

AMA Specifications—Passenger Car

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MANUFACTURER BUICK MOTOR DIVISION GENERAL MOTORS CORPORATION	CAR NAME SKYLARK GRAN SPORT
MAILING ADDRESS 1051 EAST HAMILTON AVENUE FLINT, MICHIGAN 48550	MODEL YEAR 1966
	ISSUED: 10-14-65 REVISED (*) 1-24-66

NOTES:

1. The Specifications herein are those in effect at date of compilation and are subject to change without notice by the manufacturer.
2. UNLESS OTHERWISE INDICATED:
 - a. Specifications apply to standard models without optional equipment. Significant deviations are noted.
 - b. Nominal design dimensions are used throughout these specifications.

TABLE OF CONTENTS

General Specifications 1,2	Drive Units 14	Suspensions 21
Engine—Mechanical 3	Brakes 18	Weights 24
Electrical 12	Steering 19	Index 25

BODY—TYPES AND STYLE NAMES—

Body type, number of passenger & style names; use manufacturer's code for series & body style.

<u>MODEL</u>	<u>SKYLARK GRAN SPORT</u>
44607	2 Door 4 Window 6 Passenger Thin Pillar Coupe
44617	2 Door 4 Window 6 Passenger Hardtop Coupe
44667	2 Door 4 Window 6 Passenger Convertible

AMA Specifications—Passenger Car

MAKE OF CAR BUICK MODEL YEAR 1966 DATE ISSUED 10-14-65 REVISED ^(*) 1-24-66

GENERAL SPECIFICATIONS

(All dimensions in inches unless otherwise indicated)

MODEL	Additional Information Page No.:	SKYLARK GRAN SPORT		
		44607	44617	44667
Wheelbase (L101)		115.0		
Track	Front (W101)	58.0		
	Rear (W102)	59.0		
Maximum Overall Dimensions	Length (L103)	204.0		
	Width (W103)	75.5		
	Height (H101)	53.2		53.6
Transmission (Specify trade name - opt., not available)	Manual - 3 speed	15	Std.	
	Manual - 4 speed	15	Opt.	
	Overdrive	15	N.A.	
	Automatic	16	Super Turbine (Opt.)	
Axle ratio	Manual - 3 speed	17	3.36	
	Manual - 4 speed	17	3.36	
	Overdrive	17	N.A.	
	Automatic	17	2.93	
Tire size	18	7.75 x 14		
Engine	Type, no. cyl., valve arr.	3	V8 90° In Head	
	Fuel system (Carb., other)	10	Carburetor	
	Bore and stroke	3	4.1875 x 3.640	
	Piston displ., cu. in.	3	400	
	Std. compression ratio	3	10.25	
	Max. bhp at engine rpm	3	325 @ 4400	
	Max. torque at rpm	3	445 @ 2800	

AMA Specifications—Passenger Car

MAKE OF CAR BUICK MODEL YEAR 1966 DATE ISSUED 10-14-65 REVISED ^(*)

GENERAL SPECIFICATIONS—DIMENSIONS

(All dimensions in inches unless otherwise indicated)
(Supplemental data available on request)

MODEL	SAE Ref. No.	SKYLARK GRAN SPORT		
		44607	44617	44667

FRONT COMPARTMENT

Shoulder room	W3	58.8	58.2
Hip room	W5	59.9	59.6
Max. eff. leg room - accelerator	L34	41.3	
Effective head room	H61	37.4	37.8
H Point to Heel point	H30	8.2	

REAR COMPARTMENT

Shoulder room	W4	57.1	56.7	46.6
Hip room	W6	58.6	52.9	48.5
Minimum effective leg room	L51	33.1		
Effective head room	H63	36.2	36.5	

LUGGAGE COMPARTMENT

Usable luggage capacity (Cu. Ft.)	V1	18.9		
Liftover height	H195	28.4		
Position of spare tire storage		Horizontal		
Method of holding lid open		Torsion Bars (Spring Loaded)		

STATION WAGON—THIRD SEAT

Hip room	W86	No Wagons Used		
Effective leg room	L86	No Wagons Used		
Effective head room	H86	No Wagons Used		
Seat facing direction		No Wagons Used		

STATION WAGON—CARGO SPACE

MODEL	SAE Ref. No.			
Minimum distance between wheel houses at floor level	W201	No Wagons Used		
Rear end opening width at belt	W204	No Wagons Used		
Floor length from back of front seat at floor level to inside of closed tail gate	L202	No Wagons Used		
Minimum horizontal distance from top rear of front seat back to inside of tail gate at belt	L204	No Wagons Used		
Maximum height - floor covering to headlining at centerline of rear axle	H201	No Wagons Used		
Maximum height of rear opening - tail and lift gates open	H202	No Wagons Used		
Cargo volume index (cu. ft.)	$\frac{W4 \times L204 \times H201}{1728}$	V2	No Wagons Used	

AMA Specifications--Passenger Car

MAKE OF CAR	BUICK	MODEL YEAR	1966	DATE ISSUED	10-14-65	REVISED (*)
		SKYLARK GRAN SPORT				
MODEL	44607	44617	44667			

ENGINE--GENERAL

Type, no. cyls., valve arr.	V8 - 90° In-Head	
Bore and stroke (nominal)	4.1875 x 3.640	
Piston displacement, cu. in.	400	
Bore spacing (C/L to C/L)	4.750	
No. system (front to rear)	L. Bank	2-4-6-8
	R. Bank	1-3-5-7
Firing order	1-2-7-8-4-5-6-3	
Compras. ratio (nominal)	10.25	
Cylinder Head Material	Cast Iron	
Cylinder Block Material	Cast Iron	
Cylinder Sleeve-Wet, dry, none	None	
Number of mounting points	Front	Two
	Rear	One
Engine installation angle	4° 37'	
Taxable horsepower	56.11	
Published max. bhp* @ eng. RPM	325 @ 4400	
Published max. torque* (lb. ft. @ RPM)	445 @ 2800	
Recommended fuel regular - premium	Premium	
Idle speed (spec. neutral or drive)	Manual	500
	Automatic	500 (Drive)

ENGINE--PISTONS

Material	Cast Aluminum Alloy		
Description and finish	Cam Ground - Transverse Slot - Divorced Skirt		
Weight (piston only) oz.	23.68		
Clearance (limits)	Top land	.034 - .042	
	Skirt	Top	.001 - .0016
		Bottom	.002 - .0036
Ring groove depth	No. 1 ring	.211 - .219	
	No. 2 ring	.214 - .221	
	No. 3 ring	.214 - .221	
	No. 4 ring	None	

*Max. bhp (brake horsepower) and max. torque corrected to 60° F and 29.92 in. Hg atmospheric pressure.

AMA Specifications—Passenger Car

MAKE OF CAR BUICK MODEL YEAR 1966 DATE ISSUED 10-14-65 REVISED ^(*) 1-24-66

POWER TEAMS

(Indicate whether standard or optional)

MODEL AVAILABILITY	ENGINE					TRANSMISSION	AXLE RATIO (Std. first) (Indicate A/C ratio)
	Displ. cu. in.	Carburetor	Compr. Ratio	BHP @ RPM	Torque @ RPM		
SKYLARK GRAN SPORT 44607 44617 44667	400	4 Bb1	10.25	325@ 4400	445@ 2800	Manual (3)	3.36 (a)
	400	4 Bb1	10.25	325@ 4400	445@ 2800	Manual (4)	3.36 (a)
	400	4 Bb1	10.25	325@ 4400	445@ 2800	Super Turbine	2.93 (b)

(a) Optional Ratios: 3.55, 3.90, 4.30 (3.55 Not Available with A/C)

(b) Optional Ratios: 3.36, 3.55, 3.90, 4.30

AMA Specifications – Passenger Car

MAKE OF CAR BUICK MODEL YEAR 1966 DATE ISSUED 10-14-65 REVISED ^(*) _____

	SKYLARK	GRAN SPORT	
MODEL	44607	44617	44667

ENGINE—RINGS

Function (top to bottom)	No. 1, oil or comp.	Compression
	No. 2, oil or comp.	Compression
	No. 3, oil or comp.	Oil
	No. 4, oil or comp.	None
Compression	Description - material, type, coating, etc.	Cast Iron Lubrited
	Width	.077 - .078
	Gap	.015 - .035
Oil	Description - material, type, coating, etc.	Steel Uncoated
	Width	.181 - .187
	Gap	.015 - .035
Expanders		Steel (Oil Ring) Hump Type

ENGINE—PISTON PINS

Material	Extruded SAE-1018		
Length	3.520		
Diameter	.9994 - .9997		
Type	Locked in rod, in piston, floating, etc.	Pressed in Rod	
	Bushing	In rod or piston	None
		Material	None
Clearance	In piston	.00005 - .0001 Select	
	In rod	.00075 - .00125 (Press)	
Direction & amount offset in piston	None		

ENGINE—CONNECTING RODS

Material	Forged SAE-1141 Steel	
Weight (oz.)	24.384	
Length (center to center)	6.220	
Bearing	Material & Type	Steel Backed - M/400 Aluminum-Removeable
	Overall length	.820
	Clearance (Limits)	.0020 - .0023
	End play	.005 - .012 (Total Both Rods)

AMA Specifications—Passenger Car

MAKE OF CAR BUICK **MODEL YEAR** 1966 **DATE ISSUED** 10-14-65 **REVISED** (*)

MODEL	44607	44617	44667
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ENGINE—CRANKSHAFT

Material		SAE-1145 or SAE-1053 Steel		
Vibration damper type		Rubber Absorption		
End thrust taken by bearing (No.)		Three		
Crankshaft end play		.004 - .008		
Main bearing	Material & type	Steel Backed - All Removeable First Four M/400 - Rear Durex 100A		
	Clearance	.000 - .0019		
	Journal dia. and bearing overall length	No. 1	2.4985 x .940	
		No. 2	2.4985 x .940	
		No. 3	2.4985 x 1.127	
		No. 4	2.4985 x .940	
		No. 5	2.4985 x 1.200	
No. 6	None			
No. 7	None			
Dir. & amt. cyl. offset		None		
Crankpin journal diameter		2.2495		

ENGINE—CAMSHAFT

Location		Above Crankshaft - Center of "V"		
Material		Cast Iron Alloy		
Bearings	Material	Steel Backed Babbitt		
	Number	Five		
Type of Drive	Gear or chain		Chain	
	Crankshaft gear or sprocket material		Sintered Iron	
	Camshaft gear or sprocket material		Nylon Coated Aluminum	
	Timing chain	No. of links	52	
		Width	.864	
Pitch		.500		

ENGINE—VALVE SYSTEM

Hydraulic lifters (Std, opt, NA)		Standard
Valve rotator, type (intake, exhaust)		None
Rocker ratio		1.6
Operating tappet clearance (indicate hot or cold)	Intake	None
	Exhaust	None
Timing marks on flywheel, damper, other		Harmonic Damper

(Continued)

AMA Specifications—Passenger Car

MAKE OF CAR	BUICK	MODEL YEAR	1966
		DATE ISSUED	10-14-65
		REVISED(*)	
MODEL	SKYLARK GRAN SPORT		
	44607	44617	44667

ENGINE—VALVE SYSTEM (cont.)

Timing	Intake	Opens (°BTC)	28
		Closes (°ABC)	87
		Duration - deg.	295
	Exhaust	Opens (°BBC)	76
		Closes (°ATC)	46
		Duration - deg.	302
Valve opening overlap		74	
Material		SAE-1041, 1047 or TS-8150 Steel	
Overall length		.4.785	
Actual overall head dia.		1.875	
Angle of seat & face		45°	
Seat insert material		None	
Stem diameter		.3725 ± .0005 dia. - Max. taper to be .0003 with small dia. at header	
Stem to guide clearance		.0015-.0035 with .0003 Max. Taper	
Intake	Lift (@ zero lash)		.431
	Outer spring press. and length	Valve closed (lb. @ in.)	46 @ 1.600
		Valve open (lb. @ in.)	101 @ 1.160
	Inner spring press. and length	Valve closed (lb. @ in.)	25.5 @ 1.690
		Valve open (lb. @ in.)	76 @ 1.250
	Material		GM-N82152-(21-4N)
	Overall length		4.785
	Actual overall head dia.		1.500
	Angle of seat & face		45°
	Seat insert material		None
Stem diameter		Tapered .3725 ± .0005 Top to .3715 ± .0005 Bottom	
Stem to guide clearance		Top .0015 - .0035 - Bottom .0025 - .0045	
Exhaust	Lift (@ zero lash)		.431
	Outer spring press. and length	Valve closed (lb. @ in.)	46 @ 1.600
		Valve open (lb. @ in.)	101 @ 1.160
	Inner spring press. and length	Valve closed (lb. @ in.)	25.5 @ 1.690
		Valve open (lb. @ in.)	76 @ 1.250

ENGINE—LUBRICATION SYSTEM

Type of lubrication (splash, pressure, nozzle)	Main bearings	Pressure
	Connecting rods	Pressure
	Piston pins	Splash
	Camshaft bearings	Pressure
	Tappets	Pressure
	Timing gear or chain	Drip From Front Cam Bearing
	Cylinder walls	Splash & Nozzle.

(Continued)

AMA Specifications – Passenger Car

MAKE OF CAR BUICK MODEL YEAR 1966 DATE ISSUED 10-14-65 REVISED (c) 1-24-66

	SKYLARK GRAN SPORT		
MODEL	44607	44617	44667

ENGINE—LUBRICATION SYSTEM (cont.)

Oil pump type		Gear
Normal oil pressure (lb. @ engine rpm)		40 @ 2400
Oil pressure sending unit (elect. or mech.)		Electrical
Type oil intake (floating, stationary)		Stationary
Oil filter system (full flow, partial, other)		Full Flow
Filter replacement (element, complete)		Element and Can
Capacity of crankcase, less filter-refill (qt.)		Four
	<u>ANTICIPATED LOWEST TEMPERATURE</u>	<u>USE SAE VISCOSITY</u>
Oil grade recommended (SAE viscosity and temperature range)	Above 32° F. Below 32° F to Zero °F. Below Zero ° F	10W-30, 20W or 20 10W-30 or 10W 5W-20 or 5W
Engine Service Requirement (MM, MS, etc.)	Passing Car Makers Test GM4745M	

ENGINE—EXHAUST SYSTEM

Type (single, single with cross-over, dual, other)		Dual
Muffler No. & type (reverse flow, straight thru, separate resonator)		Two Reverse Flow
Exhaust pipe dia. (O.D. wall thickness)	Branch	Not Used
	Main	2.250 - .084 (a)
Tail pipe diameter (O.D. & wall thickness)		2.000 - .048

ENGINE—CRANKCASE VENTILATION SYSTEM

	Standard	Induction System
Type (ventilates to atmos., Induction system, other)	Optional	None
Control unit	Make and model	A.C.
	Location	Right Rocker Arm Cover (b)
	Energy source (manifold vacuum, carburetor air stream, other)	Manifold Vacuum
	Control method (variable orifice, fixed orifice, other)	Variable Orifice
Complete system	Discharges (to Intake manifold, carb. air intake, air cleaner intake, other)	Intake Manifold (Standard Set-Up) Also discharge into air cleaner (Opt. Set-Up)
	Air inlet (breather cap, carburetor air cleaner, other)	Breather Cap Ventilation Air Filter in Opt. System
	Flame arrestor (screen, check valve, other)	Check Valve

- (a) Laminated Tubing
- (b) Left Cover Also Used on State of California Cars.

AMA Specifications—Passenger Car

MAKE OF CAR BUICK MODEL YEAR 1966 DATE ISSUED 10-14-65 REVISED ^(*)

	SKYLARK GRAN SPORT		
MODEL	44607	44617	44667

ENGINE— AIR INJECTION REACTOR

Type (Air injection, engine modifications, other)			
Air Injection Pump	Type	Air Injection	
	Displacement	19.3 Cu. In.	
	Drive ratio	1.25	
	Drive type	Belt	
	Relief valve (type)	Pressure Relief	
	Filter (describe)	Air Inlet Through Clean Side at Engine Air Cleaner	
Air Injection System	Air distribution (head, manifold, etc.)	Manifold	
	Point of entry	Exhaust Port	
	Injection tube I.D.	0.252	
	Check valve type	Diaphragm	
	Backfire protection (type)	Vacuum Operated Intake Air Bleed	
Carburetor	Make	Carter	
	Model	AFB	
	Barrel size	Primary 1.5625 - Secondary 1.6875	
	Idle speed	550	
	Drive Neutral	550	
Distributor	Aux. Adv. Systems (type)	None	
	Make	Delco-Remy	
	Model	1111055	
	Cent'fgal adv. in crank degrees @ eng. rpm.	Start (rpm)	600-700
		Intermed. points deg. @ rpm	15° @ 1400
		Max. deg.@rpm.	30° @ 3900
	Vacuum adv. in. crank degrees @ eng. rpm	Start (in Hg)	6-8
Intermed. points deg. @ in. Hg		10.5 @ 12	
Max. deg. @ in.		19.5	
Vacuum Source	Carburetor (Ported)		
Timing - Crank degrees @ rpm	2.5 @ 550		
Cooling System (describe changes)	Same as Standard		
Exhaust System (describe changes)	Same as Standard		

AMA Specifications— Passenger Car

MAKE OF CAR BUICK MODEL YEAR 1966 DATE ISSUED 10-14-65 REVISED (*)1-24-66

	SKYLARK GRAN SPORT		
MODEL	44607	44617	44667

ENGINE—FUEL SYSTEM

(See Supplement to Page 8 for Details of Fuel Injection, Supercharger, etc. if used)

Induction type: Carburetor, fuel injection, supercharger.		Carburetor
Fuel Tank	Capacity (gals.)	Approximately 20
	Filler location	Rear
Fuel Pump	Type (elec. or mech.)	Mechanical
	Locations	Engine
	Pressure range	5.50-7.00 @ 1800 (Cam) (At Pump Outlet)
Vacuum booster (std., optional, none)		None
Fuel Filter	Type	Pleated Paper Saran
	Locations	Engine Fuel Tank
Carburetor	Choke type	Integral Automatic
	Intake manifold heat control (exhaust or water)	Exhaust
	Air clnr. type	Polyurethane None

CARBURETOR SUPPLEMENTARY INFORMATION

Model Usage	Engine Displ.	Transmission	Carburetors		No. Used and Type	Barrel Size
			Make	Model		
44607-44617- 44667	400	Manual (3)	Carter	AFB	1-4BBL	(a)
	400	Manual (4)	Carter	AFB	1-4BBL	(a)
	400	Super Turbine	Carter	AFB	1-4BBL	(a)

(a) Primary - 1.5625; Secondary 1.6875

AMA Specifications – Passenger Car

MAKE OF CAR	BUICK	MODEL YEAR	1966
		DATE ISSUED	10-14-65
		REVISED	(a)
		SKYLARK GRAN SPORT	
MODEL	44607	44617	44667

ENGINE—COOLING SYSTEM

Type system (pressure, pressure vented, atmospheric, other)		Pressure	
Radiator cap relief valve pressure		15	
Circulation thermostat	Type (choke, bypass)	Choke	
	Starts to open at (°F)	180 ⁰	
Water pump	Type (centrifugal, other)	Centrifugal	
	GPM @ 1000 pump rpm	17	
	Number of pumps	One	
	Drive (V-belt, other)	V-Belt	
	Bearing type	Double Row	
By-pass recirculation type (internal, external)		Internal	
Radiator core type (cellular, tube and fin, other)		Cross-Flow	
Cooling system capacity	With heater (qt.)	18.5	
	Without heater (qt.)	17.5	
	Opt. equipment-specify (qt.)	18.5	
Water jackets full length of cylinder (yes, no)		No	
Water all around cylinder (yes, no)		Yes	
Radiator hose	Lower	Number and type (molded, straight)	One Molded
		Inside diameter	1.50
	Upper	Number and type (molded, straight)	One Molded
		Inside diameter	1.62
	By-pass	Number and type (molded, straight)	None
		Inside diameter	
Fan	Number of blades & Spacing		4 Std. - 5 A/C
	Diameter		18" Std. - 20" A/C
	Ratio-fan to crankshaft rev.		.92 Std. 1.3 A/C
	Fan cutout type		None - (Thermo-Clutch with A/C)
Bearing type		Single Row Ball	
*Drive belts (indicate belt used by letter)	Fan		A (C with A/C)
	Generator		A (C with A/C)
	Water Pump		A (C With A/C)
	Power Steering		B (D with A/C)
	Air Conditioning		C

* Drive Belt Dimensions	A	B	C	D	E	F	G	H	I	J	K
Angle of V	38	38	38	38							
Nominal length (SAE)	54.7	51.4	61.9	54.8							
Width	.38	.47	.38	.47							

AMA Specifications—Passenger Car

MAKE OF CAR BUICK MODEL YEAR 1966 DATE ISSUED 10-14-65 REVISED ^(*)

	SKYLARK GRAN SPORT		
MODEL	44607	44617	44667

ELECTRICAL—SUPPLY SYSTEM

Battery	Make and Model		Delco # 568
	Voltage Rtg. & Total Plates		12-66
	SAE Designation & Amp Hr. Rtg.		2 STA - 70
	Location		Left Fender Skirt
	Terminal grounded		Negative
Generator or Alternator	Make		Delco-Remy
	Model		1100691 (a)
	Type and rating		Diode Rectified Alternator (42 Amp.) (d)
	Output at engine idle (neutral)		14 Amps (c)
	Ratio—Gen. to Cr/s rev.		2.47 (b)
Regulator	Make		Delco-Remy
	Model		1119515
	Type		Voltage Control
	Cutout relay	Closing voltage @ generator rpm	None
		Reverse current to open	None
	Regu- lated	Voltage	13.6 - 14.4 at 125° F.
		Current	None
	Voltage test conditions	Temperature	None
		Load	Run 15 min. at 10 amps. (Max.)
		Other	Battery must be in circuit

ELECTRICAL—STARTING SYSTEM

Starting motor	Make		Delco-Remy
	Model		1107361
	Rotation (drive end view)		Clockwise
	Engine cranking speed		Approx. 160 rpm
	Test conditions		Engine at operating temp.
	No load test	Amps	120
		Volts	10.6
RPM (min)		4700	
Motor control	Switch (solenoid, manual)		Solenoid
	Starting procedure		PLACE TRANSMISSION IN NEUTRAL. TURN IGNITION KEY CLOCKWISE - RELEASE WHEN ENGINE STARTS - CONTROL LEVER ON MANUAL TRANSMISSION EQUIPPED CARS, SHOULD BE PLACED IN NEUTRAL BEFORE ENGAGING STARTER.

- (a) 1100709 with A/C
- (b) 2.64 with A/C
- (c) 15 amps A/C
- (d) 55 amps with A/C.

(Continued)

AMA Specifications—Passenger Car

MAKE OF CAR	BUICK	MODEL YEAR	1966	DATE ISSUED	10-14-65	REVISED (*)
MODEL	44607			44617		44667

ELECTRICAL—STARTING SYSTEM (cont.)

Motor Drive	Engagement type		Solenoid with over-running clutch	
	Pinion meshes (front, rear)		Front	
	Number of teeth	Pinion	9	
		Flywheel	Manual	166
	Auto.		166	
	Flywheel tooth face width	Manual	.375	
Auto.		.375		

ELECTRICAL—IGNITION SYSTEM

Coil	Transistorized - Std., Opt., N.A.		NA
	Make		Delco-Remy
	Model		1115161
	Amps	Engine stopped	3.8 at 12.6 Volts
Engine idling		2.3 at 12.6 Volts	
Distributor	Make		Delco-Remy
	Model		1111055
	Cent'fgal adv. in crankshaft degrees @ engine rpm (nominal)	Start (rpm)	600-700
		Intermediate points deg. @ rpm.	15° @ 1400
		Max. deg. @ rpm.	30° @ 3900
	Vacuum adv. in crankshaft degrees @ in. Hg. (nominal)	Start (in. Hg.)	6-8
		Intermediate points, deg. @ in. Hg.	10.5 @ 12
		Max. deg. in. Hg.	19.5 Max.
	Breaker gap (in.)		.013 - .019
	Cam angle (deg.)		30° ± 1°
Breaker arm tension (oz.)		19-23	
Timing	Crankshaft deg. @ rpm.		2.5 @ 550
	Mark location		Harmonic Damper
Spark Plug	Make		AC
	Model		44S
	Thread (mm)		14
	Tightening torque (lb. ft.)		25-30
	Gap		.030-.035
Cable	Conductor type		4000 ohms per foot (resistance cable)
	Insulation type		Neoprene (with inner braid)
	Spark plug protector		Hypalon Boot

AMA Specifications—Passenger Car

MAKE OF CAR	BUICK	MODEL YEAR	1966	DATE ISSUED	10-14-65	REVISED (*)
		SKYLARK GRAN SPORT				
MODEL	44607	44617	44667			

ELECTRICAL—SUPPRESSION

Locations & type	4000 ohms/ft - (spark plug and coil to distributor wires) .33 MFD condenser at coil .50 MFD condenser at voltage regulator Static collector springs at front wheels Ground strap (Engine to body firewall)
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ELECTRICAL—INSTRUMENTS AND EQUIPMENT

Speed-ometer	Make	AC
	Trip odometer (yes, no)	No
Charge indicator—type		Indicator Light
Temperature indicator—type		"Hot" only
Oil pressure indicator—type		Pressure Switch - Indicator Light
Fuel indicator—type		Electrical
Other		
Windshield wiper	Make	Delco Appliance
	Type—Standard	Electrical (dual speed)
	Type—Optional	None
	Vacuum booster provision	None
	Washer provision	Standard
Horn	Type	Solenoid
	Number used	Two
	Amp draw (each)	Both 7 to 11

DRIVE UNITS—CLUTCH (Manual Transmission)

Make & type	Dry (Borg and Beck)	
Type pressure plate springs	Belleville	
Total spring load (lb.)	2300-2600	
No. of clutch driven discs	One	
Clutch facing	Material	Woven
	Outside & inside dia.	11.0 x 6.50
	Total eff. area (sq. in.)	123.7
	Thickness	.140
	Engagement cushioning method	Springs
Release bearing	Type & method of lubrication	Ball - Sealed)
Torsional damping	Methods: springs, friction material	Springs

AMA Specifications—Passenger Car

MAKE OF CAR	BUICK	MODEL YEAR	1966	DATE ISSUED	10-14-65	REVISED (*)
		SKYLARK GRAN SPORT				
MODEL	44607	44617	44667			

DRIVE UNITS—TRANSMISSIONS

Manual 3-speed (std. or opt.)	Standard
Manual 4-speed (std. or opt.)	Optional
Manual with overdrive (std. or opt.)	NA
Automatic (std. or opt.)	Optional

DRIVE UNITS—MANUAL TRANSMISSION

Number of forward speeds		3-Speed (Standard) - - and - -	4-Speed (Optional)
Transmission ratios	In first	2.42	2.20
	In second	1.61	1.64
	In third	1.00	1.31
	In fourth	-	1.00
	In reverse	2.33	2.26
Synchronous meshing, specify gears		All Forward	
Shift lever location		Floor	
Lubricant	Capacity (pt.)	3.5	2.5
	Type recommended	A9 Mineral Oil	
	SAE viscosity number	Summer	SAE 80-90
		Winter	SAE 80-90
	Extreme cold	SAE 80-90	

DRIVE UNITS—MANUAL TRANSMISSION WITH OVERDRIVE

For transmission data see manual transmission section

Type (planetary or other)		
Manual lockout (yes, no)		
Downshift accelerator control (yes, no)		
Minimum cut-in speed		Not Available
Gear ratio		
Lubricant	Capacity (pt.) (Overdrive only)	
	Separate filler (yes, no)	
	Type recommended	
	SAE viscosity number	Summer
	Winter	
	Extreme cold	

AMA Specifications—Passenger Car

MAKE OF CAR BUICK MODEL YEAR 1966 DATE ISSUED 10-14-65 REVISED 1-24-66

	SKYLARK GRAN SPORT		
MODEL	44607	44617	44667

DRIVE UNITS—AUTOMATIC TRANSMISSION

Trade name	Super Turbine (Opt.)
Type describe	2-Speed with Torque Converter
Method of Selection (Lever, Push Button or other)	Lever (Console Optional)
Selector Pattern	P-R-N-D-L
List gear ratios Selector Pattern and indicate which are used in each selector position	1.765-1.000 Drive 1.765 Low 1.765 Reverse (Each times converter ratio.)
Max. upshift speeds—drive range	65 mph
Max. kickdown speeds—drive range	60 mph
Torque convertor	Number of elements 3
	Max. ratio at stall 2.45 (low angle) 1.80 (high angle)
	Type of cooling (air, liquid) Water
Lubricant	Capacity—refill (pt.) 19.0 (total) 5 (oil drain)
	Type recommended (a)
Special transmission features	Variable pitch stator - High angle at idle and just prior to kick-down detent.

DRIVE UNITS—PROPELLER SHAFT

Number used	One (b)
Type (exposed, torque tube)	Exposed
Outer diameter x length* x wall thickness	Manual 3-speed transmission 3.25 x 59.58 x .065
	Manual 4-speed transmission 3.25 x 59.18 x .065
	Overdrive transmission Not Available
	Automatic transmission 3.25 x 60.00 x .065

* Center to center of universal joints, or to centerline of rear attachment. (Continued)
 (a) Automatic transmission fluid type "A" identified by "AQ-ATF" followed by a number and the letter "A" on can, or use "Buick Special Oil".
 (b) Rubber element drive used on automatic transmission cars.

AMA Specifications—Passenger Car

MAKE OF CAR BUICK MODEL YEAR 1966 DATE ISSUED 10-14-65 REVISED ^(*) 1-24-66

MODEL	44607	44617	44667
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DRIVE UNITS—PROPELLER SHAFT (cont.)

Inter-mediate bearing	Type (plain, anti-friction)	None
	Lubrication (fitting, prepack)	Prepack
Universal joints	Make	Saginaw
	Number used	2
	Type (ball and trunnion, cross, other)	Cross
	Bearing	Type (plain, anti-friction)
Lubric. (fitting, prepack)		Prepack
Drive taken through (torque tube or arms, springs)		Arms
Torque taken through (torque tube or arms, springs)		Arms

DRIVE UNITS—REAR AXLE

Description	Salisbury Hypoid Semi-Floating		
Limited Slip differential, type	Positive Traction (Optional)		
Drive Pinion Offset	1.500		
No. of differential pinions	2		
Ring gear O.D. (std. ratio)	8.125		
Pinion adjustment (shim, other)	Shim		
Pinion bearing adj. (shim, other)	Collapsible Spacer		
Wheel bearing type	Ball		
Lubricant	Capacity (pt.)	2.5	
	Type recommended	MIL-L2105B	
	SAE viscosity number	Summer	80
		Winter	80
Extreme cold		80	

REAR AXLE RATIO TOOTH COMBINATIONS

(See page 4 for axle ratio usage)

Axle ratio		3.36	3.55	2.93	3.90	4.30
No. of teeth	Pinion	11	11	14	10	10
	Ring gear	37	39	41	39	43

AMA Specifications—Passenger Car

MAKE OF CAR	BUICK	MODEL YEAR	1966	DATE ISSUED	10-14-65	REVISED (*)
				SKYLARK GRAN SPORT		
MODEL	44607	44617	44667			

DRIVE UNITS—WHEELS

Type & material		Disc Steel
Rim (size and flange type)	Std.	14-6.00 JK
	Opt.	None
Attachment	Type (bolt or stud)	Stud
	Circle diameter	4.750
	Number and size	Five - .4375-20

DRIVE UNITS—TIRES

Standard (List option below)	Size & ply	7.75-14 (b) (c)
	Type - Nylon, etc.	Rayon
Rev/mile at 50 mph.		779
Inflation press. (cold)	Front	24
	Rear	24
Optional tires - size and ply		8.25-14 (c)

BRAKES—SERVICE

Type (duo-servo, disc, balanced, etc.)		Duo Servo
Self adjusting (std., opt., N.A.)		Standard
Hydraulic system type (single, dual, etc.)		Single
Power brake make & type (remote, integral, etc.)		Delco Moraine - (Int. Vac. Suspended) (a)
Effective area (sq. in.) *		152.0
Gross lining area (sq. in.) **		158.1
Swept drum area (sq. in.) ***		268.6
Percent brake effectiveness—front		59.0
Drum or Rotor	Diameter	9.495/9.505
		9.495/9.505
	Type and material	Composite Cast Iron
	Rotor (vented or solid)	Not Used
	No. pistons per caliper	Not Used
Wheel cyl- inder bore	Front	1.125
	Rear	.9375
Master cylinder bore		1.000
Available pedal travel		6.70" (manual) 4.00" (Power)
Line pressure at 100 lb. pedal load		820 psi (manual)
Shoe clearance adjustment		.015"

* Excludes rivet holes, grooves, chamfers, etc.

(Continued)

** Includes rivet holes, grooves, chamfers, etc.

*** Total swept area for four brakes:

Widest lining contact width for each brake x its drum circumference.

(a) Optional Equipment

(b) Whitewall standard - "Red Line" Optional (Nylon)

(c) 2-Ply with 4-ply rating.

AMA Specifications—Passenger Car

MAKE OF CAR	BUICK	MODEL YEAR	1966	DATE ISSUED	10-14-65	REVISED (a)
MODEL		SKYLARK GRAN SPORT				
		44607	44617	44667		

BRAKES—SERVICE (cont.)

Brake lining	Drum or Disc		Drum				
	Bonded or riveted		Riveted				
	Front Wheel	Material		Molded Extruded			
		Size (length x width x thickness)	Prim. or out-board	7.40 x 2.50 x .196 (Gross Min.) .096 (Net Min.)			
			Second. or in-board	9.92 x 2.50 x .265 (Gross Min.) .165 (Net Min.)			
		Segments per shoe		One			
	Rear Wheel	Material		Molded Extruded			
		Size (length x width x thickness)	Prim. or out-board	7.40 x 2.00 x .196 (Gross Min.) .096 (Net Min.)			
Second. or in-board			9.92 x 2.00 x .265 (Gross Min.) .165 (Net Min.)				
Segments per shoe		One					

BRAKES—PARKING

Type of control		Step-On
Location of control		Left Side at Cowl
Operates on		Rear Shoes
If separate from service brakes	Type (internal or external)	None
	Drum diameter	None
	Lining size (length x width x thickness)	None

FRAME

Type and description (Separate frame, unitized frame, partially - unitized frame)	Perimeter (Separate Frame)
---	----------------------------

STEERING

Manual (std., opt., NA)		Standard		
Power (std., opt., NA)		Optional		
Adjustable steering wheel (tilt, swing, other)	Type and description	Tilt		
	(std., opt., NA)	Optional (a)		
Wheel diameter	Manual	16"		
	Power	16"		
Turning diameter	Outside front	Wall to wall (l. & r.)	41.5	
		Curb to curb (l. & r.)	40.6	
	Inside rear	Wall to wall (l. & r.)	24.9	
		Curb to curb (l. & r.)	25.7	
Outside wheel angle with inside wheel at 20°		18° 38'		
Manual	Gear	Type	Recirculating Ball Nut	
		Make	Saginaw	
		Ratios	Gear	24.0
			Overall	28.6
	No. wheel turns	5.56		

(Continued)

(a) Not available with 3-speed manual transmission or manual steering.

AMA Specifications—Passenger Car

MAKE OF CAR BUICK MODEL YEAR 1966 DATE ISSUED 10-14-65 REVISED ^(*)1-24-66

MODEL	SKYLARK GRAN SPORT		
	44607	44617	44667

STEERING (cont.)

Power	Type (coaxial, linkage, etc.)		In-line Rotary Valve	
	Make		Saginaw	
	Gear	Type		Recirculating Ball Nut (Integral with Power Piston)
		Ratios	Gear	17.5
			Overall	20.9
	Pump driven by		Belt	
Number wheel turns		4.06		
Linkage	Type		Parallelogram	
	Location (front or rear of wheels, other)		Front of Wheels	
	Drag link (trans. or longit.)		Transverse	
	Tie rods (one or two)		Two	
Steering Axis	Inclination at camber (deg.)			
	Bearings (type)	Upper	Ball Joint Suspension Used	
		Lower	Ball Joint Suspension Used	
		Thrust	Ball Joint Suspension Used	
Wheel Alignment (range at curb weight and preferred)	Caster (deg.)		$\frac{1}{2}^{\circ}$ Neg \pm 30' *	
	Camber (deg.)		$\frac{1}{2}^{\circ}$ Pos \pm 30' *	
	Toe-in (outside track inches)		.12 to .25 *	
Steering spindle & joint type			Ball	
Wheel spindle	Diameter	Inner bearing	1.3748	
		Outer bearing	1.3743	
			.8435	
			.8430	
	Thread size		.8125-16 UNF	
Bearing type		Tapered Roller		

* Curb Height

AMA Specifications—Passenger Car

MAKE OF CAR	BUICK	MODEL YEAR	1966
		DATE ISSUED	10-14-65
		REVISED	(*)
MODEL	44607	44617	44667

SUSPENSION—GENERAL

(See Supplemental page for details on Air Suspension)*

Provision for car leveling	None	
Provision for brake dip control	Yes	
Provision for acc. squat control	Yes	
Special provisions for car jacking	None	
Shock absorber front & rear	Type	Direct
	Make	Delco
	Piston dia.	1.00
Other special features	None	

SUSPENSION—FRONT

Type and description	Coil Springs and Ball Joint	
Spring	Type	Coil
	Material	SAE 9260
	Size (coil design height & I.D.; bar length x dia.)	11.4 Des. Ht. 3.630 I.D. .654 x 135.0
	Spring rate (lb. per in.)	380
	Rate at wheel (lb. per in.)	133
Stabilizer	Type (link, linkless, frameless)	Link
	Material & bar diameter	1070-.937

SUSPENSION—REAR

Type and description	Coil Springs	
Drive and torque taken through	Arms	
Spring	Type	Coil
	Material	SAE 9260
	Size (length x width, coil design height & I.D.; bar length & dia.)	8.52 Design Height --- 5.53 I.D. .540 x 102.0
	Spring rate (lb. per in.)	115
	Rate at wheel (lb. per in.)	116
	Mounting insulation type	Reinforced Rubber
	If leaf	No. of leaves Shackle (comp. or tens)
Stabilizer	Type (link, linkless, frameless)	Not Used
	Material	Not Used
Track bar type	Not Used	

AMA Specifications—Passenger Car

MAKE OF CAR BUICK	MODEL YEAR 1966	DATE ISSUED 10-14-65 REVISED (*)	
		SKYLARK GRAN SPORT	
MODEL	44607	44617	44667

BODY—MISCELLANEOUS INFORMATION

Drs. hinged (front, rear)	Front doors	Front	
	Rear doors	--	
Type of finish (lacquer, enamel, other)		Acrylic Lacquer	
Hood counterbalanced (yes, no)		Yes	
Hood release control (internal, external)		External	
Vehicle Ident. No. location		Left Front Pillar Post	
Engine No. location		Top of Cyl. Block - Front - (Left Bank)	
Theft protection - type		None	
Vent window control method (crank, friction pivot)	Front	Friction Pivot	
	Rear	None	
Seat cushion type	Front	Zig Zag	
	Rear	Zig Zag	
	3rd seat		
Seat back type	Front	Zig Zag	
	Rear	Zig Zag	
	3rd seat		
Windshield glass type (i.e., single curved - laminated plate)		Compound Curved (Laminated Plate)	
Side glass type (i.e., curved - tempered plate)		Curved (Tempered Plate)	
Backlight glass type (i.e., compound curved - tempered plate, three piece)		Single Curved (Tempered Plate)	
Windshield glass exposed surface area		1144.2	
Side glass exposed surface area	1198.6	1302.2	1246.8
Backlight glass exposed surface area		728.9	833.8
Total glass exposed surface area	3071.7	3175.3	3224.8

LAMP HEIGHT AND SPACING

Height above ground to center of bulb	Headlamp	Highest *	25.50
		Lowest	25.50
	Tail	Highest	24.37
		Lowest	24.37
Distance from C/L of car to center of bulb	Headlamp	Inside	24.7
		Outside *	31.8
	Tail	Inside	33.5
		Outside	33.5
	Directional	Front	28.5
		Rear	33.5

* If single headlamps are used enter here.

AMA Specifications—Passenger Car

MAKE OF CAR	BUICK	MODEL YEAR	1966	DATE ISSUED	10-14-65	REVISED (*)
		SKYLARK GRAN SPORT				
MODEL	44607	44617	44667			

CONVENIENCE EQUIPMENT

(Indicate whether standard, optional or NA on each series)

Power windows	Side Windows	Optional
	Vent Windows	Not Available
	Backlight or tailgate	No Wagons in this Series
Power seats (specify type as well as availability)		4 or 6 Way (Bench) Optional
Reclining front seat back		Bucket (Passenger Only) Optional
Front seat headrest		Bucket (both sides) Optional
Radios (specify type as well as availability)		Sonomatic or AM-FM (Optional)
Rear seat speaker		Optional (Except Convertible)
Power Antenna		Optional
Clock		Optional
Air Conditioner (specify type and availability)		Optional (with automatic trans. only)
Speed warning device		Not Available
Speed control device		Not Available
Ignition lock lamp		Not Available
Back up lamp		Standard
Dome lamp		Standard
Glove compartment lamp		Standard
Prkg. brake signal lamp		Optional
Luggage compartment lamp		Optional
Underhood lamp		Not Available
Courtesy lamp		Standard
Map lamp		Not Available
Auto. trans. quad. lamp		Included in Auto. Trans. Option Package
Emergency flasher lamp		Not Available
Cornering light lamp		Not Available

INDEX

SUBJECT	PAGE NO.	SUBJECT	PAGE NO.
Automatic Transmission	1, 16	Linings - Clutch, Brake	14, 18, 19
Axis, Steering	20	Lubrication	7, 8, 14, 15, 16, 17
Axle, Rear	1, 17	Luggage Capacity	2
Battery	12	Motor, Starting	12
Bearings, Engine	5, 6, 7	Muffler	8
Belts - Fan, Generator, Water Pump	11	Overdrive	15
Body - General Information, types	Title, 1, 2, 22	Piston Pins & Rings	3, 5
Exterior Dimensions	1	Pistons	3, 5
Interior Dimensions	2	Power Brakes	18
Brakes - Parking, Service, Power	18, 19	Power Steering	19
Camber	20	Power Teams	4
Camshaft	6	Propeller Shaft, Universal Joints	16, 17
Capacities		Pumps - Oil, Fuel	8, 10
Cooling System	11	Water	11
Fuel Tank	10	Radiator, Hoses	11
Lubricants		Ratios - Axle	1, 4, 17
Engine Crankcase	8	Compression	1, 3, 4
Transmission and Overdrive	15, 16	Steering	19, 20
Rear Axle	17	Transmission	15, 16
Carburetor	4, 9, 10	Rear Axle	1, 4, 17
Caster	20	Regulator - Generator	12
Choke, Automatic	10	Rims	18
Clutch - Pedal Operated	14	Rings, Piston	5
Coil, Ignition	13	Rods - Connecting	5
Connecting Rods	5	Shock Absorbers, Front & Rear	21
Convenience Equipment	23	Spark Plugs	13
Cooling System	11	Speedometer	14
Crankcase Ventilation	8	Springs - Front & Rear Suspension	21
Crankshaft	5	Valve, Engine	6
Cylinders and Cylinder Head	3	Stabilizer (Sway Bar) - Front & Rear	21
Distributor - Ignition	13	Starting Motor	12
Electrical System	12, 13, 14	Steering	19, 20
Engine		Suppression - Ignition, Radio	14
Bore, Stroke, Displacement, Type	1, 3	Suspension - Front & Rear	21
Compression Ratio	1, 3	Tailpipe	8
Firing Order, Cylinder Numbering	3	Thermostat, Cooling	11
General Information, H.P. & Torque	1, 3	Timing, Engine & Valve	6, 7, 13
Lubrication	7, 8	Tires	1, 18
Power Teams	4	Toe in	20
Exhaust Emission Control	9	Torque Converter	16
Exhaust System	8	Torque - Engine, Rated	1, 3, 4
Equipment Availability	22	Transmission - Types	1, 4, 10, 15, 16
Fan, Cooling	11	Automatic	1, 4, 10, 15, 16
Filters - Engine Oil, Fuel System	8, 10	Manual & Overdrive	1, 4, 10, 15
Frame	19	Ratios	15, 16
Front Suspension	21	Track	1
Fuel, Fuel Pump, Fuel System	1, 3, 10	Trunk Luggage Capacity	2
Fuel Injection	1, 10	Turning Diameter	19
Generator and Regulator	12	Unitized Construction	19
Glass	22	Universal Joints, Propeller Shaft	16, 17
Height (Lamps)	14	Valves - Intake & Exhaust	6, 7
Headroom - Body	2	Vibration Damper	6
Heights - Overall	1	Voltage Regulator	12
Horns	14	Water Pump	11
Horsepower - Brake	1, 3, 4	Weights - Shipping, Curb	24
Ignition System	13	Wheel Alignment	20
Inflation - Tires	18	Wheelbase	1
Instruments	8, 14	Wheels & Tires	18
Kingpin (Steering Axis)	20	Wheel Spindle	20
Lamp Height & Spacing	22	Widths - Car & Body	1
Legroom	2	Windshield	22
Lengths - Overall	1	Windshield Wiper	14
Lifters, Valve	6		