

COPO SPECS & STATS P/N 20129562: 2013 Features

2013 FEATURES	350 Naturally Aspirated	396 Naturally Aspirated	427 Naturally Aspirated
NHRA HORSEPOWER RATINGS	350	500	435
RECOMMENDED MAX ENGINE RPM	8000	8000	8000
NHRA Shipping Weight	3,195 lbs	3,195 lbs	3,195 lbs
TRANSMISSION: Automatic	ATI Racing Products "Pro Glide" SFI-approved ATI "Super Case" 1.87 ratio 9310 straight cut gear set Precision balanced carrier with 4340 tool steel output shaft Turbo spline input shaft – 300M material 7 clutch high gear pack Billet clutch hub High flow front pump with heat-treated pinned stator tube Deep aluminum pan Hard chrome rings Fluid overflow catch can	ATI Racing Products "Pro Glide" SFI-approved ATI "Super Case" 1.87 ratio 9310 straight cut gear set Precision balanced carrier with 4340 tool steel output shaft Turbo spline input shaft – 300M material 7 clutch high gear pack Billet clutch hub High flow front pump with heat-treated pinned stator tube Deep aluminum pan Hard chrome rings Fluid overflow catch can	ATI Racing Products "Pro Glide" SFI-approved ATI "Super Case" 1.87 ratio 9310 straight cut gear set Precision balanced carrier with 4340 tool steel output shaft Turbo spline input shaft – 300M material 7 clutch high gear pack Billet clutch hub High flow front pump with heat-treated pinned stator tube Deep aluminum pan Hard chrome rings Fluid overflow catch can
TRANSMISSION: Manual	G-Force "G101A" 4-speed	G-Force "G101A" 4-speed	G-Force "G101A" 4-speed
Gear ratios:			
1st	3.17	3.17	3.17
2nd	1.87	1.87	1.87
3rd	1.33	1.33	1.33
4th	1	1	1
Clutch	Hyatt Racing Services/Mcleod adjustable 10.5"	Hyatt Racing Services/Mcleod adjustable 10.5"	Hyatt Racing Services/Mcleod adjustable 10.5"
Flywheel	Mcleod SFI-Approved Aluminum	Mcleod SFI-Approved Aluminum	Mcleod SFI-Approved Aluminum
TORQUE CONVERTER (AUTOMATIC ONLY)	ATI Racing Products "Treemaster MRT" Series 8" diameter housing Furnace brazed impeller and turbine fins Precision pump drive tube Heavy duty needle bearings Investment cast cover	ATI Racing Products "Treemaster MRT" Series 8" diameter housing Furnace brazed impeller and turbine fins Precision pump drive tube Heavy duty needle bearings Investment cast cover	ATI Racing Products "Treemaster MRT" Series 8" diameter housing Furnace brazed impeller and turbine fins Precision pump drive tube Heavy duty needle bearings Investment cast cover
Flex Plate	Steel ATI "Super Plate" - SFI-approved	Steel ATI "Super Plate" - SFI-approved	Steel ATI "Super Plate" - SFI-approved
SHIFTER: Automatic	Hurst "Quarterstick" — 2-speed automatic Forward pattern	Hurst "Quarterstick" — 2-speed automatic Forward pattern	Hurst "Quarterstick" — 2-speed automatic Forward pattern
SHIFTER: Manual	Long V-Gate	Long V-Gate	Long V-Gate
ENGINE			
Block	Chevrolet Performance LS7 aluminum	Chevrolet Performance LS3 aluminum	Chevrolet Performance LS7 aluminum
Bore, Stroke	4.125" x 3.270"	4.065" x 3.825"	4.125" x 4.00"
Static Compression Ratio	10.6:1 nominal	10.4:1 nominal	13.0:1 nominal
Crankshaft	Callies 4340 "Dragonslayer"	Callies 5140 "Compstar"	Callies 5140 "Compstar"
Rods	Callies 4340 H-beam "Ultra Rods"	Callies 4340 H-beam "Ultra Rods"	Callies 4340 H-beam "Compstar"
Length	6.350"	6.200"	6.100"
Pin Bore Diameter	.928"	.928"	.928"
Bearings	Clevite "H-Series" heat-treated tri-metal rod and main bearings	Clevite "H-Series" heat-treated tri-metal rod and main bearings	Clevite "H-Series" heat-treated tri-metal rod and main bearings
Pistons	Mahle forged 2618 alloy	Mahle forged 4032 alloy	Mahle forged 2618 alloy
Piston Type	Dome Graphal coating Friction-coated skirts	Flat Top Graphal coating Friction-coated skirts	Dome Graphal coating Friction-coated skirts
Piston Rings	Mahle .043" x .043" x 3mm Ductile iron top with radius molybdenum face Plain cast-iron tapered 2nd Chrome-plated oil rails with low-tension expander	Mahle .043" x .043" x 3mm Ductile iron top with radius molybdenum face Plain cast-iron tapered 2nd Chrome-plated oil rails with low-tension expander	Mahle .043" x .043" x 3mm Ductile iron top with radius molybdenum face Plain cast-iron tapered 2nd Chrome-plated oil rails with low-tension expander
Camshaft	Chevrolet Performance steel billet hydraulic roller	Chevrolet Performance steel billet hydraulic roller	Chevrolet Performance steel billet hydraulic roller
Duration	226° IN / 236° EX @ .050" lift	233° IN / 276° EX @ .050" lift	233° IN / 276° EX @ .050" lift
Theoretical valve lift	.525" IN / .525" EX	.595" IN / .595" EX	.630" IN / .630" EX
Lobe Centers	110°	107°	107°
VALVETRAIN			
Tappets	Chevrolet Performance "Ceramic Ball" high-rpm hydraulic roller	Chevrolet Performance "Ceramic Ball" high-rpm hydraulic roller	Chevrolet Performance "Ceramic Ball" high-rpm hydraulic roller
Pushrods	3/8" diameter Trend Performance chrome moly	3/8" diameter Trend Performance chrome moly	3/8" diameter LS7
Rocker Arms	1.7:1 ratio LS9 with roller trunions	1.7:1 ratio LS9 with roller trunions	1.8:1 ratio LS7 with roller trunions
Valve Springs	Performance Springs Incorporated (PSI) "Max Life" beehive	Performance Springs Incorporated (PSI) "Max Life" beehive	Performance Springs Incorporated (PSI) "Max Life" beehive
Spring Seats	Chevrolet Performance Hardened steel	Chevrolet Performance Hardened steel	Chevrolet Performance Hardened steel
Retainers	Chevrolet Performance Lightweight steel	Chevrolet Performance Lightweight steel	Chevrolet Performance Lightweight steel
Cylinder Heads	Aluminum based on LS3	Aluminum based on LS3	Fully CNC'ed aluminum based on LS7
Nominal Intake Port Volume	265 cc	265 cc	280 cc
Nominal Exhaust Port Volume	88 cc	88 cc	95 cc
Nominal Combustion Chamber Volume	68 cc	68 cc	70 cc
Intake Valves	Hollow stem steel	Hollow stem steel	Del West titanium
Head Diameter, Stem Diameter	2.165" x 8mm	2.165" x 8mm	2.205" x 8mm
Exhaust Valves	Lightweight sodium-filled exhaust valves	Lightweight sodium-filled exhaust valves	Lightweight sodium-filled exhaust valves
Head Diameter, Stem Diameter	1.590" x 8mm	1.590" x 8mm	1.615" x 8mm
Head Gaskets	Chevrolet Performance LS7 multi-layer steel head gaskets	Chevrolet Performance LS9 multi-layer steel head gaskets	Fel-Pro Performance multi-layer steel with raised cylinder sealing bead
Oil Pump	Internal wet sump	Internal wet sump	Internal wet sump
Oil Pan	Deep-sump cast aluminum	Deep-sump cast aluminum	Deep-sump cast aluminum
Capacity	6 quarts	6 quarts	6 quarts
Damper	ATI Performance Products "Super Damper" - SFI approved	ATI Performance Products "Super Damper" - SFI approved	ATI Performance Products "Super Damper" - SFI approved
Water Pump	Meziere Billet electric	Meziere Billet electric	Meziere Billet electric
Intake Manifold	Chevrolet Performance/Holley "Hi Ram"	Chevrolet Performance/Holley "Hi Ram"	Chevrolet Performance/Holley "Hi Ram"
Throttle Body	Whipple Industries - Billet Aluminum	Whipple Industries - Billet Aluminum	Whipple Industries - Billet Aluminum
Blade Size	90mm	90mm	102mm
HEADERS	American Racing Headers 2" x 30" primary with merge collectors 304 Stainless Steel	American Racing Headers 2" x 30" primary with merge collectors 304 Stainless Steel	American Racing Headers 2" x 30" primary with merge collectors 304 Stainless Steel
FUEL SYSTEM	Aeromotive "Eliminator" fuel pump — free flow rating = 800 lb/hr Aeromotive "A1000" pressure regulator with manifold pressure compensation capability Aeromotive 10-micron high-flow filter Lightweight black nylon braided-8 AN hoses Black anodized aluminum-8 AN hose ends and fittings High-impedance fuel injectors Fuel Pressure: 70 psi base	Aeromotive "Eliminator" fuel pump — free flow rating = 800 lb/hr Aeromotive "A1000" pressure regulator with manifold pressure compensation capability Aeromotive 10-micron high-flow filter Lightweight black nylon braided-8 AN hoses Black anodized aluminum-8 AN hose ends and fittings High-impedance fuel injectors Fuel Pressure: 70 psi base	Aeromotive "Eliminator" fuel pump — free flow rating = 800 lb/hr Aeromotive "A1000" pressure regulator with manifold pressure compensation capability Aeromotive 10-micron high-flow filter Lightweight black nylon braided-8 AN hoses Black anodized aluminum-8 AN hose ends and fittings High-impedance fuel injectors Fuel Pressure: 70 psi base
Flow Rate	43 lb/hr @ 58 psi with EV6 / USCAR connector	43 lb/hr @ 58 psi with EV6 / USCAR connector	58 lb/hr @ 58 psi with EV6 / USCAR connector
Differential Gearing	Automatic: 4.86:1 Manual: 5.43:1	Automatic: 4.57:1 Manual: 5.29:1	Automatic: 4.57:1 Manual: 5.00:1
Drive Shaft	Manual: 4" OD x .065" wall steel tube Automatic: 4" OD x .125" wall 6061-T6 aluminum tube Chromoly end caps Billet steel slip yoke Heavy-duty 1350 universal joints	Manual: 4" OD x .065" wall steel tube Automatic: 4" OD x .125" wall 6061-T6 aluminum tube Chromoly end caps Billet steel slip yoke Heavy-duty 1350 universal joints	Manual: 4" OD x .065" wall steel tube Automatic: 4" OD x .125" wall 6061-T6 aluminum tube Chromoly end caps Billet steel slip yoke Heavy-duty 1350 universal joints

2013 Features standard for 350, 396, and 427 Naturally Aspirated

ENGINE CONTROLS & IGNITION	Holley "HP" electronic fuel injection processor <ul style="list-style-type: none"> Speed density operation Wide-band O2 sensor included Cable-actuated throttle Production LS7 ignition coils Production LS7 secondary wires GM sensors
ELECTRICAL	Dash-installed control switches: <ul style="list-style-type: none"> Starter Ignition Fuel pump Water pump Cooling fan Lights
GAUGES	Autometer with gold "Bowtie" logo on dials <ul style="list-style-type: none"> 5" 10K RPM tach with shift light Electronic water temp with 2.0625" face and 100°-260°F range Electronic trans temp with 2.0625" face and 100°-260°F range Electronic oil pressure with 2.0625" face and 0-100 psi range Electronic fuel pressure with 2.0625" face and 0-100 psi range Voltmeter with 2.0625" face and 8-18v range
SAFETY	RJS Safety Equipment 3" driver restraints RJS Safety Equipment window net
CHASSIS	Chromoly cage – NHRA certified to 8.50 ET Sub-frames tied together Front engine cradle modified to accept additional oil pan clearance Rear sub-frame modified to accept unique COPO NHRA Stock Eliminator suspension
REAR SUSPENSION	4-bar with adjustable top links Adjustable Panhard link Double-adjustable Strange Engineering coil over shocks Anti-roll bar
FRONT SUSPENSION	Adjustable Strange Engineering coil over struts Sway bar removed
STEERING	Production steering gear modified for manual (non-assist) operation
BRAKES	Lightweight vented rotors Billet 4-piston lightweight calipers Lightweight tandem master cylinder OEM pedal modified to mount master cylinder All components provided by Strange Engineering
WHEELS	Bogart Racing light-weight with unique COPO logo <ul style="list-style-type: none"> Forged outer ring Billet center 15" x 10" rear – 5/8" studs 3.875" Back Spacing 15" x 3.5" front – 1/2" studs 2.50" Back Spacing 4 3/4" bolt circle pattern
TIRES	Rear – Auto trans: 9.0 / 30.0R - 15 94.0" Radial Rear – Manual trans: 9.0 / 30.0 - 15 94.0" Bias Ply Front – 4.5 / 28.0 - 15 Drag only
GEARS & AXLES	Strange Engineering 9" aluminum center section Lightweight steel spool Strange Engineering 9310 alloy Strange Engineering 35-spline axles Strange Engineering Chrome-moly yoke
DRIVE SHAFT	4" OD x .125" wall 6061-T6 aluminum tube Chromoly end caps Forged chrome-moly slip yoke Heavy-duty 1350 universal joints