NEWS FROM THE SWAMP FOX Old Car Club

Swamp Fox Region

CELEBRATING OUR 37th YEAR AS AN ACTIVE CLUB

September 1, 2018

NEXT MEETING
Brown's BBQ
1243 West
Lucas St.
Florence, SC
Sep.11, 2018
6:30 PM for eating/fellowship
7:00 PM for Club Meeting

HAPPY BIRTHDAY TO:

Curt Smith	9-7
Debbie Stewart	9-21
Cheryl Floyd	9-27
Stacy Spence	9-28

WELCOME NEW MEMBERS
Kit Fulmer

2018 CLUB OFFICERS

President	Al Robinson	496-7207
Vice Pres.	Tom Spence	773-0189
Secretary/ Treasurer.	Susan Pace	230-0212

NEW CLUB WEBSITE:
swampfox.aaca.com
Email:swampfoxoldcarclub@gmail.com

2018 Car Show Schedule
Sweet Potato Festival, Darlington, SC 10/13/18
Pecan Festival, Florence, SC 11/3/18

Robinson's Ramblings'

September 1st is here and I don't know where the year has gone. The planning and preparation is in good shape for the Sweet Potato show in Darlington on Oct 13 with Nick as the chairman for the show. Tom Spence has the preparation for the Pecan Festival show in good shape, and we have started the planning phase for the Antique and Classic show at Hoffmeyer Place for next April. The show date will be April 13, 2019 for this show.

I would like to welcome Kit Fulmer to the club as our newest member. Kit has a really nice 1938 Plymouth 2dr sedan and is doing a lot of work on the car at this time. He will be driving it to our meetings in the near future.

I would also like to welcome Doug and Cheryl Floyd as our 2 new Board of Directors members. They fill 2 vacancies resulting from Tom Spence's promotion to Vice President and one vacancy that existed for some time. Dave Rast will become our Facebook Master so anything related to Facebook will go to and thru him.

Robinson’s Ramblings’ con’t

Curt will be the chairman for the Hoffmeyer Place show again in 2019. He has already put some things in place and we hope to make this show even bigger and better. It was a huge success in 2018 and the future looks bright for 2019. We will need lots of help from each of you as we go forward. This show will become our signature presentation in the Pee Dee in the future and will showcase just how great a car club we are!!!

Don't forget Charlotte Auto Fair Sept 5-9. The club gathering place for those attending will be my swap meet spaces (SO-28 and TO 28) in the Orange Field. Also mark the next Cars and Coffee at Highland Park Methodist Church on your calendar for Sept 8 from 9 to 11 am.

Let’s get some cars together and go as a group to the Golden Leaf show in Mullins on Sept 22. Luther Johnson heads up this show and is a very active member of Swamp Fox. Let's support him on this show.

REMEMBER, LIFE'S TOO SHORT TO DRIVE BORING CARS-ENJOY YOUR PRIDE AND JOY!

AL

The Editors Turn

This month's "Swamp Fox Rides" features the story of the acquisition and restoration of a 1970 Pontiac GTO as told by its owner and Swamp Fox Car Club member Bill Edwards.

In addition to his story, I have included sequential photos of the car as purchased, during the restoration process, and after it received an AACA First Grand National Award. These photos are just a small sample of the hundreds of pictures taken to document and facilitate the restoration of this special car.

The materials that follow are an effort to outline the processes, methods, and references used to complete the successful restoration of his GTO. I hope that it will be helpful to you when you begin your own restoration project.

Curt Smith

The steps to a successful restoration

- Define the scope of the restoration. Will it be a complete ground up restoration or a service and repair procedure to make the car a reliable and attractive driver?

- Get organized. Plan, manage and control your project. Ultimately you are responsible for the outcome. Carefully select the primary shop that will do the work. Make frequent visits to keep the project on track and the quality at a high level. Address issues in a timely manner.

- Do your homework. Research reliable and factual references, not just an internet search. See attached examples including build sheets, assembly manuals, restoration manuals, judging manuals, and parts catalogs.

- Determine and document the originality and condition of everything. Seek advice from experienced, knowledgeable people. Listen carefully to what they say. Ask lots of questions. Take notes. Heed their advice as appropriate.

- Photograph in detail, all of the car prior to beginning the restoration. Inspect every component of the car. Photograph and document all of the numbers (VIN, part numbers, serial numbers, date codes, etc.). Confirm that your photos are clear and complete.

- Carefully disassemble the car. Bag and tag everything. Do NOT throw away anything! One day you will need to refer to an old, original component and compare to a new or rebuilt replacement part.

- Continue to photograph all steps of disassembly. This will be valuable when it is time to reassemble.

- Photograph all steps of reassembly to create an historical record.

- Closely control the storage of everything during the restoration process. Sometimes the most important and valuable rare parts will grow legs and disappear without a trace.

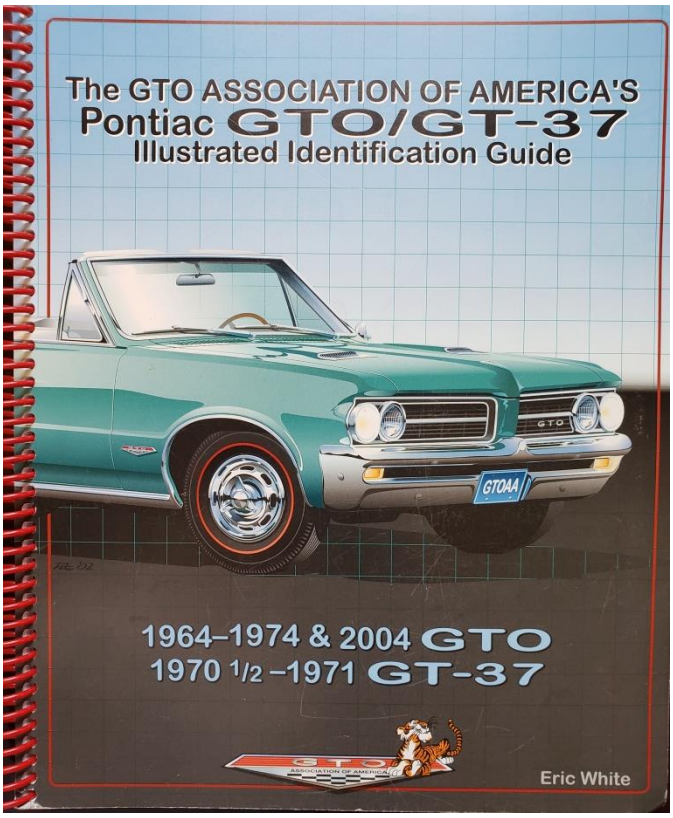
- The pace of a project will ebb and flow. Allow time to sort out issues as the project nears completion. Time is of the essence but Quality is forever.

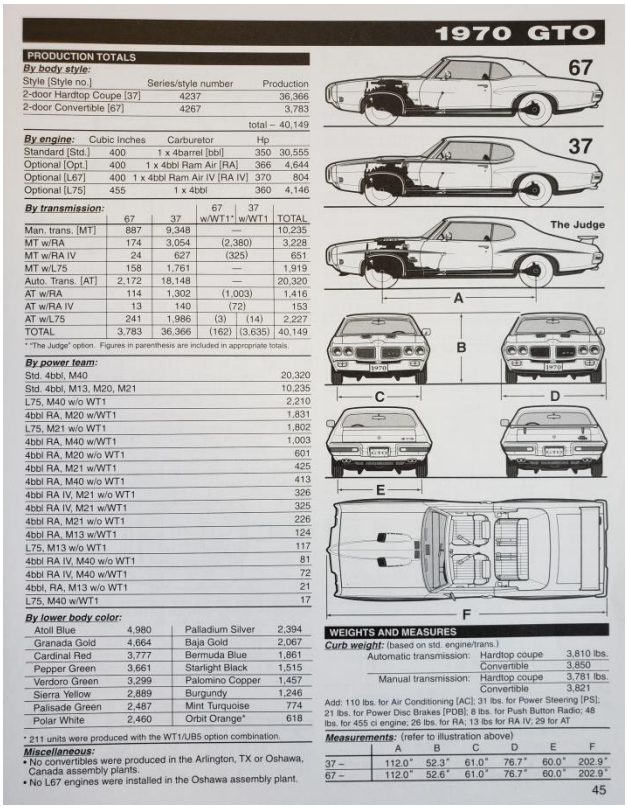
- Success is a result of preparation and perspiration. If you don't plan and manage your project effectively, it will only be a success by accident.

Good luck with your project!

Curt Smith

Research





1970 GTO

PRODUCTION TOTALS

By body style:

Style [Style no.]	Series/style number	Production
2-door Hardtop Coupe [37]	4237	36,366
2-door Convertible [67]	4267	3,783
		total – 40,149

By engine:

Cubic Inches	Carburetor	Hp	
Standard [Std.]	400	1 x 4barrel [bbl]	350	30,555
Optional [Opt.]	400	1 x 4bbl Ram Air [RA]	366	4,644
Optional [L67]	400	1 x 4bbl Ram Air IV [RA IV]	370	804
Optional [L75]	455	1 x 4bbl	360	4,146

By transmission:

	67	37	67 w/WT1*	37 w/WT1	TOTAL
Man. trans. [MT]	887	9,348	—		10,235
MT w/RA	174	3,054	(2,380)		3,228
MT w/RA IV	24	627	(325)		651
MT w/L75	158	1,761	—		1,919
Auto. Trans. [AT]	2,172	18,148	—		20,320
AT w/RA	114	1,302	(1,003)		1,416
AT w/RA IV	13	140	(72)		153
AT w/L75	241	1,986	(3)	(14)	2,227
TOTAL	3,783	36,366	(162)	(3,635)	40,149

* "The Judge" option. Figures in parenthesis are included in appropriate totals.

By power team:

Std. 4bbl, M40	20,320
Std. 4bbl, M13, M20, M21	10,235
L75, M40 w/o WT1	2,210
4bbl RA, M20 w/WT1	1,831
L75, M21 w/o WT1	1,802
4bbl RA, M40 w/WT1	1,003
4bbl RA, M20 w/o WT1	601
4bbl RA, M21 w/WT1	425
4bbl RA, M40 w/o WT1	413
4bbl RA IV, M21 w/o WT1	326
4bbl RA IV, M21 w/WT1	325
4bbl RA, M21 w/o WT1	226
4bbl RA, M13 w/WT1	124
L75, M13 w/o WT1	117
4bbl RA IV, M40 w/o WT1	81
4bbl RA IV, M40 w/WT1	72
4bbl, RA, M13 w/o WT1	21
L75, M40 w/WT1	17

By lower body color:

Atoll Blue	4,980	Palladium Silver	2,394
Granada Gold	4,664	Baja Gold	2,067
Cardinal Red	3,777	Bermuda Blue	1,861
Pepper Green	3,661	Starlight Black	1,515
Verdoro Green	3,299	Palomino Copper	1,457
Sierra Yellow	2,889	Burgundy	1,246
Palisade Green	2,487	Mint Turquoise	774
Polar White	2,460	Orbit Orange*	618

* 211 units were produced with the WT1/UB5 option combination.

Miscellaneous:
- No convertibles were produced in the Arlington, TX or Oshawa, Canada assembly plants.
- No L67 engines were installed in the Oshawa assembly plant.

WEIGHTS AND MEASURES

Curb weight: (based on std. engine/trans.)

Automatic transmission:	Hardtop coupe	3,810 lbs.
	Convertible	3,850
Manual transmission:	Hardtop coupe	3,781 lbs.
	Convertible	3,821

Add: 110 lbs. for Air Conditioning [AC]; 31 lbs. for Power Steering [PS]; 21 lbs. for Power Disc Brakes [PDB]; 8 lbs. for Push Button Radio; 48 lbs. for 455 ci engine; 26 lbs. for RA; 13 lbs for RA IV; 29 for AT

Measurements: (refer to illustration above)

	A	B	C	D	E	F
37 –	112.0"	52.3"	61.0"	76.7"	60.0"	202.9"
67 –	112.0"	52.6"	61.0"	76.7"	60.0"	202.9"

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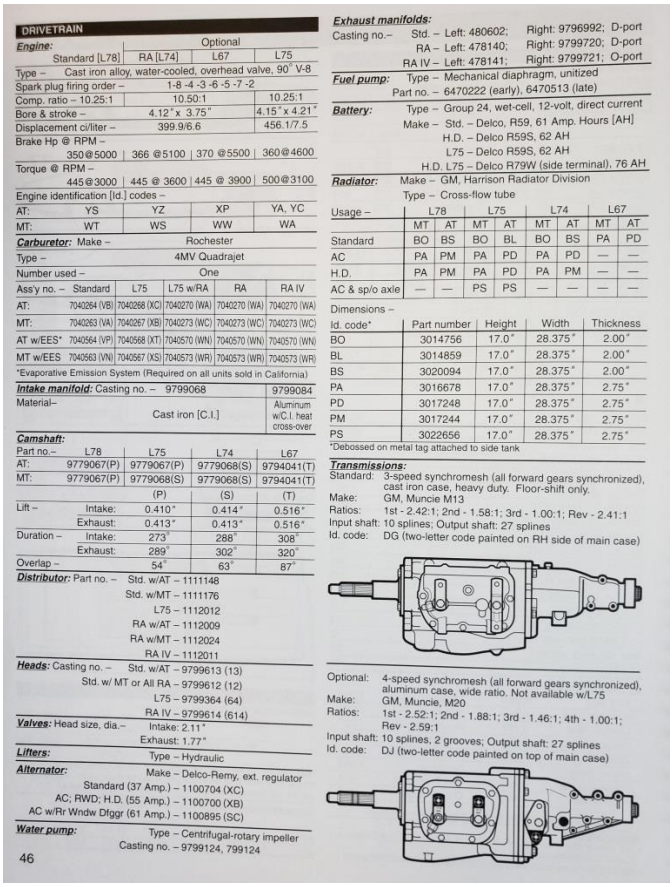

DRIVETRAIN

Engine:

	Standard [L78]	Optional RA [L74]	L67	L75
Type –	Cast iron alloy, water-cooled, overhead valve, 90° V-8			
Spark plug firing order –	1-8 -4 -3 -6 -5 -7 -2			
Comp. ratio –	10.25:1	10.50:1		10.25:1
Bore & stroke –	4.12" x 3.75"			4.15" x 4.21"
Displacement ci/liter –	399.9/6.6			456.1/7.5
Brake Hp @ RPM –	350@5000	366@5100	370@5500	360@4600
Torque @ RPM –	445@3000	445 @ 3600	445 @ 3900	500@3100
Engine identification [Id.] codes –				
AT:	YS	YZ	XP	YA, YC
MT:	WT	WS	WW	WA

Carburetor: Make – Rochester
Type – 4MV Quadrajet
Number used – One

Ass'y no. – Standard	L75	L75 w/RA	RA	RA IV
AT: 7040264 (VB)	7040266 (XC)	7040270 (WA)	7040270 (WA)	7040270 (WA)
MT: 7040263 (VA)	7040267 (XB)	7040273 (WC)	7040273 (WC)	7040273 (WC)
AT w/EES* 7040564 (VP)	7040568 (XT)	7040570 (WN)	7040570 (WN)	7040570 (WN)
MT w/EES 7040563 (VN)	7040567 (XS)	7040573 (WR)	7040573 (WR)	7040573 (WR)

*Evaporative Emission System (Required on all units sold in California)

Intake manifold: Casting no. – 9799068 | 9799084
Material– Cast iron [C.I.] | Aluminum w/C.I. heat cross-over

Camshaft:

Part no.–	L78	L75	L74	L67
AT:	9779067(P)	9779067(P)	9779068(S)	9794041(T)
MT:	9779067(P)	9779068(S)	9779068(S)	9794041(T)
		(P)	(S)	(T)
Lift – Intake:		0.410"	0.414"	0.516"
Exhaust:		0.413"	0.413"	0.516"
Duration – Intake:		273°	288°	308°
Exhaust:		289°	302°	320°
Overlap –		54°	63°	87°

Distributor: Part no. – Std. w/AT – 1111148
Std. w/MT – 1111176
L75 – 1112012
RA w/AT – 1112009
RA w/MT – 1112024
RA IV – 1112011

Heads: Casting no. – Std. w/AT – 9799613 (13)
Std. w/ MT or All RA – 9799612 (12)
L75 – 9799364 (64)
RA IV – 9799614 (614)

Valves: Head size, dia.– Intake: 2.11"
Exhaust: 1.77"

Lifters: Type – Hydraulic

Alternator: Make – Delco-Remy, ext. regulator
Standard (37 Amp.) – 1100704 (XC)
AC; RWD; H.D. (55 Amp.) – 1100700 (XB)
AC w/Rr Wndw Dfggr (61 Amp.) – 1100895 (SC)

Water pump: Type – Centrifugal-rotary impeller
Casting no. – 9799124, 799124

Exhaust manifolds:
Casting no.– Std. – Left: 480602; Right: 9796992; D-port
RA – Left: 478140; Right: 9799720; D-port
RA IV – Left: 478141; Right: 9799721; O-port

Fuel pump: Type – Mechanical diaphragm, unitized
Part no. – 6470222 (early), 6470513 (late)

Battery: Type – Group 24, wet-cell, 12-volt, direct current
Make – Std. – Delco, R59, 61 Amp. Hours [AH]
H.D. – Delco R59S, 62 AH
L75 – Delco R59S, 62 AH
H.D. L75 – Delco R79W (side terminal), 76 AH

Radiator: Make – GM, Harrison Radiator Division
Type – Cross-flow tube

Usage –	L78 MT	L78 AT	L75 MT	L75 AT	L74 MT	L74 AT	L67 MT	L67 AT
Standard	BO	BS	BO	BL	BO	BS	PA	PD
AC	PA	PM	PA	PD	PA	PD	—	—
H.D.	PA	PM	PA	PD	PA	PM	—	—
AC & sp/o axle	—	—	PS	PS	—	—	—	—

Dimensions –

Id. code*	Part number	Height	Width	Thickness
BO	3014756	17.0"	28.375"	2.00"
BL	3014859	17.0"	28.375"	2.00"
BS	3020094	17.0"	28.375"	2.00"
PA	3016678	17.0"	28.375"	2.75"
PD	3017248	17.0"	28.375"	2.75"
PM	3017244	17.0"	28.375"	2.75"
PS	3022656	17.0"	28.375"	2.75"

*Debossed on metal tag attached to side tank

Transmissions:
Standard: 3-speed synchromesh (all forward gears synchronized), cast iron case, heavy duty. Floor-shift only.
Make: GM, Muncie M13
Ratios: 1st - 2.42:1; 2nd - 1.58:1; 3rd - 1.00:1; Rev - 2.41:1
Input shaft: 10 splines; Output shaft: 27 splines
Id. code: DG (two-letter code painted on RH side of main case)

Optional: 4-speed synchromesh (all forward gears synchronized), aluminum case, wide ratio. Not available w/L75
Make: GM, Muncie, M20
Ratios: 1st - 2.52:1; 2nd - 1.88:1; 3rd - 1.46:1; 4th - 1.00:1; Rev - 2.59:1
Input shaft: 10 splines, 2 grooves; Output shaft: 27 splines
Id. code: DJ (two-letter code painted on top of main case)

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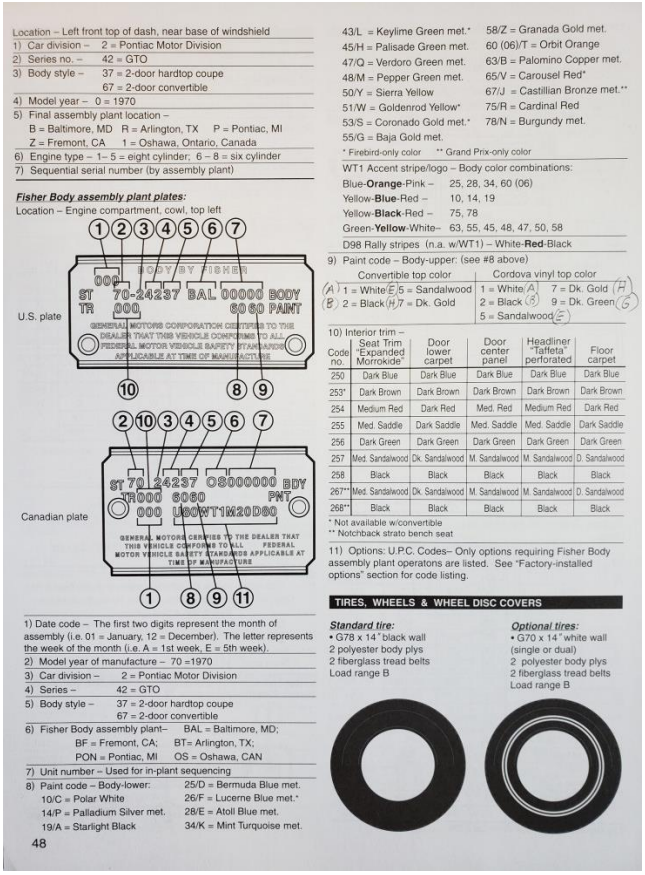

Location – Left front top of dash, near base of windshield
1) Car division – 2 = Pontiac Motor Division
2) Series no. – 42 = GTO
3) Body style – 37 = 2-door hardtop coupe
67 = 2-door convertible
4) Model year – 0 = 1970
5) Final assembly plant location –
B = Baltimore, MD R = Arlington, TX P = Pontiac, MI
Z = Fremont, CA 1 = Oshawa, Ontario, Canada
6) Engine type – 1– 5 = eight cylinder; 6 – 8 = six cylinder
7) Sequential serial number (by assembly plant)

Fisher Body assembly plant plates:
Location – Engine compartment, cowl, top left

U.S. plate

Canadian plate

1) Date code – The first two digits represent the month of assembly (i.e. 01 = January, 12 = December). The letter represents the week of the month (i.e. A = 1st week, E = 5th week).
2) Model year of manufacture – 70 =1970
3) Car division – 2 = Pontiac Motor Division
4) Series – 42 = GTO
5) Body style – 37 = 2-door hardtop coupe
67 = 2-door convertible
6) Fisher Body assembly plant– BAL = Baltimore, MD;
BF = Fremont, CA; BT= Arlington, TX;
PON = Pontiac, MI OS = Oshawa, CAN
7) Unit number – Used for in-plant sequencing
8) Paint code – Body-lower:
10/C = Polar White
14/P = Palladium Silver met.
19/A = Starlight Black
25/D = Bermuda Blue met.
26/F = Lucerne Blue met.*
28/E = Atoll Blue met.
34/K = Mint Turquoise met.
43/L = Keylime Green met.*
45/H = Palisade Green met.
47/Q = Verdoro Green met.
48/M = Pepper Green met.
50/Y = Sierra Yellow
51/W = Goldenrod Yellow*
53/S = Coronado Gold met.*
55/G = Baja Gold met.
58/Z = Granada Gold met.
60 (06)/T = Orbit Orange
63/B = Palomino Copper met.
65/V = Carousel Red*
67/J = Castillian Bronze met.**
75/R = Cardinal Red
78/N = Burgundy met.
* Firebird-only color ** Grand Prix-only color

WT1 Accent stripe/logo – Body color combinations:
Blue-**Orange**-Pink – 25, 28, 34, 60 (06)
Yellow-**Blue**-Red – 10, 14, 19
Yellow-**Black**-Red – 75, 78
Green-**Yellow**-White– 63, 55, 45, 48, 47, 50, 58
D98 Rally stripes (n.a. w/WT1) – White-**Red**-Black

9) Paint code – Body-upper: (see #8 above)

Convertible top color	Cordova vinyl top color
(A) 1 = White (E) 5 = Sandalwood	1 = White (A) 7 = Dk. Gold (H)
(B) 2 = Black (H) 7 = Dk. Gold	2 = Black (B) 9 = Dk. Green (G)
	5 = Sandalwood (E)

10) Interior trim –

Code no.	Seat Trim "Expanded Morrokide"	Door lower carpet	Door center panel	Headliner "Taffeta" perforated	Floor carpet
250	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue
253*	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown
254	Medium Red	Dark Red	Med. Red	Medium Red	Dark Red
255	Med. Saddle	Dark Saddle	Med. Saddle	Med. Saddle	Dark Saddle
256	Dark Green	Dark Green	Dark Green	Dark Green	Dark Green
257	Med. Sandalwood	Dk. Sandalwood	M. Sandalwood	M. Sandalwood	D. Sandalwood
258	Black	Black	Black	Black	Black
267**	Med. Sandalwood	Dk. Sandalwood	M. Sandalwood	M. Sandalwood	D. Sandalwood
268**	Black	Black	Black	Black	Black

* Not available w/convertible
** Notchback strato bench seat

11) Options: U.P.C. Codes– Only options requiring Fisher Body assembly plant operatons are listed. See "Factory-installed options" section for code listing.

TIRES, WHEELS & WHEEL DISC COVERS

Standard tire:
- G78 x 14" black wall
2 polyester body plys
2 fiberglass tread belts
Load range B

Optional tires:
- G70 x 14" white wall (single or dual)
2 polyester body plys
2 fiberglass tread belts
Load range B

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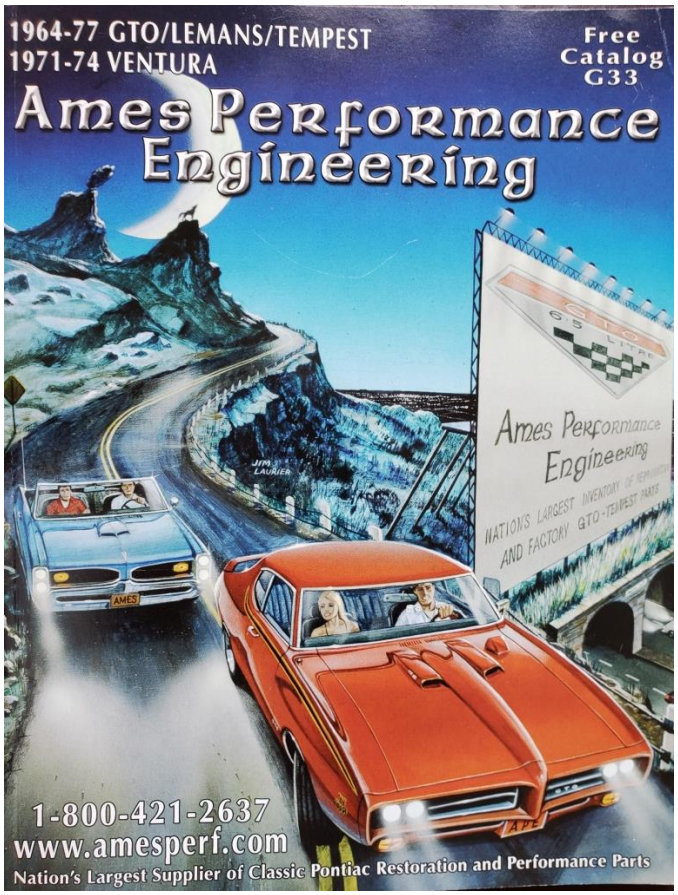
1970
LEMANS/GTO &
GRAND PRIX
ASSEMBLY
MANUAL
GM Restoration Parts
General Motors Trademarks used under license to Millenium Industries, Inc.
BILL EDWARDS


1964-77 GTO/LEMANS/TEMPEST
1971-74 VENTURA
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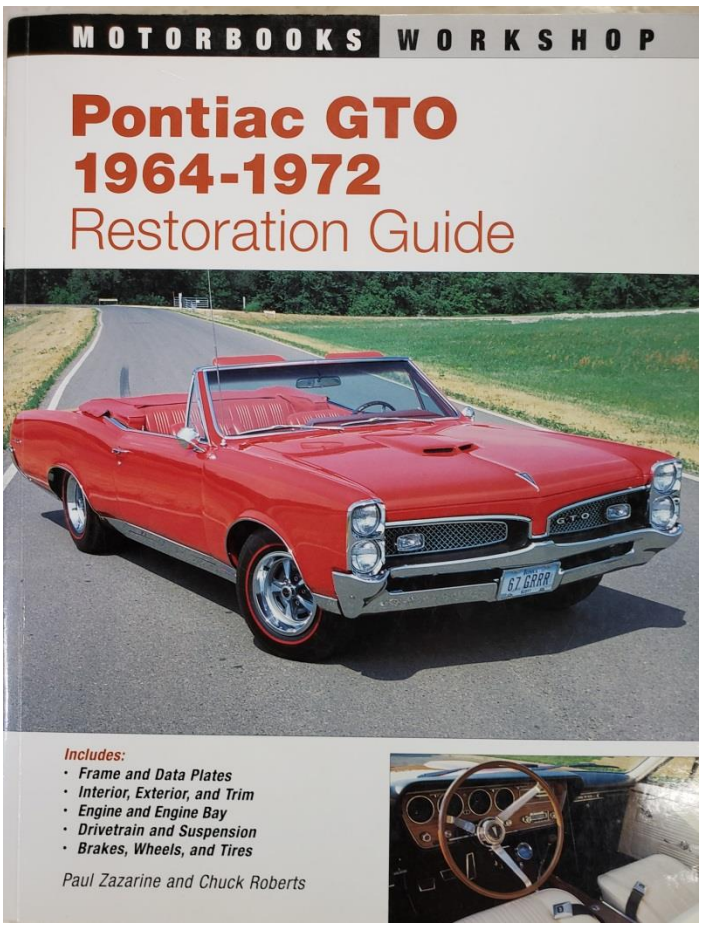
MOTORBOOKS WORKSHOP
Pontiac GTO
1964-1972
Restoration Guide
Includes:
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• Interior, Exterior, and Trim
• Engine and Engine Bay
• Drivetrain and Suspension
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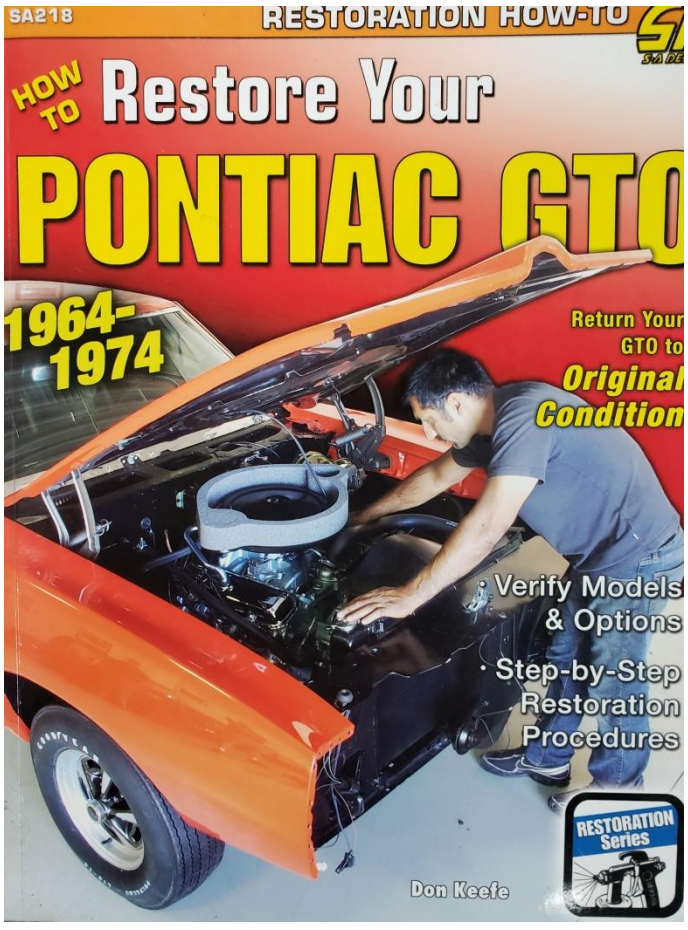
Paul Zazarine and Chuck Roberts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RESTORATION HOW-TO
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• Verify Models & Options
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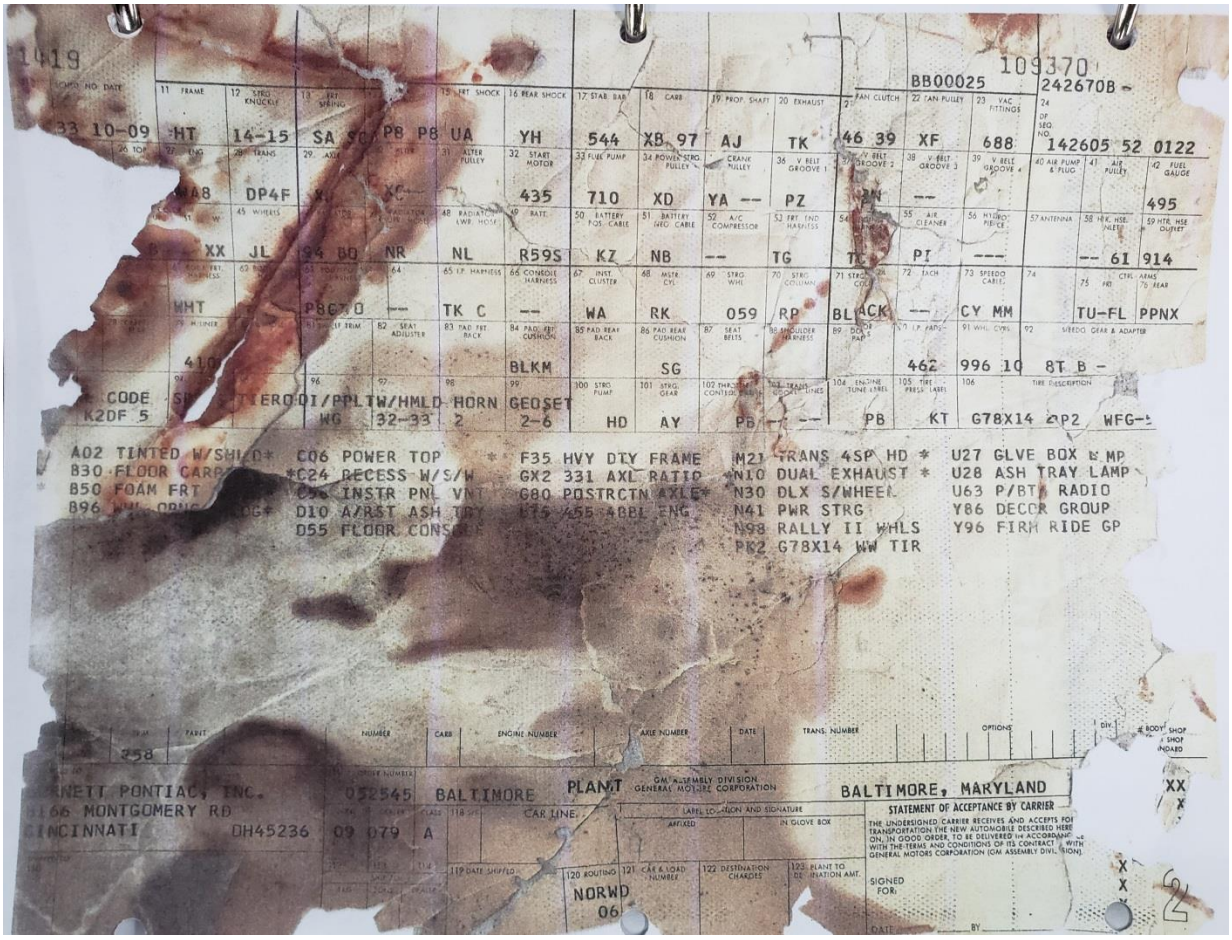


GTO ASSOCIATION OF AMERICA

CONCOURS JUDGING STANDARDS

September 2012

Swamp Fox Rides

The story of a 1970 GTO restoration

Coming of driving age during the muscle car era was so exciting and those fond memories are what directs my collecting interest day. Those powerful memories came to light when Curt and I took a trip to Hickory, North Carolina to examine an LT1 Corvette.

The owner had a number of GTO's not for sale, including a burgundy 1970, 455 HO convertible, 4-speed car, one of 158. This was the muscle car embodiment of my first car, a 1970 Pontiac Lemans Coupe, automatic, 350, 2 barrel car. The goal of reliving my teen years and muscle car form required significant amounts of "green poultice" applied to the owner's reluctance to sell. Though it looked great from 10 feet away and all numbers were matching, much work lay beneath the shiny repaint as you can see from the restoration photos.

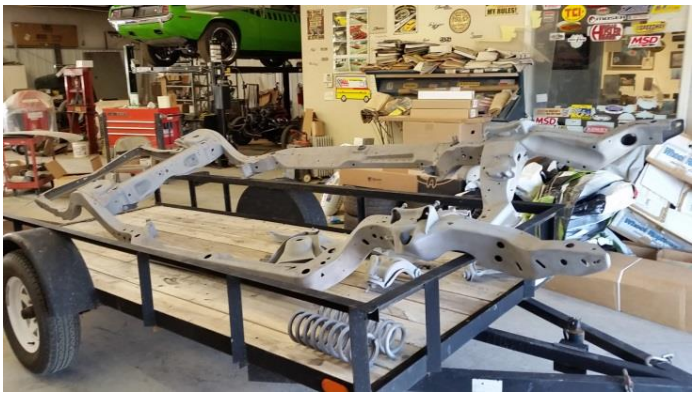
A full frame-off restoration was required which was entrusted to Duane Knight and his expert staff at Knight's body shop. The documentation available for Pontiac's from the Pontiac Historical Society allows confirmation of the exact specifications of this car and the expert research assistance of Curt branching out from his Corvette expertise resulted in the end result which is now traversed AACA judging including a First Grand National Award in Greensburg, Pennsylvania this summer.

Every time I look at the GTO I think about all the fun I had in my first car at age 16. This emotional attachment is very helpful when you think of the time and expense of going through a frame off restoration but I can truly say that it was all worthwhile and it would be very difficult for me to ever part with this fine example of American muscle.

Bill Edwards

Disassembly

Body work, Paint and Reassembly




GTO
455 CID
Firestone
WIDE OVAL

Details, Details, Details

2018 AACA First Grand National Award Winner

Show Winning Recipes

Cherry Cheese Cake ---- Donna Smith

Crust

Crush the contents of 2 packages of graham crackers in a bowl.

Add 1 ½ sticks of melted butter and mix.

Place in a 9” x 12” serving dish.

Filling

Mix the contents of 1 pack of Dream Whip per instructions on package in a bowl.

Place two, 8oz. Philadelphia Cream Cheese and ½ box of powdered sugar in a separate bowl. Mix the cream cheese and sugar until very creamy. Then fold in the Dream Whip. Put this mixture on top of the graham cracker crust.

Add 2 (21oz.) cans of Duncan Hines Comstock Original Country Cherry Pie Filling on top of the cream cheese.

Refrigerate overnight. Serves 8-12 .

(This recipe was given to Donna by a dear friend Joey Snyder)

Automotive History

Built in Acton, England, the 1905 Napier won so much acclaim that it helped make the British automotive industry world-famous. The Napier popularized the six-cylinder engine which was to become one of the most widely used types of auto engine.

The two men responsible for the Napier, Montague S. Napier and Selwyn F. Edge, began their automotive careers when Edge bought a used Panhard racer. The car needed major modification, and he took it to Napier, the young owner of a firm that manufactured precision machinery. With the substitution of a wheel for the steering tiller and a new engine developed by Napier, the car ran so well that the two men decided to go into business. Napier was the mechanical expert and Edge was the salesman.

In 1902, only two years after the first Napier was built, Edge drove one of the cars to victory in the prestigious Gordon Bennett Trophy Race. In fact, it was the only entry to finish the grueling run. This race showed the world that the Napier and the British auto industry were ready to make their mark on automotive history. The following year Napier developed a smooth-running efficient six-cylinder engine. Realizing the potential of this engine, he put full effort into promoting it. Perfecting the engine and building public acceptance for it proved to be the company's greatest contribution to the future.

The year of the Napier six was 1905.
Six-cylinder engines were produced in several versions from models of modest horsepower used in passenger cars to the huge 90-horsepower racing engine. With the motto "publicity by competition," Edge made the Napier famous by entering cars in every race possible. To ensure publicity, he flooded the newspapers before every race with grand statements about the Napier. Unlike the ballyhoo of many other car promoters, Edge's statements were factual, based on the efficient design and quality of work performed by Napier and his men. In speed trials and hill-climbs, the Napier six was unbeatable. The 90-horsepower six set record after record in England, Europe and the United States, including the world land speed record of 104.65 mph at Daytona Beach, Florida. That same year, Edge demonstrated the touring virtue of the Napier six in a 466-mile drive from Brighton to Edinburgh. The powerful Napier covered the entire distance in high gear, without the need for shifting. Motorists of the time considered this a big advantage because shifting was often difficult for the average driver.

Impressed by the Napier's accomplishments in competition and by the quality of its craftsmanship, titled and distinguished customers throughout the world bought Napier touring cars and limousines. The Maharajah of Alwar summed up the performance of the Napier six by saying "quite the most superior in reliability, flexibility and easy running."

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