	GR 4.4:1	PMGR	2.3/1.7	N	6510NB
Chrome	OEM	10MT	1.9/1.4	N	3510A
Chrome nose	OEM	10MT	1.9/1.4	N	3510AC
Stealth black	OEM	10MT	1.9/1.4	N	3510B
Blue	OEM	10MT	1.9/1.4	N	3510BBLUE
Orange	OEM	10MT	1.9/1.4	N	3510BORANGE
Red	OEM	10MT	1.9/1.4	N	3510BRED
Yellow	OEM	10MT	1.9/1.4	N	3510BYELLOW

1957-81 With OFFSET mounting for manual transmission,

168 tooth flywheel, cast iron nose

	oo., oace .				
Finish	Style	Series	HP/KW	Index	Item
Chrome	OEM	10MT	1.9/1.4	N	3689A
Stealth black	OEM	10MT	1.9/1.4	N	3689B

OFFSET MOUNT





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

Finish	Style	Series	HP/KW	Index	<u>Item</u>
Chrome	GR 18:1	Tuff Torque	3.0/2.2	Υ	3193NA
Zinc	GR 18:1	Tuff Torque	3.0/2.2	Υ	3193NB
Chrome	GR 6.1:1	PMGR	1.6/1.2	Υ	6550A
Zinc	GR 6.1:1	PMGR	1.6/1.2	Υ	6550B
Chrome	GR 1.4KW	HI-OSGR	1.9/1.4	Υ	6584A
Stealth black	GR 1.4KW	HI-OSGR	1.9/1.4	Υ	6584B
Blue	GR 1.4KW	HI-OSGR	1.9/1.4	Υ	6584BBLUE
Orange	GR 1.4KW	HI-OSGR	1.9/1.4	Υ	6584BORANGE
Red	GR 1.4KW	HI-OSGR	1.9/1.4	Υ	6584BRED
Yellow	GR 1.4KW	HI-OSGR	1.9/1.4	Υ	6584BYELLOW
Chrome	GR 18:1	HI-OSGR	2.6/1.9	Υ	6772A
Stealth black	GR 18:1	HI-OSGR	2.6/1.9	Υ	6772B
6584 has a 9-to	oth pinion gear				

CAMARO & FIREBIRD

1993-95 w/5.7L, STRAIGHT mounting holes

Finish	Style	Series	HP/KW	Index	<i>Item</i>	
Chrome	GR 4.4:1	PMGR	1.9/1.4	N	6631NA	
Zinc	GR 4.4:1	PMGR	1.9/1.4	N	6631NB	

STRAIGHT MOUNT



CAMARO, FIREBIRD & CORVETTE

1998-01 Camaro & Firebird w/LS1, 168 tooth flywheel 1997-01 Corvette w/LS1 & LS6

Finish	Styl	e Series	HP/KW	Index	Item
Chrome	GR	PMGR	1.9/1.4	N	6492A
Zinc	GR	PMGR	1.9/1.4	N	6492B
Chrome	GR	Tuff Torque	3.0/2.2	Υ	13310A
Zinc	GR	Tuff Torque	3.0/2.2	Υ	13310
11-tooth ninion	rear	Does NOT fit 20	04-06 GTO		





GM-Chrysler Starters





CHEVROLET V8 & I-6

1957-63 V8 cars & 1962-82 I-6 & V8 trucks 3 bolt mtg **Finish** Style Series HP/KW Index Item Chrome OEM 10MT 1.9/1.4 Ν 3686A Stealth black OEM 10MT 1.9/1.4 3686B Ν

CHEVROLET & OLDSMOBILE

STRAIGHT mounting holes,

153 tooth flywheel, 1 long & 1 short bolt

Finish	Style	Series	HP/KW	Index	ltem
Chrome	OEM	10MT	1.9/1.4	Ν	3631A
Stealth black	OEM	10MT	1.9/1.4	N	3631B

CHEVROLET BUICK OLDS PONTIAC V6

1995-07 With 3.4 or 3.8L V6, 1 long and 1 short bolt							
Finish	Style	Series	HP/KW	Index	Item		
Chrome	GR	PMGR	2.2/1.6	N	6431NA		
Zinc	GR	PMGR	2.2/1.6	N	6431NB		

OLDSMOBILE PONTIAC

1965-80 With STRAIGHT mounting, 2 long bolts

Stock flywheel, driver side engine block mounting

le Series	HP/KW	Index	ltem
M 10MT	1.9/1.4	N	3570A
M 10MT	1.9/1.4	N	3570B
Tuff Torque	3.0/2.2	Υ	13186A
Tuff Torque	3.0/2.2	Υ	13186
		M 10MT 1.9/1.4 M 10MT 1.9/1.4 Tuff Torque 3.0/2.2	M 10MT 1.9/1.4 N M 10MT 1.9/1.4 N Tuff Torque 3.0/2.2 Y

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

AMC JEEP

1976-77 AMC Gremlim, Hornet 3.8L, 4.2L, 5.0L, Matador 4.2L, 5.0L, 5.9L, 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,

J Series Pickup 4.2L, 5.9L, 6.6L, 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



3211NB

13186A

JEEP WRANGLER JK

High torque, gear reduction, compact size

Finish	Application	Stvle	T	HP/KW	Item
	2007-2008 3.8L All				
Zinc	2009-2011 3.8L w/ M/T	PMGR	10	1.6/1.2	3213
Black	2009-2011 3.8L w/ A/T	PLGR	10	1.5/1.1	3214
Zinc	2012-2018 3.6L All	PLGR	9	1.7/1.3	3215



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/KW	Inde	ex Item
Chrome	GR 4.4:1	Tuff Torque	2.5/1.61	N	6084A
Gray	GR 4.4:1	Tuff Torque	2.5/1.61	Ν	6084B



Ford Starters

FORD

1963-91 289, 302, 351 w/automatic trans, 2 bolt mounting								
Finish	Style	Series	HP/KW	Index	Item			
Chrome	OEM	4.5"	1.9/1.4	N	3124A			
Stealth black	OEM	4.5"	1.9/1.4	N	3124B			
Blue	OEM	4.5"	1.9/1.4	N	3124BBLUE			
Yellow	OEM	4.5"	1.9/1.4	N	3124BYELLOW			
Chrome	GR	HI-PMGR	2.1/1.6	Υ	6551A			
Zinc	GR	HI-PMGR	2.1/1.6	Υ	6551B			
Zinc	GR	HI-PMGR	2.1/1.6	Υ	6551B			





3124 has a 9-tooth pinion gear

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

Allus/Itoot 4	Lo big bioc	Alias/Root 420 big blook							
Finish	Style	Series	HP/KW	Index	Item				
Chrome	GR 3.75:1	HI-OSGR	1.9/1.4	Υ	6585A				
Stealth black	GR 3.75:1	HI-OSGR	1.9/1.4	Υ	6585B				
Blue	GR 3.75:1	HI-OSGR	1.9/1.4	Υ	6585BBLUE				
Red	GR 3.75:1	HI-OSGR	1.9/1.4	Υ	6585BRED				
Yellow	GR 3.75:1	HI-OSGR	1.9/1.4	Υ	6585BYELLOW				
Chrome	GR 3.75:1	HI-OSGR	2.6/2.0	Υ	6785A				
Stealth black	GR 3.75:1	HI-OSGR	2.6/2.0	Υ	6785B				
6795 has a 0 tag	th ninian goor								





6785 has a 9-tooth pinion gear

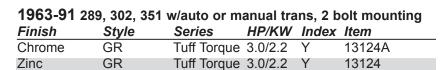
1963-91 289, 302, 351 w/automatic trans, 2 bolt mounting 1991-93 T-bird 5.0L w/auto trans, 2 bolt mtg, 4.084" reg bore 1992-95 Mustang 5.0L w/automatic trans, 2 bolt mounting

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

6124 has a 10-tooth pinion gear, upgrade to 6585 or 6785 - see above







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

1000 17 20	J, JUZ, JJ I	W/IIIaiiaai ti	u1131111331	O11, 2 N	oit illoulithing
Finish	Style	Series	HP/KW	Index	Item
Chrome	OEM	4.5"	1.9/1.4	N	3132A
Stealth black	OEM	4.5"	1.9/1.4	N	3132B
Chrome	GR	Tuff Torque	3.0/2.2	Υ	13132A
Zinc	GR	Tuff Torque	3.0/2.2	Υ	13132
Chrome	GR	PMGR	1.9/1.4	N	6132A
Stealth black	GR	PMGR	1.9/1.4	N	6132B





FORD MUSTANG

1966-81 25	5 V8 & 1992	2-93 2.3L Mu	stang, 3	bolt m	ounting
Finish	Style	Series	HP/KW	Index	Item
Chrome	GR	PMGR	1.9/1.4	N	6131A
Stealth black	GR	PMGR	1.9/1.4	N	6131B







Ford Starters







1992-09 Crown Victoria 4.6L 1996-04 Mustang 4.6L 1997-98 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 3 bolt mounting 1994-97 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

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



ł	-	O	R	D

2005-09 Mustang 4.6L 1999-04 Expedition 4.6L 2000-05 Excursion 5.4L, 6.8L 1999-08 F Series Pickup 4.6L 2002 Lincoln Blackwood 5.4L Noseless 3 bolt mounting 2007-09 Mustang 5.4L 1999-09 Expedition 5.4L 2006-08 Lincoln Mark LT 5.4L 1999-09 F Pickup 5.4L, 6.8L 1999-09 Lincoln Navigator 5.4L

Finish		Series	HP/KW	Index	Item	
Chrome	GR	PMGR	1.9/1.4	N	6646A	
7inc	GR	PMGR	1 9/1 4	N	6646B	



FORE

1978-80 L6 200 w/automatic transmission, 2 bolt mounting Finish Style Series HP/KW Index Item

Stealth black OEM 4.5" 1.9/1.4 N 3160B



FORD 1969-77

1969-77 351, 400, 429, 460

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

Finish	Style	Series	HP/KW	Index	Item
Chrome	OEM	4.5"	1.9/1.4	N	3149A
Stealth black	OEM	4.5"	1.9/1.4	N	3149B
Chrome	GR	Tuff Torque	3.0/2.2	Υ	13149A
Zinc	GR	Tuff Torque	3.0/2.2	Υ	13149
101101 111					

13149 has an 11-tooth pinion





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

3 holt mounting, automatic or manual

3 boit mounting, automatic or manual					
Finish	Style	Series	HP/KW	Index	Item
Chrome	OEM	4.5"	1.9/1.4	N	3131A
Stealth black	OEM	4.5"	1.9/1.4	N	3131B
Chrome	GR	Tuff Torque	3.0/2.2	Υ	13131A
Zinc	GR	Tuff Torque	3.0/2.2	Υ	13131

Accessories

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	
Remote solenoid top post	7312	



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 & 6772 mini starter Complete kit includes full-spline pinion

Description	<i>Item</i>
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
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 3193, 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



Water Pumps



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





SUPERCOOL

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

BUILT IN USA

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

PREMIUM OUALITY

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.

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.

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 Water Pumps

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	
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 1635 Pumps have a 3/8"-16 threaded hole

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



CORVETTE SMALL BLOCK - SHORT STYLE PUMP

1984-91	5.812" H	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" H	Hub Height,	3/4" Pilot		
Chrome	Alum	SuperCool	Platinum	1394ND	
Polished	Alum	SuperCool	Platinum	1394NE	
Cast PLUS+	Alum	SuperCool	Platinum	1394NF	
1972-1982	2 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 William













6.937" Hub Height, 5/8" Pilot

CHEVROLET SMALL BLOCK - LONG STYLE PUMP

1969-95 NOT for use on 89-95 trucks

Orange Alum SuperCool Platinum 1511NCORANGE Red Alum SuperCool Platinum 1511NCRED Yellow Alum SuperCool Platinum 1511NCYELLOW Cast PLUS+ Alum SuperCool Platinum 1511NC 1511NCREV

1969-96 NO	T for use on	87-95 trucks or	r LT1 engines	6.937" Hub Height,	5/8" Pilot
Chrome	Alum	SuperCool	Smoothie	1448NA	
Polished	Alum	SuperCool	Smoothie	1448NB	
Black chrome	Alum	SuperCool	Smoothie	1448NA7	
Stealth black	Alum	SuperCool	Smoothie	1448NCBLK NEW!	
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	

As cast	Iron	SuperCool	Standard	1449N	
1987-95 Tr	uck V6	-V8TBI 6.937"	Hub Height,	5/8" Pilot	
Chrome	Alum	SuperCool	Smoothie		1675AA
Polished	Alum	SuperCool	Smoothie		1675AB
Stealth black	Alum	SuperCool	Smoothie		1675AC
Cast PLUS+	Alum	SuperCool	Smoothie		1675A
Chrome Chrome	Iron Iron	Standard SuperCool	Standard Standard		1675NA 1675NB
Stealth black	Iron	SuperCool	Standard		1675NC
As cast	Iron	SuperCool	Standard	1	1675N

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







CHEVROLET BIG BLOCK - SHORT STYLE PUMP

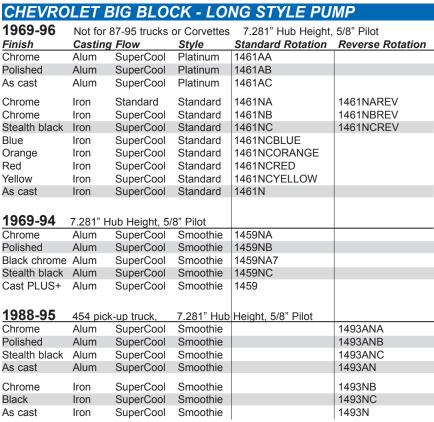
1965-72 5.750" Hub Height, 5/8" Pilot **Finish** Casting Flow Standard Rotation Reverse Rotation Style Chrome Alum SuperCool Smoothie 1496NA Polished Alum SuperCool Smoothie 1496NB Black chrome Alum SuperCool Smoothie 1496NA7 Stealth black Alum SuperCool Smoothie 1496NC Cast PLUS+ Alum SuperCool Smoothie 1496 Platinum 1495AA 1495AAREV Chrome Alum SuperCool Polished Alum SuperCool Platinum 1495AB 1495ABREV Black chrome Alum Supercool Platinum 1495NA7 Blue Alum SuperCool Platinum 1495ACBLUE 1495ACORANGE Orange Alum SuperCool Platinum SuperCool Platinum 1495ACRED Red Alum 1495ACYELLOW Yellow Alum SuperCool Platinum Cast PLUS+ SuperCool Platinum 1495AC 1495ACREV Alum Standard Chrome Iron Standard 1494NA 1494NAREV 1494NBREV Chrome SuperCool Standard 1494NB Iron Stealth black SuperCool Standard 1494NC 1494NCREV Iron Blue Iron SuperCool Standard 1494NCBLUE 1494NCORANGE Orange Iron SuperCool Standard Red Iron SuperCool Standard 1494NCRED 1494NCYELLOW Yellow Iron SuperCool Standard SuperCool Standard 1494N Iron

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

Premium Chevrolet Water Pumps Quality

CORVETTE BIG BLOCK - SHORT PUMP

1965-72	5.750" H	ub Height, 3	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



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













CHEVRO	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 Water Pumps

















GM LS1 & LS6 1998-02 Camaro/Firebird 1997-04 Corvette 2004-06 GTO Finish Casting Rotation Flow Style Item

2007-00 (<i>-</i> 1				
Finish	Casting	Rotation	Flow	Style	Item
Chrome	Alum	Reverse	Standard	Platinum	1310A
Polished	Alum	Reverse	Standard	Platinum	1310B
Stealth black	Alum	Reverse	Standard	Platinum	1310D
Cast PLUS+	Alum	Reverse	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

1968-70 w/air, 1971-85 w/o air 5.562" Hub Height, 5/8" Pilot						
		Rotation	Flow	Style	Item	
Chrome	Iron	Standard	Standard	Standard	1444NA	
Stealth black	Iron	Standard	Standard	Standard	1444NE	
As cast	Iron	Standard	Standard	Standard	1444N	

13/1-30 4	.3, 5.0,	6.6, 7.5L W/air	5.937 H	ub Heignt, 5/	8" PIIOt
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
Chrome	Iron	Standard	Standard	Standard	1504NA-2

PONTIAC1969-81 4.3, 5.7, 6.6L & 455, 11 bolt4.468" Hub Height, 5/8" PilotFinishCastingRotationFlowStyleItemChromeAlumStandardSuperCoolPlatinum1475AAPolishedAlumStandardSuperCoolPlatinum1475AB

SuperCool Platinum

1475AC

Alum	Standard	SuperCool	Platinum	1475
Iron	Standard	Standard	Standard	1475NA
Iron	Standard	Standard	Standard	1475NB
Iron	Standard	Standard	Standard	1475N
	ron ron	ron Standard ron Standard	ron Standard Standard ron Standard Standard	ron Standard Standard Standard ron Standard Standard Standard

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

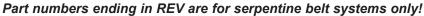
Standard

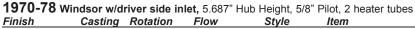
Stealth black Alum

Chrome	Iron	Standard	Standard	Standard	1445NA
Stealth black	Iron	Standard	Standard	Standard	1445NB
As cast	Iron	Standard	Standard	Standard	1445N

Ford Water Pumps

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 Chrome	Iron Iron	Standard SuperCool	Standard Standard	1432A 1432B	1432AREV		
Stealth black	Iron	SuperCool	Standard	1432C	1432CREV		
Blue	Iron	SuperCool	Standard	1432CBLUE			
Red	Iron	SuperCool	Standard	1432CRED			
Yellow	Iron	SuperCool	Standard	1432CYELLOW			
As cast	Iron	SuperCool	Standard	1432N			





Fillish Casting Rotation Flow		item
Chrome Iron Standard Standard S	Standard	1468A
Chrome Iron Standard SuperCool S	Standard	1468B
Stealth black Iron Standard SuperCool S	Standard	1468C
Blue Iron Standard SuperCool S	Standard	1468CBLUE
Red Iron Standard SuperCool S	Standard	1468CRED
Yellow Iron Standard SuperCool S	Standard	1468CYELLOW
As cast Iron Standard SuperCool S	Standard	1468N

1970-78 Cleveland w/driver side inlet, 5.687" Hub Height, 5/8" Pilot, 1 heater tube							
Chrome	Iron	Standard	Standard	Standard	1469A		
Chrome	Iron	Standard	SuperCool	Standard	1469B		
Stealth black	Iron	Standard	SuperCool	Standard	1469C		
Blue	Iron	Standard	SuperCool	Standard	1469CBLUE		
Red	Iron	Standard	SuperCool	Standard	1469CRED		
Yellow	Iron	Standard	SuperCool	Standard	1469CYELLOW		
As cast	Iron	Standard	SuperCool	Standard	1469N		

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

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

MUSTANG 5.0L

Cast PLUS+ Alum

Cast PLUS+ Alum

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		
Vallow	Alum	Payarea	SuperCool	Dlatinum	1504NCVELLOW		

SuperCool

SuperCool

Reverse

Reverse

Standard

Platinum

1594AC

1594N

1979-85 M	lustang 5.	0L w/driver s	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













Ford Water Pumps



















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 4	29, 460	5.562" Hu	b Height, 3/	4" Pilot	
Finish			Flow		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
4005.70					
<u> 1965-76 з</u>	<u>90, 427, </u>	428 FE	7.578" Hul	b 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 2.3L	3/4" pilot		
Finish	Casting	Rotation	Item	
As cast	Iron	Standard	1538N	

CHRYSL	ER				
1958-79 38	33, 440	3.078" Hub	Height, 5/8" I	Pilot	
Finish		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 3	18, 340, 3	360 5.562"	Hub Height,	5/8" Pilot	
Cast PLUS+	Alum	Standard	SuperCool		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

AIR PUMP ELIMINATOR KIT - FORD

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. FOR OFF-ROAD USE ONLY - NOT TO BE SOLD INTO CALIFORNIA OR ANY OTHER CARB COMPLIANT STATES

OOM LIMIT	O I/ (I LO.		
Description	Item	Description	Item
Chrome	1700A	Stealth black	1700C
Polished	1700B	As cast	1700

Accessories

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



CHROME HOSE NIPPLES - GM STYLE	
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 EXTENSIONS - CHEVY SB

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



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



WATER PUMP BOLT KITS - CHEVY

Chrome plated or zinc, kits include 4 bolts, 4 lock & 4 flat washers

Chrome Hex Zinc Hex Chrome Socket Zinc Socket

Small block w/short water pump, Fits series 1354, 1534 & 1635 Includes one 3/8"-16 x 1-3/4", two 3/8"-16 x 2", one 3/8"-16 x 2-3/4" bolt. 7675A 7675B 7675C 7675D

Small block w/short water pump, Fits 1394 series

Includes two 3/8"-16 x 1-3/4", one 3/8"-16 x 2", one 3/8"-16 x 2-1/2" bolt. 7677A 7677B 7677C 7677D

Small & big block w/long water pump, 1448, 1449, 1461 & 1511 series Includes four 3/8"-16 x 2-1/4" bolts.

7678A 7678B 7678C 7678D

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

Includes four 3/8"-16 x 2" bolts.

7676A 7676B 7676C 7676D



Power Steering Pumps



TYPE II POWER STEERING PUMPS w/TOP PRESSURE PORT











6169AL

- 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 except for 6169AL
- Pumps have a 17mm (0.669") shaft except LS1 applications which have a 19mm (0.748") shaft. Overall pump height 4" see page 43 for additional dimensions
- For use with factory or remote reservoir tank depending upon part number
- Press fit pulley installation kit included requires a press on pulley, not included
- Overall pump height is 4". 100% New not remanufactured
- Perfect for street rods and custom vehicles with limited engine space

Direct Fit Applications		Chrome	Polished	Stealth Black	Cast PLUS	+
1992-96 Corvette 5.7 LT V8 OH	V only				6169AL	
1998-02 Camaro & Firebird w/L	S1, stock replacement,					
M16-1.5 & GM pressure slip po	rt, 8mm through holes	6175ALD-6	6175ALP-6	6175ALB-6	6175AL-6	
Universal Fit Applications						
Ports - Fittings	Mounting	Chrome	Polished	Stealth Black	Cast PLUS	+ 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 in Colors	Mounting	Blue	Orange	Re	d	Yellow
AN-6 & AN-10	8mm through holes	6175ALBLUE	6175ALOF	RANGE 61	'5ALRED	6175ALYELLOW





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



IN-LINE POWER STEERING FILTER

This universal in-line power steering pump filter features a powerful internal magnet to remove harmful ferrous materials, a pleated filter media to remove non-ferrous particles, a laser welded stainless steel canister housing and 3/8" OD barbed ends. It also has an internal pressure bypass to retain full flow capabilities. Ideal for use with stock and aftermarket power steering systems. 5559

Power Steering Pumps

TYPE II POWER STEERING PUMPS w/BOTTOM PRESSURE PORT









Same pump specifications as the Type II pumps on page 30 except that these pumps have a bottom pressure port

Ports - Fittings	Mounting	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

PRESSURE VALVES AND FITTINGS FOR TYPE II PUMPS

Replacement AN fittings are CNC machined from billet aluminum and include washer with Oring. 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 OEM factory pumps and are exclusively for use with Tuff Stuff aluminum Type II pumps.

Description	Plain
Pressure fitting, AN-6 x M16-1.5 x 1.25" long	5550
Return fitting, AN-10 x 7/8"-14	5551
850 PSI low pressure valve - all except LS pumps	5552
1200 PSI high pressure valve - all except LS pumps	5555 NEW!
850 PSI low pressure valve - for LS pumps only	5558 NEW!









PULLEYS FOR TYPE II PUMPS

Steel construction, 6-groove, 5.50" OD, 19mm ID, press-fit. Only fits Tuff Stuff LS1 Type II pumps.

Finish	19mm ID
Chrome	8489A
Stealth black	8489B

NI 8489A

Polished 5550P 5551P



BRACKETS FOR TYPE II PUMPS

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. **See page 42** for bracket dimensions.

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



1990-99 Mustang 1990-97 Thunderbird 1991-94 Explorer 1990-97 Mercury Cougar OE style direct-fit pump with reservoir. 0.688" OD shaft requires a press-on pulley, not included. 850 PSI rating, three M10 x 1.5 threaded mounting holes, 5/8"-18 SAE inverted flare pressure port, 3/8" return tube.

Finish	Item
As cast	6168N





Power Steering Pumps



TEARDROP STYLE







6183A



BANJO STYLE









DIRECT FIT SAGINAW STYLE POWER STEERING PUMPS

- GM Saginaw style pump features all new components including reservoir and pump assembly
- Includes a 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, include a pulley installation kit and require a press-fit pulley
- 5/8" keyed shafts require a bolt-on pulley and include a 1/8" x 7/16" Woodruff key
- Pumps are 1200 PSI/3GPM rated to work with most gearbox systems
- 850 PSI/2GPM valve sold separately for Mustang II systems
- Clockwise rotation only, pulley not included, see page 43 for product dimensions

				$\overline{}$
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	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

Most GM pick-up trucks and variants with:

1973-74 6 Cylinder engine	5/8" keyed	3/8"-16	6172A	6172B
1973-74 Small block Chevy engine	5/8" keyed	3/8"-16	6171A	6171B
1973-74 Big block Chevy engine	5/8" keyed	3/8"-16	6165A	6165B
1975-79 6 Cylinder engine	3/4" press fit	3/8"-16	6164A	6164B
1975-79 Small block Chevy engine	3/4" press fit	3/8"-16	6189A	6189B
1975-79 Big block Chevy engine	3/4" press fit	3/8"-16	6166A	6166B
1980-86 292 6 Cylinder engine	3/4" press fit	M10 x 1.5	6186A	6186B
1980-87 Small block Chevy & 85-87 w/4.3L V6	3/4" press fit	M10 x 1.5	6163A	6163B
1980-84 Big block Chevy engine	3/4" press fit	M10 x 1.5	6167A	6167B
1996-13 With Hydro-Boost brake system NEW!	3/4" press fit	3/8"-16	6162A	6162B













6172A









Power Steering Parts

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		
Stealth black	6176B	6174B	6188B
Yellow	6176BYELLOW		
Orange	6176BORANGE		
Red	6176BRED		
Blue	6176BBLUE		
Pump unit only,	does not include reservoir		6188









6174 - 6176 - 6188

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 pulley				Press-on pulley		
5.80" Dia, 0.625" ID				5.80" Dia, 0.747" ID		
Finish	1-Groov	⁄e		Finish	1-Groove	2-Groove
Chrome	8488A	Plain	8488C	Chrome	8485A	8486A
Polished	8488B	Black	8488D NEW!	Black	8485B	8486B







8486A

ADAPTER FITTINGS 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 Tuff Stuff Saginaw style power steering pumps. Fittings sold individually. Chrome plated 5553A Plain Adapts 5/8"-18 inverted flare to 5/8"-18 Male SAE flare Brass NEW! 5557





PRESSURE VALVES FOR SAGINAW PUMPS

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

Does NOT it factory Givi Saginaw pumps.	
Description	Item
850 PSI low pressure valve (replaces 850PSI VALVE)	5556
1200 PSI high pressure valve	5554





POWER STEERING PUMP CANS / RESERVOIRS

Replace your o	lamaged Sagina	w style Tuff Stuff reservoir inste	ad of replacing the complete pump
Fits 6174 & 61	176	Fits 6177 & 6178	Fits 6196 & 6197
pumps w/tube	on left, SAE	pumps w/center tube	pumps w/center tube
Finish	Item	Item	Item
Chrome	6501A	6502A	
Stealth black	6501B	6502B	6509B NEW!
Raw steel	6501C	6502C	







BILLET STYLE ALUMINUM POWER STEERING CAP/DIPSTICK

Fits all Tuff Stuff Saginaw style power steering pumps. Will not fit Type II pumps. **Finish** Chrome 6500A Polished

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. See page 42 for bracket dimensions.

Chevy Small Block			Chevy Big Block	
Water pump	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				





6507B, 6508B

6503A

Booster w/Master Cylinder









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. Every unit is vacuum tested to insure reliability and made from 100% new components.

Works with many stock mounting bracket set-ups and with Tuff Stuff bracket kits on page 40.

GM A BODY 1964 - 66

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 1966 - 72

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 2127NA-2 2127NB-2

CHEVY II NOVA 1962 - 67

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. Includes two clevis pivots.

Master Cylinder	Bore	Chrome	Stealth Blac
2071 Dual reservoir	1"-1/8"	2132NA	2132NB
2020 Dual reservoir	1"	2132NA-1	2132NB-1
2018 Dual reservoir	1"	2132NA-2	2132NB-2



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 E	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 h	rakes 3/	8-24 nedal ro	d threads

FORD MUSTANG 1967 - 70 2125

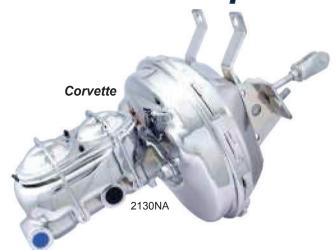
9" Single Diaphragm Booster Combo, 3/8"-16 studs				
Master Cylinder	Bore	Chrome	Gold Zinc	
2071 Dual reservoir	1-1/8"	2125NA	2125NB	
2020 Dual reservoir	1"	2125NA-1	2125NB-1	
2018 Dual reservoir	1"	2125NA-2	2125NB-2	
2017 Dual reservoir	1"	2125NA-3	2125NB-3	

5 Mounting studs - one is offset

JEEP CJ 1974 - 86 21

9" Single Slim Line Diaphragm Booster Combo				
Master Cylinder	Bore	Chrome	Gold Zinc	
2071 Dual reservoir	1-1/8"	2131NAJ	2131NBJ	
2020 Dual reservoir	1"	2131NAJ-1	2131NBJ-1	
2018 Dual reservoir	1"	2131NAJ-2	2131NBJ-2	
Includes mounting bracket				

100% New Components









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 and fit virtually all hot rods, customs and muscle cars. Every unit is vacuum tested to insure reliability and made from 100% new components. Includes 3/8"-16 mounting studs and nuts.

Works with many stock mounting bracket set-ups and with Tuff Stuff bracket kits on page 40.

7" UNIVERSAL BOOSTER COMBO					
		Single Diaphragm		Dual Diaph	ragm
Master Cylinder	Bore	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

8" UNIVERSAL BOOSTER COMBO					
		Dual Diaph	ragm		
Master Cylinder	Bore	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			

9" UNIVERSAL	B00	STER CO	ОМВО		
		Single Slim	Diaphragm	Dual Diaph	nragm
Master Cylinder	Bore	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

11" UNIVERSAL BOOSTER COMBO				
Single Diaphragm				
Master Cylinder	Bore	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	





Quality built in Cleveland, Ohio using 100% new components. See pages 42-43 for booster and master cylinder dimensions and details.

Premium Quality

Power Brake Boosters

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 40. Most booster rods have a 3/8"-24 fine thread. Boosters have a 3-3/8" square mounting footprint except 2225N, 2230N and 2233N. Master cylinder mounting studs are 3/8"-16 and spacing is 3-3/8" center-to-center.

	,
	2221NA7
-	-





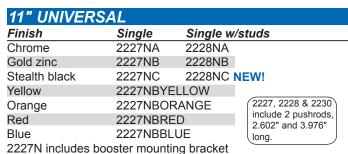




9" UNIVE	RSAL			
Finish	Single	Slim Line	Dual	Dual
Chrome	2226NA	2231NA	2224NA	2229NA
Gold zinc	2226NB	2231NB	2224NB	2229NB
Stealth black			2224NC	2229NC
Yellow	2226NBY	ELLOW	2224NCYELI	_OW
Orange	2226NBORANGE		2224NCORA	NGE
Red	2226NBRED		2224NCRED	
Blue	2226NBB	LUE	2224NCBLUI	=











9" CORVETTE 1963 - 67
Finish Single Includes mounting bracket
Chrome 2230NA
Gold zinc 2230NB





9" CHEVY II NOVA 1962 - 67					
Finish	Single				
Chrome	2233NA				
Gold zinc	2233NB				

9" MUSTANG 1967 - 70





Finish	Single	Includes mounting bracket
Chrome	2225NA	Use with 2017 master cylinder
Gold zinc	2225NB	
9" JEEP CJ	1974 - 86	





9 JEEP CJ 1914 - 00		
Finish	Single Slim	Includes mounting bracket
Chrome	2231NAJ	
Gold zinc	2231NBJ	

11" GM TRUCK 1973 - 93		
Finish	Dual	Includes mounting bracket
Chrome	2232NA	and 2 clevis pivots
Stealth black	2232NB	

Master Cylinders







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.



















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. Requires DOT3 brake fluid.

1" bore, 9/16"-18 rear & 1/2"-20 front driver side ports

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

1-1/8" bore, 9/16"-18 rear & 1/2"-20 front driver side ports

Chrome	2071NA	2072NA
Black chrome	2071NA7	2072NA7
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. Requires DOT3 brake fluid

3-3/6 mounting note spacing. Requires DO13 brake not		
Finish	Shallow	Deep
Chrome	2020NA	2021NA
Black chrome	2020NA7	2021NA7
Stealth black	2020NC	
Yellow	2020NCYELLOW	
Orange	2020NCORANGE	
Red	2020NCRED	
Blue	2020NCBLUE	
As cast	2020NB	2021NB

GM 1955 - 64

1" bore, two 7/16"-24 ports 3-3/8" mounting hole spacing. Single reservoir for drum/drum brakes, fruit jar style Requires DOT3 brake fluid.

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. Requires DOT3 brake fluid Chrome 2017NA
Yellow 2017NBYELLOW
Red 2017NBRED
Blue 2017NBBLUE
As cast 2017NB

MASTER CYLINDER REBUILD KITS

Includes all 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

Premium Quality

Master Cylinders

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. Requires DOT3 brake fluid.

1" bore, 9/16"-18 rear & 1/2"-20 front driver side ports

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

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

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

1-1/8" bore, 9/16"-18 rear & 1/2"-20 front driver side ports

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

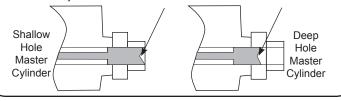
100% New Components





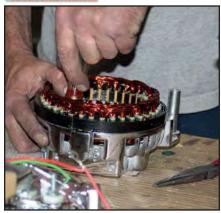
TECH TIP

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 in Cleveland, Ohio, along with assembly and Tuff Testing of every unit!

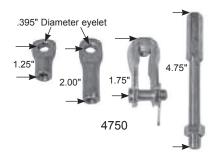






Booster Brackets





BOOSTER EXTENSION ROD & CLEVIS KIT

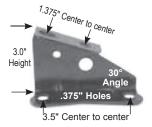
Universal kit adapts most factory brake setups to Tuff Stuff boosters. Rod length is 4.75" and has 3/8"-24 fine threads

Finish Item Plain finish 4750

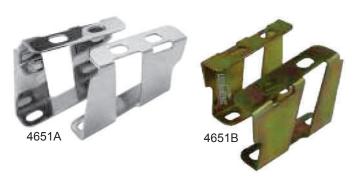


GM 1967-72 BRAKE BOOSTER BRACKETS

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	ltem
Chrome	4650A
Black chrome	4650A7
Gold zinc	4650B
Stealth black	4650C
Yellow	4650BYELLOW
Orange	4650BORANGE
Red	4650BRED
Blue	4650BBLUE



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



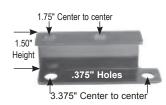
Finish	Item
Chrome	4651A
Black chrome	4651A7
Gold zinc	4651B
Stealth black	4651C
Yellow	4651BYELLOW
Orange	4651BORANGE
Red	4651BRED
Blue	4651BBLUE



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



includes left and	right brackets
Finish	Item
Chrome	4652A
Black chrome	4652A7
Gold zinc	4652B
Stealth black	4652C
Yellow	4652BYELLOW
Orange	4652BORANGE
Red	4652BRED
Blue	4652BBLUE

Booster Brackets

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 assembly

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

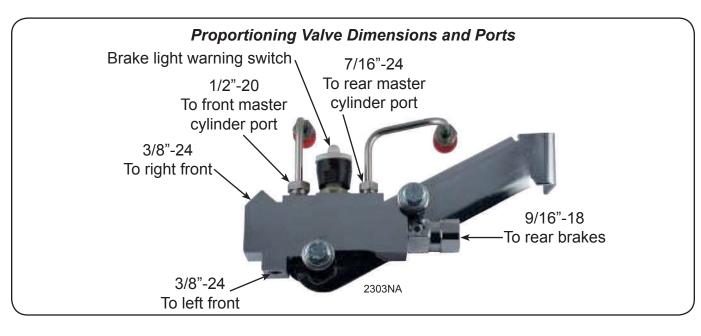
Includes OE style mounting bracket, two short brake lines, proportioning valve with brake light switch, wire terminal and fasteners.

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
Finish Chrome	Disc/Drum 2301NA	Disc/Drum 2302NA	Disc/Disc 2303NA



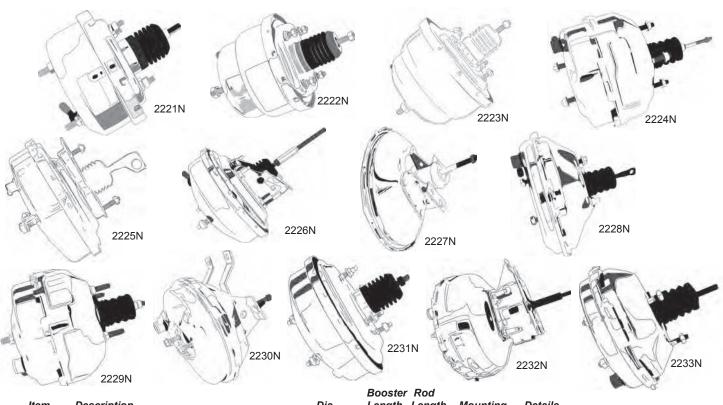


Product Dimensions



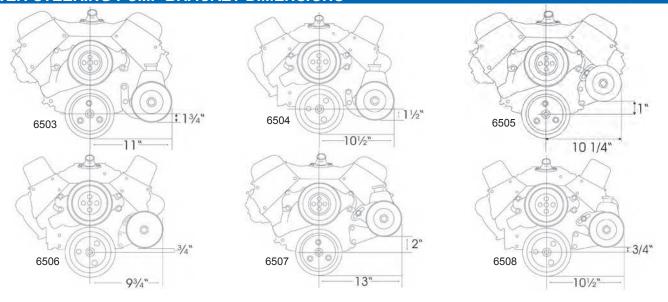
POWER BRAKE BOOSTER DIMENSIONS

Boosters have a 3-3/8" square mounting footprint except 2225N, 2230N and 2233N. Master cylinder mounting studs are 3/8"-16 and spacing is 3-3/8" C-to-C.



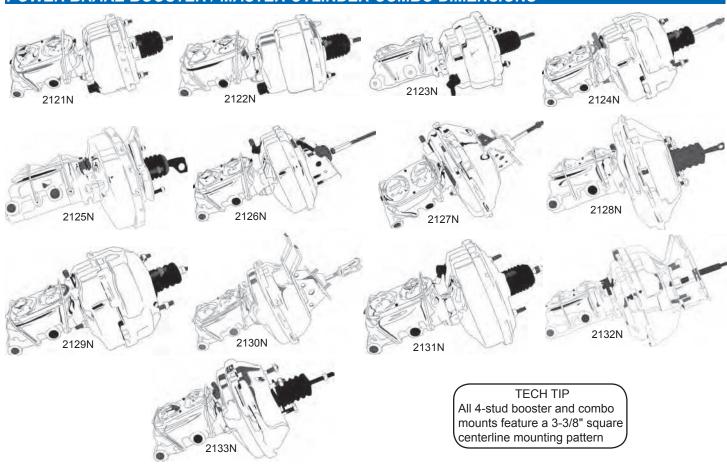
			Dooste	1100		
Item	Description	Dia	Length	Length	Mounting	Details
2221N	7" Single diaphragm	7"	3.50"	4.00"	4 studs	M8-1.5 x 22mm (~7/8") metric studs
2222N	7" Dual diaphragm	7"	5.25"	4.00"	4 studs	M8-1.5 x 22mm (~7/8") metric studs
2223N	8" Dual diaphragm	8"	5.25"	4.00"	4 studs	M8-1.5 x 22mm (~7/8") 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	M8-1.5 x 22mm (~7/8") metric 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	M10-1.5 x 28mm (~1-1/8") metric studs

POWER STEERING PUMP BRACKET DIMENSIONS



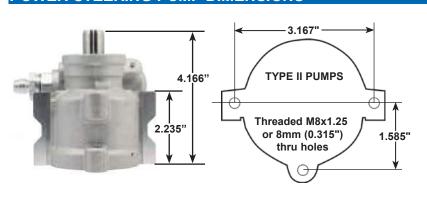
Product Dimensions

POWER BRAKE BOOSTER / MASTER CYLINDER COMBO DIMENSIONS



Univer	sal master cylinder w/power brake booster combo		МС	Booster	Rod		
Item	Description	Dia	Length	Length	Length	Mounting	Details
2121N	7" Single diaphragm combo	7"	8.00"	3.50"	4.00"	4 studs	M8-1.5 x 22mm (~7/8") metric studs
2122N	7" Dual diaphragm combo	7"	8.00"	5.25"	4.00"	4 studs	M8-1.5 x 22mm (~7/8") metric studs
2123N	8" Dual diaphragm combo	8"	8.00"	5.25"	4.00"	4 studs	M8-1.5 x 22mm (~7/8") 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	M8-1.5 x 22mm (~7/8") metric studs
	ted 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	M10-1.5 x 28mm (~1-1/8") metric studs

POWER STEERING PUMP DIMENSIONS





SAGINAW PUMPS Overall pump height is 9.00", width is 5.50", depth of pump and reservoir is 6.25" and exposed shaft length is 1.00"

Alternator FAQ'S









Matt

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 a chrome plated 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.

Water Pump FAQ's

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

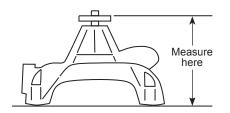
Engines that have been modified for more horsepower generally run hotter than stock engines. SuperCool water pumps are designed to provide 30% more flow. If combined with the proper thermostat and radiator, your engine's overheating can be resolved.

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!

Tuff Stuff National Sales Manager Tim Andrews SRT Charger



Starter FAQ'S



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 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 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 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 kind of fluid should I use in my power steering pump reservoir?

Use a high quality, name brand Power Steering Fluid that can be purchased at your local auto parts store.

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 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.

Booster/Master FAQ'S

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.





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	<i>Item</i>
Large	99007
X Large	99008
XX Large	99009



BASEBALL CAPS

These black baseball style 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.

Black baseball cap 99010



DECALS

Tuff Stuff decals are four color self adhesive and stick to any clean, dry surface. Nominal size is $2-1/2^{\circ}$ X 5° .

Sold individually 99004



BANNERS

Ideal for performance and custom shops, retailers and garages. Made from heavy gauge plastic material and measure 24" X 48". Designed for indoor or outdoor usage.

Tuff Stuff Logo banner 99005

Winners use Tuff Stuff products!



Specifically:

- · Mini 55 amp alternator
- Aluminum water pump
- Gear reduction starter
- Type II power steering pump

Brian Matthei - owner



Web Site Features

- Up-to-the minute new product information
- Year/Make/Model product lookup
- Downloadable instruction sheets
- Tech information and product dimensions
- Local dealer listings
- · New product flyers and catalog
- 360° Rotating product images
- Frequently asked questions
- Product and factory tour videos
- Tech request submission form

Premium Quality

All Tuff Stuff products feature 100% new, *NOT* remanufactured components. All polishing, chrome plating and powder coating are done in house – in Cleveland, Ohio – along with assembly and Tuff Testing of every unit.

Product specifications and pricing are subject to change without notice or obligation, Tradenames are used for reference only.

About Tuff Stuff Performance Accessories

Tuff Stuff Performance Accessories has been in business over 40 years. Tuff Stuff products are quality built in Cleveland, Ohio using 100% new components. From chrome plated high output alternators to high torque gear reduction starters, Tuff Stuff has a complete line of under hood accessories including water pumps, power steering pumps, air conditioning compressors, master cylinders and power brake boosters for the custom and hot rod markets.

Frank Hurst Sr. began building alternators and starters out of his garage in 1976. Tuff Stuff is a continuing product of the Hurst Family's hard work and dedication.

