

INTER-ORGANIZATION LETTERS ONLY



TO	Mr. N. E. Farley	ADDRESS	Proving Ground
FROM	Mr. Z. Arkus-Duntov	ADDRESS	Research & Development Section
SUBJECT	<u>CORVETTE 5951</u>	DATE	January 3, 1955

During operation with overdrive, a carburetor change was made which may be a detriment now.

The paw sitting on the primary throttle shaft and actuating secondary throttle shaft has been changed.

The replacement of this paw with the standard and adjustment of the connecting link will bring the carburetor back to standard.

Z. Arkus-Duntov

ZAD:hs

TO Mr. C. E. Conklin
FROM Mr. W. F. Speer
SUBJECT Rebuild Car #5951

ADDRESS Experimental Garage
ADDRESS Engineering Department
DATE January 10, 1956

cc Messrs. M. S. Rosenberger
T. E. Dougherty
F. C. Burrell
W. R. Mackenzie
M. Rose
C. M. Rubly
N. H. McCuen
N. E. Farley
W. C. Bunting

A work order will be written to cover rebuilding of Corvette Car #5951 as soon as possible, to rebuild to 1956 Chassis with 1955 Body.

Use new 1955 Body from Car #6903 (transfer correct Serial Number Plate) and use original Body from Car #5951 to salvage race car #92. Remove Tail Fin and patch holes.

While Bodies are being transferred, make quick design study of installation of W.O. 19332-1 4-Speed Transmission on Chassis

The ultimate purpose is twofold; (1) to prepare a 1956 power demonstrator and (2) to provide a ride development car.

A new Rear Axle Assembly is required.



W. F. Speer
Engineering Department

VFS:hla
15 G 1 Y

TO	See Below	ADDRESS	
FROM	Mr. F. C. Burrell	ADDRESS	Proving Ground
SUBJECT	CORVETTE RACE CARS	DATE	January 11, 1956

To Messrs.	E. N. Cole	C. C. Jakust	M. Rose
	P. A. Collins	N. H. McCuen	T. E. Dougherty
	H. F. Barr	C. M. Rubly	C. E. Conklin
	E. J. Premo	J. T. Rausch	Z. A. Duntov
	H. H. Schroeder	E. J. Lourie	M. M. Roensch
	R. F. Sanders	W. R. Mackenzie	G. A. Brundrett
	M. S. Rosenberger	N. E. Farley	
	W. F. Speer	F. C. Meer	

General rebuilding work orders #17725-9, 17725-10, and 17725-11 will be issued to cover reworking of Racing Corvette Cars #6901, 6903, and 6905.

This memo is to summarize the latest rebuild of three cars, 6901, 6903 and 6905, to bring them up to date and equip them with heavy duty material as required for Daytona Beach Speed week and Sebring 12 Hour Road Race.

These cars are to be built up as shown. The cars will be delivered to Florida by truck.

6901 Car.

1. Body

Daytona: Prototype 1956 body, modified by removal of windshield, side windows, top, radio, heater and R.H. seat.
Right side to be covered with a fiberglass cover. Small windshield to be made for driver side.

Sebring: Substitute canvas cover for fiberglass. Safety Straps for top deck, hood and rear deck.

2. Frame - 1956 Production

Remove Rear Axle bumper bracket. Remount bumper elsewhere.

3. Front Suspension

Daytona: 1956 Production Corvette.
Shot peened parts.

Sebring: 1956 Heavy Duty Front sprindles, bearings, Halibrand hubs and brakes. 3/4" stabilizer bar.

Daytona: Standard 1956 Corvette.
Axle ratio 3.27-1 with hy-torque. Shorten axle shafts 3/32 on spline.

Sebring: Special Halibrand axle shafts.
3.55-1 axle ratio with hy-torque.

5. Brakes

Daytona: Standard 1956 Corvette.

Sebring: Halibrand spot disc brakes.

6. Engine

Daytona: Engine to be standard 1956 Corvette, reworked as follows:
Piston to cylinder clearance to be .003" with cast iron piston rings.

Pistons cut for valve clearance.

All bearing fits to be high limit.

Oil pressure to be high limit.

Intake and exhaust parts to be cleaned out and matched to manifolds.

Intake manifold to be latest design with large ports.

Use Duntov camshaft.

Engine mount to be cut away on right side to prevent water leak.

Dual belt drive to water pump.

Five quart oil pan.

Spark plug wire shield. - 372 02 03

Harden and drawn valve keepers 45 R. (Magnaflux)

Check piston to top of bore dimension, both sides should be the same.

Generator to have extra large pulley. 5" Dia.

Engine to be dynamometer tested.

Heavy duty clutch.

370 70 50
372 02 03

7. Transmission

Daytona: Use close ratio transmission with sealed front bearing and rear vent.

Sebring: Same

8. Exhaust

Make up exhaust similar to that used on #5951 except sand bend tubing.

Fuel Tank

Daytona: Standard Corvette 1956.

Sebring: Large fuel tank 40 gallon with dual fuel lines and dual electric pumps. Large filler cap extending through top deck.

SAE 24

GM 4151 M-1

6903-6905 Cars.

1. Body

Production 1956 body modified by removal of windshield, side windows, and top. No radio, heater or windshield wipers to be installed. Small windshield to be made for driver side. Canvas cover for R.H. seat.

2. Frame

Same as 6901.

3. Front Suspension

Same as 6901.

4. Rear Axle

Same as 6901 except 3.55-1 with hy-torque.

5. Brakes

Same as 6901

6. Engine

Same as 6901 except cylinder bores to be .030 oversize. Intake and exhaust parts to be left as cast.

7. Transmission

Same as 6901.

8. Exhaust

Same as 6901.

Fuel Tank

Same as 6901.

9. Steering Gear

Same as 6901.

10. Wheels & Tires

Same as 6901.

12. Headlights

Same as 6901.

Steering mast and shaft to be shortened, 1-1/2 inches.

10. Wheels & Tires

Daytona: Standard Corvette wheels.
Firestone Super Sport high speed tires.

Sebring: Halibrand wheels.
Firestone Super Sport road race tires.

12. Headlights

Daytona: Standard Corvette.

Sebring: Headlights to be best available standard unit for night driving and durability.

Instruments

Daytona: Standard Corvette
Precision tachometer.

Sebring: Speedometer head to be recalibrated and connected for use as a tachometer.
Tachometer to be converted to speedometer. & Frank, was this done?

14. Bumper

All bumpers and attaching brackets to be removed.

Tools

Daytona: None

Sebring: Jack and hammer for tire changing to be in car secured by clips or springs.

80. Accessories

Daytona: Install seat belts and brackets.

Sebring: Auxillary driving lights to be mounted on front of car.

14. Bumpers

Same as 6901.

Tools

Same as 6901.

80. Accessories

Same as 6901.

Spare parts - Daytona

1 Spare engine short block. .

1 Close ratio transmission with sealed bearing.

- 2 Clutch discs

2 Production fuel pumps.

2 Electric fuel pumps. v

2 Distributors.

10 Sets spark plugs } 5-42

~~2 Sets spark plugs~~ } 5-43

2 Sets spark plug wires. -

Spare axle ratio's

2-3.55:1 with hy-torque

2-3.27:1 with hy-torque

1-3.08:1 with hy-torque

Tires - 6.70 x 15

15 high speed super sport.

8 Town and Country super sport.

Spare parts - Sebring

All spare parts from Daytona.

3 sets tools - minimum requirement mechanics set necessary for any minor repair job.

6 Flash lights. 2 cell

12 extra flash light batteries.

6 headlight bulbs.

12 tail light bulbs

3 Gasoline funnels.

3 Oil can spouts.

3 floor jacks.

6 lug wrenches *Hammers* 3# BRASS

~~24 lug nuts~~

24 spare wheels.

48 6.70 x 15 super sport tires and tubes.

~~6 extra fuel pumps.~~

6 sets extra fan belts.

6 extra coil resisters

6 coils

Key hole.

Frank C. Burrell

F. C. Burrell
Development Engineer

FCB:hla
40 G 1 Y

BUILD ORDER

4A

B

TO: Experimental Shop

DATE 11-21-55

ORDER NO. 19303-28

EG
MSR
EJP
DFU

DIST: 3-A-H-Y

C. C. Jakust

UPC D 1

STOCK CAR (27)

CHARGE TO: Administration

(69)

NO. OF UNITS 2

WHERE USED	
EXP.	CAR #6903-6905
PROD.	YEAR
FUTURE	PROGRAM 19300

SUBJECT

Build (2) 19300 Corvette Bodies for Special Development Work.

DESIGN ORDER NO.

EST. COST

WORK TO BE ACCOMPLISHED

Build Two (2) additional 19300 Corvette Bodies same as released for 19303-1 except the following parts to be omitted: Windshield, Windshield Framing, Folding Top and Mechanism, Windshield Door Trim Moulding, Door Garnish & Reveal Mouldings, Side Door Windows, and Regulators.

Mr. E. Gray will cooperate in obtaining material from sources.

It may be necessary for our shops to make some plastic parts either in epoxies obtained from sources or plasters made from mahogany models.

This Work Order will cover this and any other building required to provide parts for St. Louis.

DISPOSITION OF FINISHED MATERIAL: Obtain material and send to St. Louis Assembly Plant for assembly. Completed Bodies to be returned to Experimental Dept. for installation of "Special Conversion Kits".

SPECIAL INSTRUCTIONS: All material to be qualified and assembled with production assembly fixtures.

REASON: To provide material for installation on cars 6903 and 6905 for special development work per W.O. 19307-1 and 2 NOTE: Was formerly W.O. 19324-1 M.S. #1 and 19324 M.S. #1

HAS SOURCE BEEN CONTACTED:

P.O.

PRESENT SOURCE STATUS:

SHIP TO:

VIA

CHARGE

		REQUIRED	ESTIMATED	ACTUAL
DATES	FABRICATION	12-1-55		
	INSTALLATION	12-15-55		
REQUESTED BY E.M. Fieger	D. F. Urban C.C. Jakust	*APPROVALS E.J. Premo T.A. Carlyon		W. F. Speer

DUP-CHEV. 232 ENG.

has

MEMO
CVR
JLM
ZAD

TO: Experimental Shop & Garage DATE 1-4-56

DIST: 3-A-C-J-H-R-S-T-Y-Z-W

W. R. MacKenzie

UPC 15

CHARGE TO: STOCK CAR

NO. OF UNITS 1

WHERE USED

EXP. CAR # 6901

PROD. YEAR

FUTURE PROGRAM

ORDER NO. 17725-4

Sheet 1 of 2 1956

SUBJECT Rework Corvette
#6901 for Speed
Run (FLORIDA)

DESIGN ORDER NO.

WORK TO BE ACCOMPLISHED

EST. COST

This work order to cover time and material to rework Car #6901 for maximum speed record run and expenses of transporting the car, personnel and spare parts to Florida and return.

Work to be done and spare parts necessary detailed on sheet #2.

DISPOSITION OF FINISHED MATERIAL: Proving Ground will transport car to Florida for speed run by Z. Arkus-Duntov on January 11, 1956.

SPECIAL INSTRUCTIONS: WORK WAS ORIGINALLY AUTHORIZED UNDER WC-17727
NOT ISSUED.

REASON: To provide a 1956 Corvette modified for maximum speed to make speed run for advertizing purposes.

HAS SOURCE BEEN CONTACTED:

P.O.

PRESENT SOURCE STATUS:

SHIP TO:

VIA

CHARGE

		REQUIRED	ESTIMATED	ACTUAL
DATES	FABRICATION			
	INSTALLATION			
REQUESTED BY F. C. Purrell	APPROVALS <i>W. R. MacKenzie</i>		<i>LP</i>	<i>Spec 1/6</i>

DUP-CHEV. 232 ENG.

50P 1-Card

1-6

Rework Car #6901

1. Body - 1956 body. Remove windshield, side windows, radio, heater and top. Install special cover over right hand side of seat and small windshield. Make up head rest and tail fin.
- h. Rear Axle - Change to 2.92:1 ratio from #5951 car.
6. Engine - Remove high power engine from #5951 car. Disassemble engine and inspect for failures. Reseat valves and check valve spring loads. Make necessary repairs to put engine in top condition. This engine to have the ~~Denton~~ camshaft. Front engine mount to be cut away on right side to prevent water leak at water pump.
7. Transmission - Install "close ratio" transmission from car #5951.
10. Wheels & Tires - Wheels to be standard Corvette. Tires to be standard tires.
80. Accessories - Install seat belts and brackets. Special tachometer and instruments from #5951 car.

Spare Parts:

- 1 - Engine short block assembly
- 1 - close ratio transmission
- 2 - clutch discs
- 2 - prod. front springs
- 2 - prod. fuel pumps
- 1 - Bendix electric fuel pump
- 1 - distributor
- 6 - sets spark plugs: 3 - 42 Com.
3 - 43 Com.
- 1 - set spark plug wires
- 1 - heat rest
- h - rear axle differential assemblies: 1 - 2.92:1
1 - 3.08:1
1 - 3.27:1 + high torque
1 - 3.55:1 + high torque
- 1 - set axle shaft assemblies shortened 3/32
- 2 - T & C racing tires to be sent with car

Delivered to Florida by Firestone:

- 8 - Super sport high-speed tires
- 2 - T & C racing tires

Spencer
1-1-56

BUILD ORDER

COMPLETED 2-2-56

TO: Experimental Shop & Garage

DATE January 17, 1956

ORDER NO. 19307-5

Sheet 1 of 2

ENC
WRM
CMR
NHM

DIST: 3-A-C-E-F-H-J-K-N-
R-S-T-Z

UPC 15

CHARGE TO: Exp. Garage
See Note (44)

NO. OF UNITS 1

WHERE USED	
EXP.	CAR # 5951
PROD.	YEAR
FUTURE	PROGRAM

SUBJECT

Rebuild Car 5951 for
Proving Ground "Axle
Hop" Development &
Demonstration Purposes.

DESIGN ORDER NO.

WORK TO BE ACCOMPLISHED Rebuild 1955 Corvette 5951 for Proving Ground "Axle Hop"
Development and to be used as a special Demonstrator.

(cont. on next sheet)

DISPOSITION OF FINISHED MATERIAL:

SPECIAL INSTRUCTIONS: Car is to be used as a Special Demonstrator and is to be kept as clean as possible.

REASON:

NOTE: Assembly costs only to be charged to this Work Order. Charge for component parts to be charged to individual Work Orders.

HAS SOURCE BEEN CONTACTED:

P.O.

PRESENT SOURCE STATUS:

SHIP TO:

VIA

CHARGE

		REQUIRED	ESTIMATED	ACTUAL
DATES	FABRICATION			
	INSTALLATION			
REQUESTED BY M.S. Rosenberger - 2		APPROVALS T.A. Carlyon		W.F. Speer

Car was rebuilt with the following material -

GROUP NO.	WORK ORDER NO.	DESCRIPTION
1	19303-28	1955 Production Corvette Body removed from 6903
2		1955 Production Frame Assy. reworked to accept Clutch Linkage.
3	19324	Latest 1956 Ride material was installed 12-4-55 including latest 2° Caster Shims, Rear Spring Hangers, & Shackle Brackets.
3		Front Suspension Control Arms, etc, are regular 1955 Production.
4	19310	Rear Axle Assy. 3.55:1 Differential Carrier as removed from Car 6901.
4	19324	Installed 1956 Ride features as noted above.
4		Remainder of Rear Suspension is 1955 Corvette Prod.
5		All Brake material is 1956 Corvette Production.
6	17450-45	1956 Engine Assy. Serial 0001272F56G as removed from Car 6901. Engine is BPO 411 - Dual 4-Barrel, and 11" Borg & Beck Production Clutch.
6	19314-7	Ignition Wire Shielding removed from Car 6901.
7		Car was converted to 3-Speed from Powerglide per W.O. 19025-10 by Design Check 6-15-55. Now incorporates 1956 Production Corvette close-ratio Transmission.
8		Fuel & Exhaust System is 1956 Production Corvette.
9		Steering Gear & related parts are 1956 Prod. Corvette.
10		Regular Production Firestone 6.70 x 15 White Wall Tires with Regular Production Wheels.
12		1955 Production Electrical Equipment.
13		1955 Production Radiator & related material.

Remainder of material is 1955 Corvette Production.

49P

CHEVROLET MOTOR DIVISION
GENERAL MOTORS CORPORATION
ENGINEERING CENTER
BOX 246 NORTH END STATION
DETROIT 2, MICHIGAN

*Russ
Mr. Vermeersch
wants to speak to you*

June 6, 1956

Michigan Department of State
James M. Hare, Secretary of State
Lansing 18, Michigan

Attention: Mr. G. O'Connor
Title and Registration Division

Dear Sir:

We are in receipt of letter from Mr. Louis Buchner, Manager, Southeastern Regional Area advising that Application for Title for a Chevrolet Corvette by our Mr. Russell F. Sanders has been questioned inasmuch as Certificate of Title #5215870 which accompanied the application for Title identified the vehicle as a 1953 Model and the vehicle was described as a 1955 model in the application for title in Mr. Sanders name.

At the time of the sale of this vehicle an explanatory letter accompanied all documents advising that the car was completely rebuilt in the course of engineering processes and when completed, was a 1955 model throughout. We assumed that this would suffice to complete the transaction.

Mr. Sanders is one of our Staff Engineers and is fully aware of the fact that the vehicle was originally produced as a 1953 model and converted to 1955 status in our shops.

Mr. Buchner forwarded to us with his letter, all the forms involved in this transaction which we will hold until such time as you advise the necessary steps to complete this transaction.

Your cooperation will be appreciated.

J. J. Vermeersch
J. J. Vermeersch
Chevrolet Motor Division
General Motors Corporation
Engineering Center
Box 246, North End Station
Detroit 2, Michigan

cc: Mr. R. F. Sanders. ✓

JJVink

COPY