Build Sheets and the Late Model C3
Authenticating Corvette Options

by Tom Russo

Late-model C3 build sheets were first described in the Winter 2006 issue of *The Corvette Restorer*. That article described the use of Corvette manifests, known to hobbyists as tank stickers or build sheets, and how they were used for Corvette assembly from 1967 through 1982. The article distinguished the Corvette Order Copy used as a tank sticker for 1967–1972 from the Production Manifest Copy used from 1973–1982. The order copy was a sales document printed in portrait format while the manifest was a production document printed in landscape format. The standard factory practice was to glue a copy to each gas tank, but the article also described several other locations where owners have discovered a discarded copy of the much-coveted build sheet.

This article serves as an update to that original article but builds on a persistent collection and study of 1973-82 build sheets. In collecting those build sheets, I have had much correspondence with Corvette owners willing to share their cars' history. So we are able to provide anecdotal data never published before on late-model C3 build sheets. The first article described how Corvette used build sheets in assembly. It also introduced distinguishing characteristics among build sheets used from 1973 through 1982. This article will explore how the use of data increased during that time and how a build sheet documents the broadcast codes associated with factory options installed on St Louis- or Bowling Green-manufactured Corvettes. With these documents, we find the increased dependence of data processing for assembly, the increased reliance on the manifest in production to document regular production options (RPOs) and specifically the production of pre-assigned vehicle identification numbers prior to assembly.

What is a build sheet? It is a factory production document that was used to pull, or call out, option equipment replacing base equipment. Each sheet is a collection of data sets displayed in a matrix of boxes organized more by rows than by columns: It includes sales order data (RPOs), production data (broadcast codes), and destination data (dealer of origin). In terms of build-sheet format, row formats changed over the years to accommodate the increased need to display data, and columns lost their vertical orientation in favor of horizontal. All of which suggests that the box arrangement by production year revealed little consistency from one model year to the next. The intent was to display multiple, complex data sets.

This article begins with a brief review of what the hobby has learned about Corvette sales and production documents, followed by major milestones for 1973-82 build sheets. It will provide an overview of what is found on build sheets, such as RPOs, related broadcast codes, and printed data versus typed data. Finally, build sheets are discussed based on the evolution of data formats by model years of production. The article concludes with a discussion of how the study of build sheet data can contribute to improving judging and restoration guidance in NCRS Technical Information Manuals and Judging Guides.

Background

The origins of the 1973-82 manifest (build sheet) stem from the transition of assembly plant management from Chevrolet Car Division to General Motors Assembly Division (GMAD) in the early 1970s. Management of Chevrolet assembly plants was gradually taken over by GMAD throughout the 1960s to improve plant inefficiencies recognized by GM Corporate. Chevelle production and its use of the landscape-style manifest provides the best contrast to Corvette production and helps to understand the transition from the Corvette Order Copy to the landscape-style manifest.

The Chevelle plant in Fremont, CA, was managed by GMAD, while all other Chevelle plants were managed by Chevrolet. The Fremont plant used the GMAD build-sheet format throughout Chevelle production, beginning in 1965. By 1970, all seven Chevelle plants had come under GMAD management and were using the GMAD manifest. Figure 1 illustrates a typical 1970 Chevelle landscape-style build sheet. However, members of the Chevelle forum have deemed this a reproduction with incorrect data sets. (See http://chevelles.com/forums)

The build sheet is a Corvette's DNA for vehicle options. Broadcast codes called out option equipment installed in

place of base parts. The use of the GMAD manifest reflects a change of data management methods for Chevrolet assembly plants, such as the St Louis Corvette assembly plant. Thus, the interpretation of this data for late-model Corvette production draws comparisons but also contrasts with what has been known about Corvette production data from 1963-1972.

Al Grenning first described the GM ordering and scheduling system and the relationship among sales documents and production documents for 1965–1966 and 1965–67 Corvettes in "Corvette Build Orders 1965-1967: Part 1," *Corvette Restorer*, Summer 2001, and Part II, Fall 2001. John Hinckley introduced us to the Broadcast Copy and how it was used during assembly of Corvettes in "The Missing Link.." *Corvette Restorer*, Spring 2003 He also gave meaning to the many hand-written three-digit number sequences owners discovered on Corvette Order Copies and on body panels. The data presented in these articles addressed primarily mid-year Corvette production but reveal that Chevrolet continued these methods through 1972. Owners of 1973-82 Corvettes discovered during their search for tank stickers that the format changed from portrait style (Corvette Order Copy) to landscape style. Retrieved build sheets reflect the integration of GMAD data processing evidenced by the factory manifest. Thus in 1973, Corvette sees the replacement of the Corvette Order Copy on the tank with the factory manifest. Hinckley's article also noted that broadcast copies had been in use in other GM factories prior to 1973, but it wasn't until that year that they were glued to Corvette gas tanks.

Several data types described by Grenning and Hinckley from 1965-1972 build documents can be linked with later-C3 build sheets (1973-82) and even contemporary build sheets (C5-C6). For example, these data include the dealer order number, dealer codes, zone codes and expected date of production. GM dealer order forms were pre-numbered, so when the form was used to document a new car purchase, the dealer order number is recorded on various production documents throughout procurement, assembly and delivery. The use of the dealer order number continued throughout C3 production. It was printed on the window sticker, build sheet and dealer invoice. The dealer number and the GM zone are also displayed in the destination section.

Other data changes that accompanied the transition of build sheets include the VIN sequence, key codes, introduction of merchandise option codes and finally the pre-assigned VINs. Broadcast codes were used in early Corvette production, but they were two sheets called the chassis broadcast sheet and the body broadcast sheet. Each represented a different data set, but it was the GMAD-style build sheet that integrated the two data sets and printed the data on a single sheet.

The remainder of this article will describe this data and their use for 1973-82 build sheets. It begins with an overview of build sheet milestones.

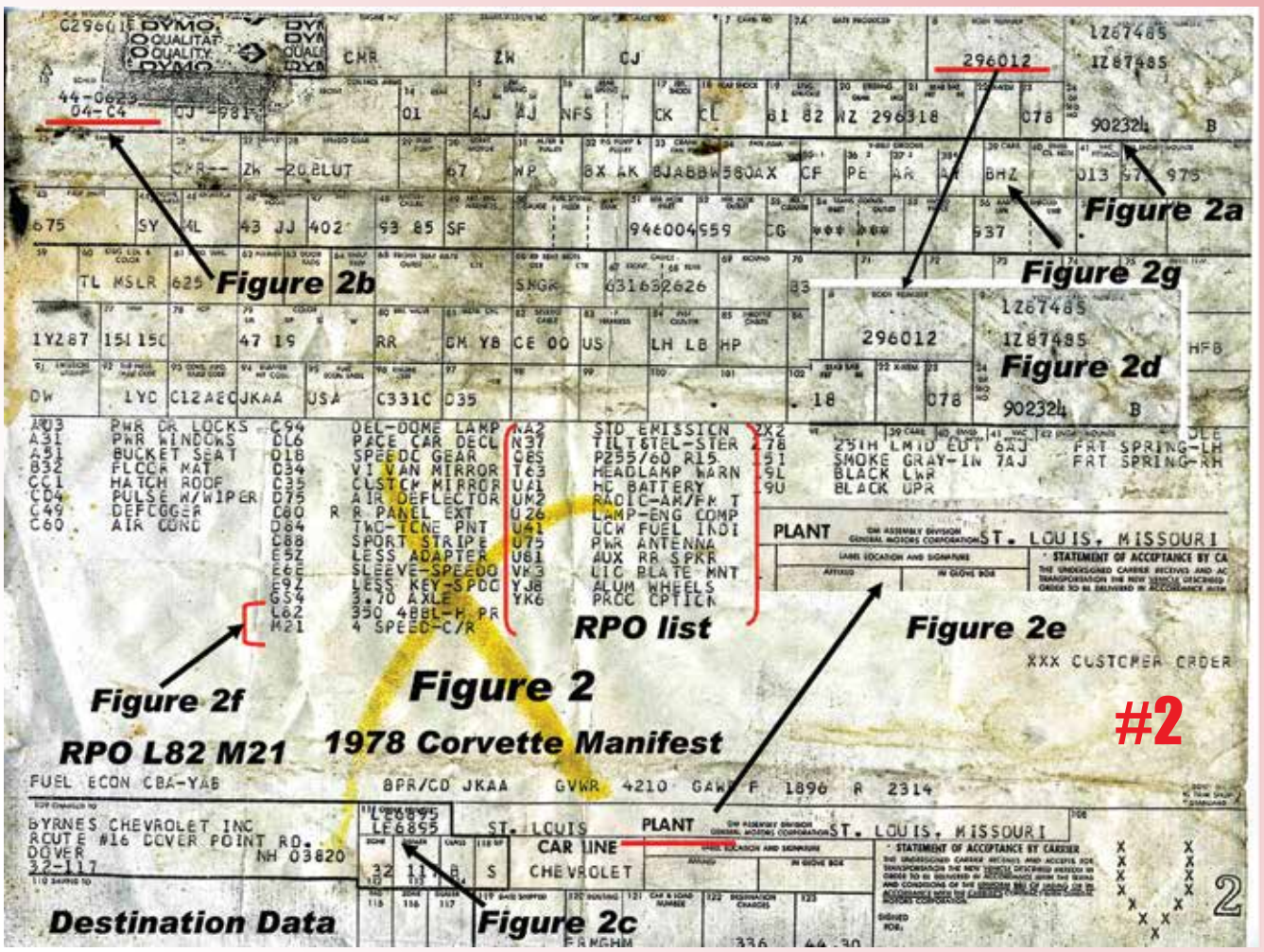
Build Sheet Milestones: 1973-1982

This overview is based on a study of build sheets by model year with some years represented by numerous examples while other model years are represented by only a few. But the numbers do provide some insights into how build-sheet data changed from 1973 through 1982. Thus, reviews of C3-build sheets by model year reveal milestones in terms of either build-sheet format or data display. These milestones include:

1973 – GMAD landscape-style manifest replaces Corvette Order Copy
1973 – Last five digits of VIN typed on the manifest using a typewriter at the trim-tag station
1973 – Key codes typed on the manifest using a typewriter at the trim tag station
1974 – Greater use of chassis broadcast codes
1975 – Introduction of interior broadcast codes
1977 – Greater use of engine compartment mechanical broadcast codes
1977 – Use of broadcast codes for interior trim including options and color
1977 – Extensive use of DYMO tape to obscure key codes
1978 – Introduction of merchandise-option codes with Anniversary and Pace Car
1981 – Key codes no longer typed on manifest copies at Bowling Green
1981 – Pre-assigned VIN printed on manifest begun at Bowling Green

The analysis of build sheets is based on contributions from many Corvette owners, who contributed their documents with the knowledge that critical information would not be made public. Thus, the illustrations represent only a few examples. This article uses a 1978 L82 M21 Pace Car manifest as a typical build sheet from the midpoint of late model C3 production.

Let's begin with orientation to a typical manifest using '78 Pace Car VIN 2324 (Figure 2a). This is an L82 M21 with trim tag date code H05 or April 5. In the upper left corner of Figure 2b, Box 10 is printed SCHED NO DATE. This is believed to be the production schedule number and the schedule date. The date reads 04-04 and the number above it (44-0623) is the daily production schedule number. Number 2324's scheduled production was 04/04, and by 04/05, body assembly was complete and the first coat of paint applied. LE 6895 is the dealer order number (Figure 2c, Box 111). The dealer order number is printed on both the window sticker (Figure 3) and the dealer invoice, in addition to the manifest. The BODY NUMBER 296012 is shown in Box 8 (Figure 2d). The body number was assigned sequentially as orders came to the assembly plant prior to both assembly and VIN assignment. Also



note the PLANT reference to the GM Assembly Division (Figure 2e).

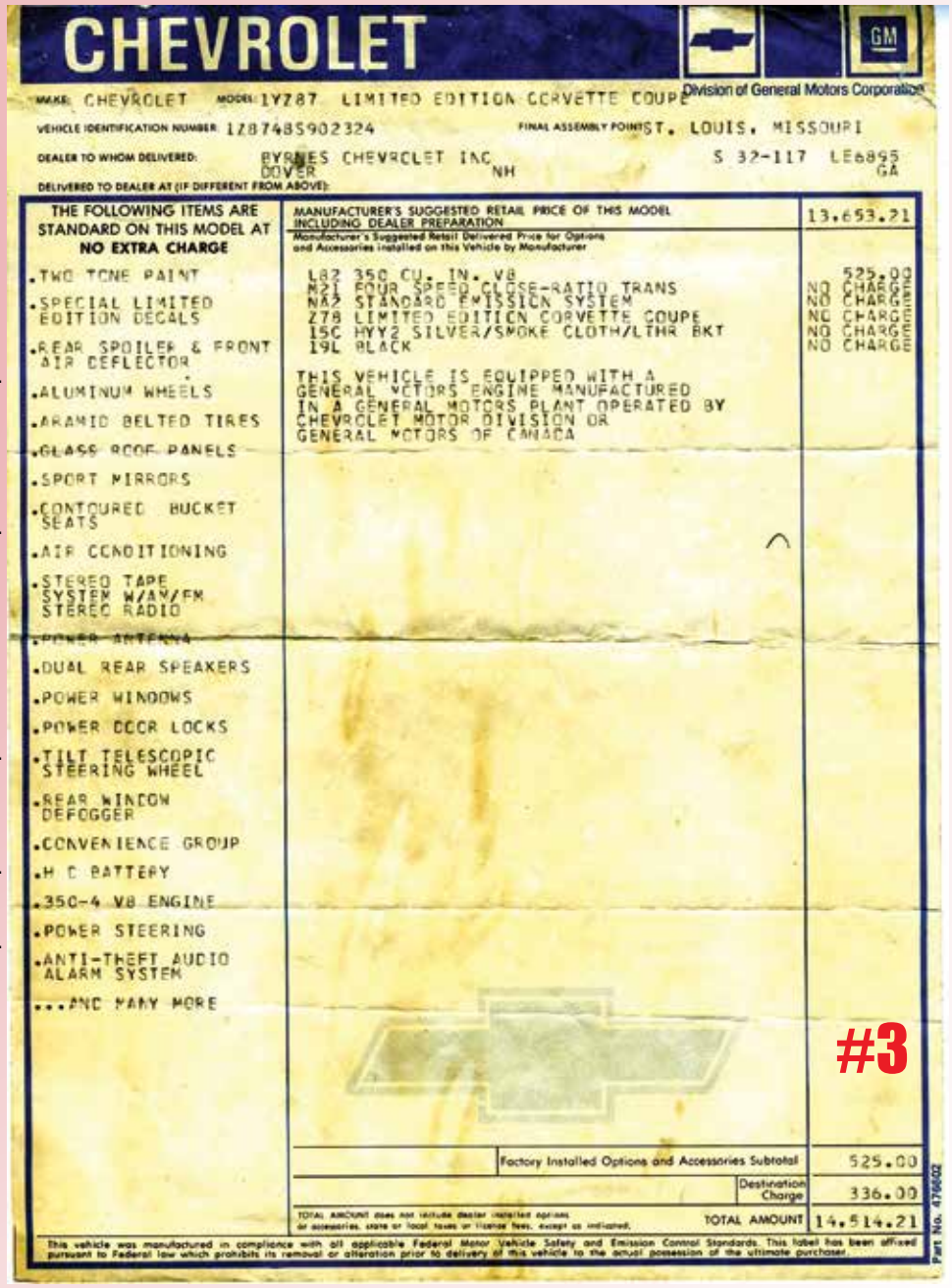
Regular Production Options

Regular Production Options (RPOs) are the most popular data used by hobbyists to describe options installed on a Corvette. Most enthusiasts are familiar with L88, LT1, ZR1, LS1 or the twenty-first century ZR1. RPO data is referenced in a number of Corvette publications including NCRS references but also popular publications such as the *Corvette Black Book*.

On the dealer order form, RPOs appear as boxes and were checked for options selected by the buyer. Buyers' RPO data were then printed on the build sheet along with other RPO process options. That instructed factory workers what parts or processes were to be used or installed on the designated vehicle. The same RPO data were also printed on the dealer invoice and the shipper's copy that was sent to the dealer once Corvette assembly was completed.

RPOs did not always represent a single item, such as a motor. One single RPO could also call out a group of RPOs. This collection of RPOs was designated as a merchandising function and represented an assembly of related parts that would make up the option. One example is the ZX2 Convenience Group (Figure 4) that was optional from 1977 through 1981. The ZX2 included courtesy lighting (spare-tire lamp), dome light (C94), headlamp warning buzzer (T63), passenger vanity mirror (D34), low-fuel warning lamp (U41) and associated wiring harnesses. The build sheet would call out the related hardware and wiring harness to install this option. In contrast, a motor whether LT1 or L82 was a single assembly from carburetor to manifolds.

But this ensemble of RPOs was not limited to the late model C3 years. In the muscle-car era, RPOs were bundled to represent a performance option. When ordering a ZR1 in 1970, a buyer picked up an LT1, M22, J50, K66 and related specialty items. (K66 (Transistor ignition was not a regular production option in 1970 but was bundled for the ZR1 option.) A buyer could also cherry pick options by ordering an LT1 and hook it up to an M21 for a nice street ride.


CHEVROLET

Division of General Motors Corporation

MAKE: CHEVROLET MODEL: 1Y787 LIMITED EDITION CORVETTE COUPE

VEHICLE IDENTIFICATION NUMBER: 1Z8748S902324 FINAL ASSEMBLY POINT: ST. LOUIS, MISSOURI

DEALER TO WHOM DELIVERED: BYRNES CHEVROLET INC DOVER NH S 32-117 LE6895 GA

DELIVERED TO DEALER AT (IF DIFFERENT FROM ABOVE):

THE FOLLOWING ITEMS ARE STANDARD ON THIS MODEL AT NO EXTRA CHARGE	MANUFACTURER'S SUGGESTED RETAIL PRICE OF THIS MODEL INCLUDING DEALER PREPARATION	13,653.21
	Manufacturer's Suggested Retail Delivered Price for Options and Accessories installed on this Vehicle by Manufacturer	
	L82 350 CU. IN. V8	525.00
	M22 FOUR SPEED CLOSE-RATIO TRANS	NO CHARGE
	N47 STANDARD EMISSION SYSTEM	NO CHARGE
	Z78 LIMITED EDITION CORVETTE COUPE	NO CHARGE
	15C HYY2 SILVER/SMOKE CLOTH/LTHR BKT	NO CHARGE
	19L BLACK	NO CHARGE
	THIS VEHICLE IS EQUIPPED WITH A GENERAL MOTORS ENGINE MANUFACTURED IN A GENERAL MOTORS PLANT OPERATED BY CHEVROLET MOTOR DIVISION OR GENERAL MOTORS OF CANADA	
•TWO TONE PAINT		
•SPECIAL LIMITED EDITION DECALS		
•REAR SPOILER & FRONT AIR DEFLECTOR		
•ALUMINUM WHEELS		
•ARAMID BELTED TIRES		
•GLASS ROOF PANELS		
•SPORT MIRRORS		
•CONTOURED BUCKET SEATS		
•AIR CONDITIONING		
•STEREO TAPE SYSTEM W/AM/FM STEREO RADIO		
•POWER ANTENNA		
•DUAL REAR SPEAKERS		
•POWER WINDOWS		
•POWER DOOR LOCKS		
•TILT TELESCOPIC STEERING WHEEL		
•REAR WINDOW DEFOGGER		
•CONVENIENCE GROUP		
•H C BATTERY		
•350-4 V8 ENGINE		
•POWER STEERING		
•ANTI-THEFT AUDIO ALARM SYSTEM		
...AND MANY MORE		
	Factory Installed Options and Accessories Subtotal	525.00
	Destination Charge	336.00
	TOTAL AMOUNT	14,514.21

TOTAL AMOUNT does not include dealer installed options or accessories, state or local taxes or license fees, except as indicated.

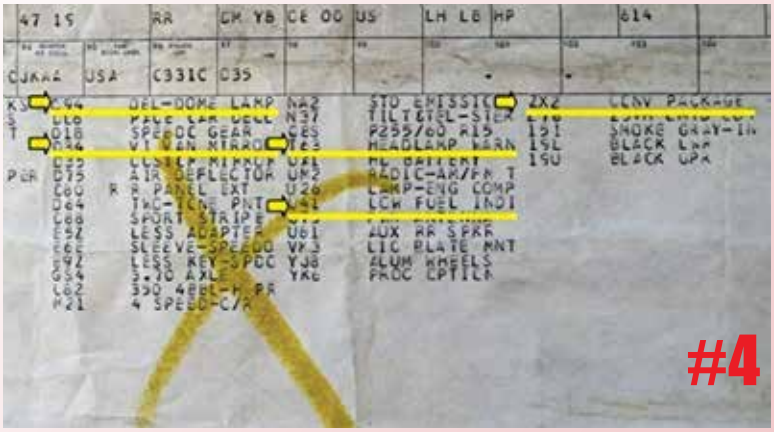
This vehicle was manufactured in compliance with all applicable Federal Motor Vehicle Safety and Emission Control Standards. This label has been affixed pursuant to Federal law which prohibits its removal or alteration prior to delivery of this vehicle to the actual possession of the ultimate purchaser.

Part No. 476602

#3

In later C3 years when Corvette built and marketed Limited-Edition Pace Cars and 1982 Collector Editions, RPO groups were standard equipment, not unlike earlier model years. When a buyer ordered the Z78 1978 Pace Car, the dealer marked the Z78 option. That option code called out a group of convenience options such as power windows (A31), special seats (A51), locks (AU3), courtesy lights (ZX2) and glass t-tops (CC1). Of course, the buyer paid for these standard equipment options, but the items were base for this special model. It also called out other special edition features such

as special interior, exterior paint, Indy 500 decals and special badges. But each option had its unique RPO in the event buyers wanted certain options on the base 1978 coupe, some of which were not available until the Pace Car was in dealer showrooms.



Broadcast Codes

If we learn nothing else from a study of build sheets, it is that broadcast codes served as the key pick code used by factory workers to select and install a buyer's options. Furthermore, build sheets reflect the options installed on a vehicle but not the entire data set for assembling a Corvette. *The Corvette Assembly Instruction Manual* (AIM) is a document that describes the typical or base coupe Corvette assembly and is familiar to many hobbyists.

Broadcast codes were used everywhere and included motor, transmission, rear-end axle, carburetor, radiator, alternator, radiator hoses, fan belts, wheels, interior colors, interior options, and paint, to name a few applications. Broadcast codes were stamped into metal, printed onto tags that were strapped around coils, wire bails or glued onto a metal part. Perishable items such as fan belts or radiator hoses had the code ink stamped on the rubber. A broadcast code tells us something about the application of an automobile component for a given model year and often will incorporate a date code. Today, stamped metal parts have given way to barcodes.

Therefore, the build sheet documents all options the buyer had to select at the time of purchase. It also represents by codes parts installed on the vehicle. Today's owner, with a build-sheet VIN that matches the vehicle VIN before him, can reconcile the authenticity of many key parts on that Corvette. It is also a feature that can distinguish an original component from a high-quality reproduction part when all that separates the two is the broadcast code. Today, technology can rival the production characteristics of original parts and therefore the hobbyist must arm himself with all the knowledge available to him.

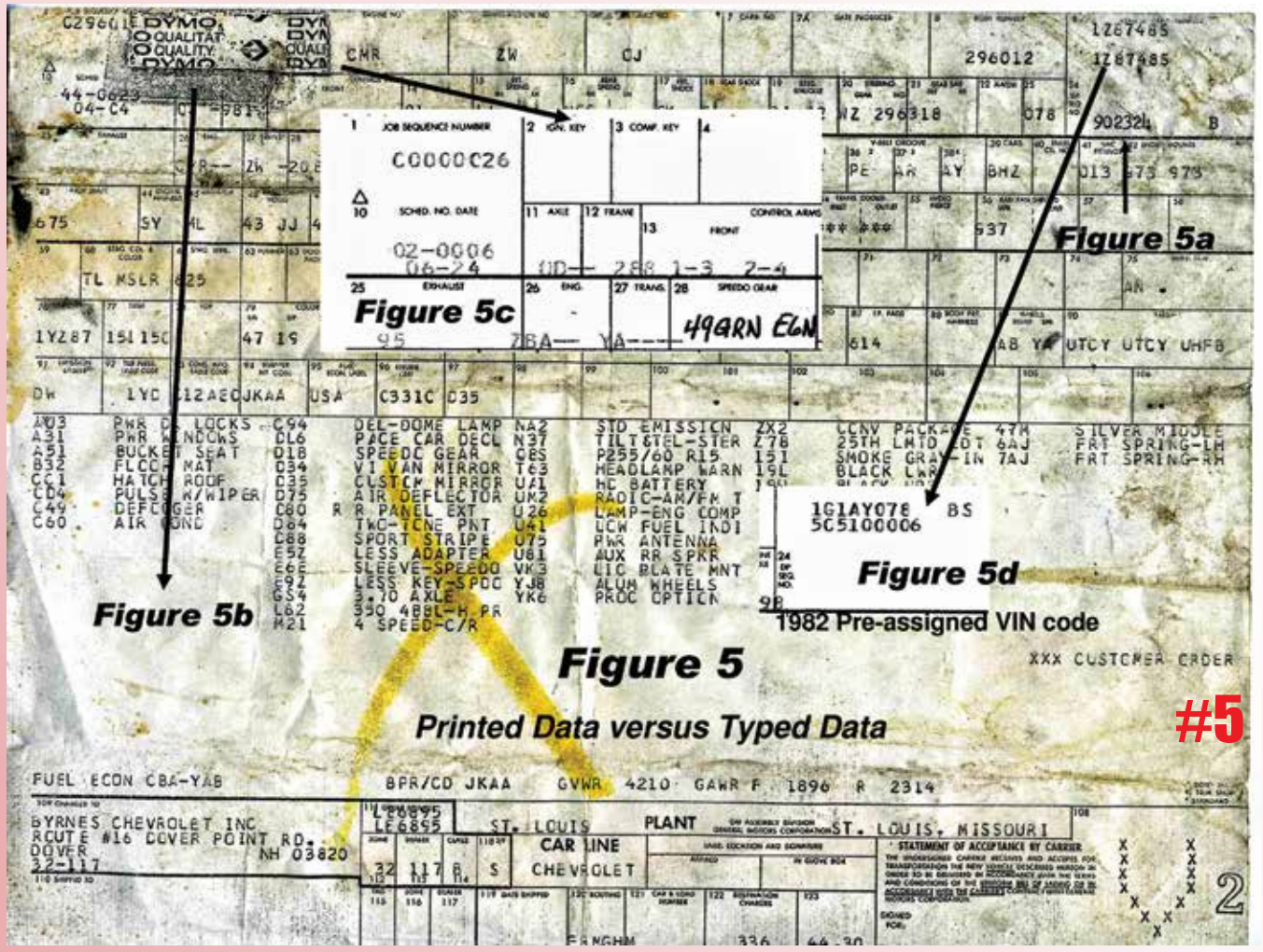
So, how is the build sheet used to document a correct carburetor for a known power team? Consider 1978 where eleven carburetors were listed to mate with one of seven power teams. Figure 2f illustrates the build-sheet portion where RPO M21 and L82 were specified and Figure 3 shows the window sticker where these RPOs were invoiced to the dealer. But note Box 39 CARB (Figure 2g) that references the broadcast code BHZ. The BHZ code was assigned for the L82 M21 power team. This carb was configured for an L82 engine with manual transmission to meet standard emissions (NA2) for 1978. In a judging event, the mechanical judge would expect to see an L82 M21 1978 Corvette with a carb BHZ broadcast code.

Printed Data versus Typed Data

Owners of St Louis-built Corvettes that have retrieved their build sheets found a mix of fonts and type styles on the sheet. Western Union-style Teletype machines were used to print data on a pre-printed, multi-part form that was separated and distributed to several assembly lines. Tele-type machines were built around the use of optical character recognition (OCR) systems.

However, not all data was pre-printed or printed by the Teletype machine. Key codes and the VIN were typed onto selected copies of the manifest once Corvette assembly had begun. The manifest was printed using pre-numbered multi-copy paper. Seven copies were printed and distributed to the various assembly lines such as paint, trim, chassis, final trim, etc. My theory is that Copy #1 was retained in the St Louis factory administrative office and did not record either key codes or the VIN. These copies were not distributed in the factory to be discarded in vehicles that left the factory and were apparently lost to fire in St Louis, so this theory remains conjecture. I do have copies of 1973 build sheets, Copy #1 with no typed key codes or VIN.

This was not consistent from 1973 through 1982. The VIN was assigned at the trim-tag station; at which point, the VIN was typed onto the manifest (Figure 5a). Key codes appeared on the manifest in 1973 and were typed along with the VIN at the trim-tag station. By 1977, typed key codes were distorted by use of DYMO embossed label tape (Figure 5b). Apparently, key-code theft had become



an issue and the factory limited access to workers with key/lock assembly responsibilities. The assigned VIN series and key codes were typed with a typewriter using a Times Roman font on the pre-printed, teletyped form. This took place at a station located between the first and second paint coat after the form had been printed. By 1981, key codes were no longer typed onto the manifest. (Figure 5c) shows a portion of the build sheet for a 1982 RPO 1YY07 Collector Edition VIN 006, assembled June 24, 1981. Note blank boxes where key codes were once typed.)

As data processing progressed, the VIN sequence was assigned and printed on the manifest prior to the onset of assembly. We see this in 1981-82 build sheets and this process continues today with C6 production. So, the pre-assigned VIN was included with the Teletype-printed data set (Figure 5d). Interesting enough, this practice was limited to Bowling Green-built cars. Corvette assembly was occurring simultaneously at St Louis and Bowling Green during 1981, and St Louis manifests show that the VIN continued to be typed at the trim-tag station.

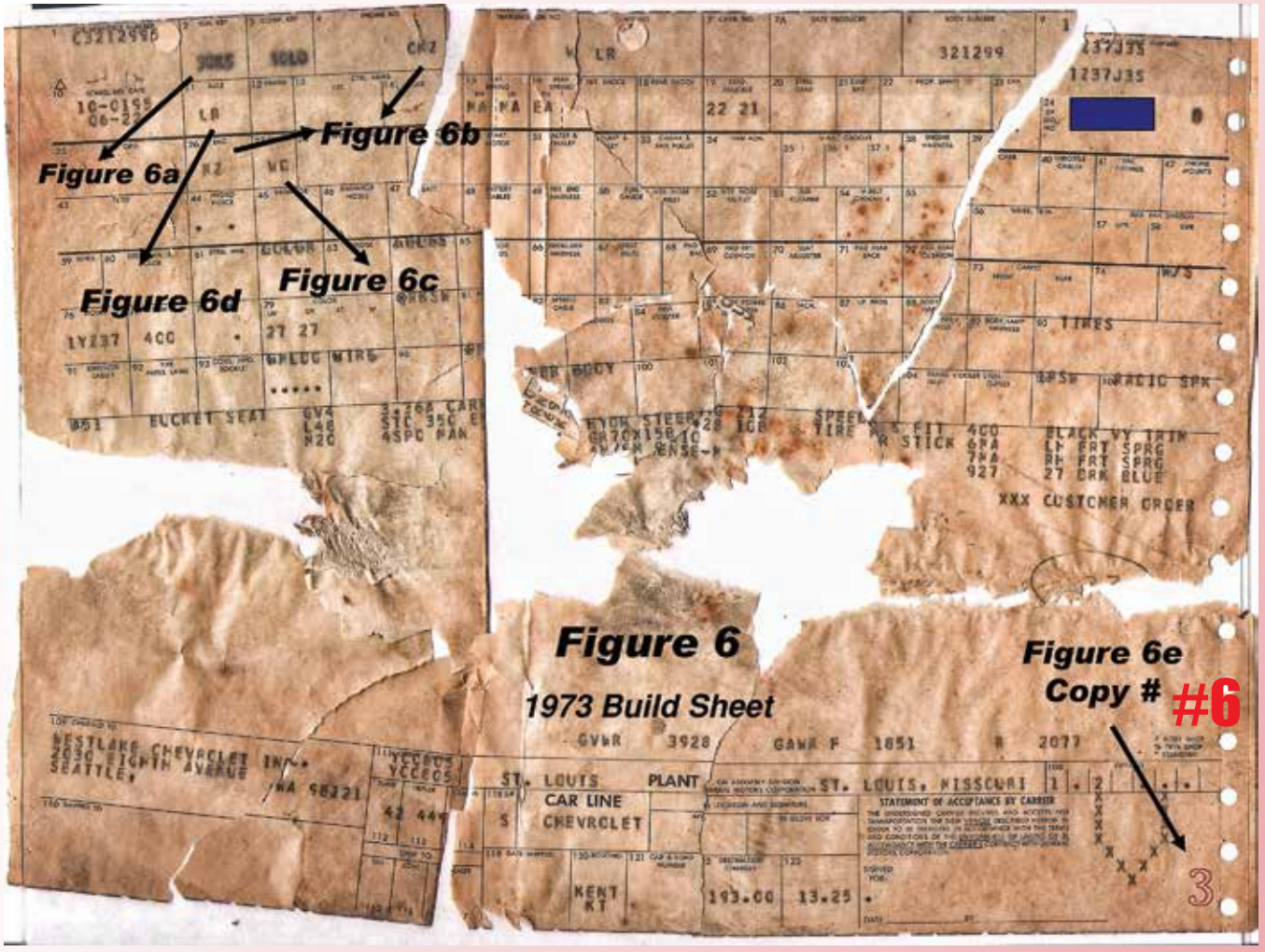
Build Sheet Data Analysis by Model Year

Model year build sheets with similar data sets and common characteristics have been arbitrarily grouped. 1973 stands alone as a transition year and is the least understood, while 1974-76, 1977-80 and 1981-82 are grouped together. These groupings have little to do with NCRS judging groups, or probably anything else you've learned about judging by model classes.

1973 Build Sheet

The most striking feature of the '73 build sheet, next to its landscape format, was the prominent display of key codes (Figures 6a and 7a). As previously described, key codes and the last six digits of the VIN were typed by a typewriter at the trim-tag station as the trim tag and VIN were riveted to the freshly painted body. At some point during the 1975-76 production year, the trim tag station was moved which resulted in the trim tags getting a single coat of paint but no primer.

As stated, 1973 gas tanks were the first to sport a Corvette production manifest, but data display was limited. Build



sheets were printed with the RPO data and destination data. The use of printed broadcast codes saw limited application. It is only speculation, but 1973 was a year of transition from Chevrolet Car Division management to the GMAD assembly plant management. The build sheet was introduced, but in all likelihood, the factory continued to use the methods that had been used during early C3 production, such as the chassis broadcast copy.

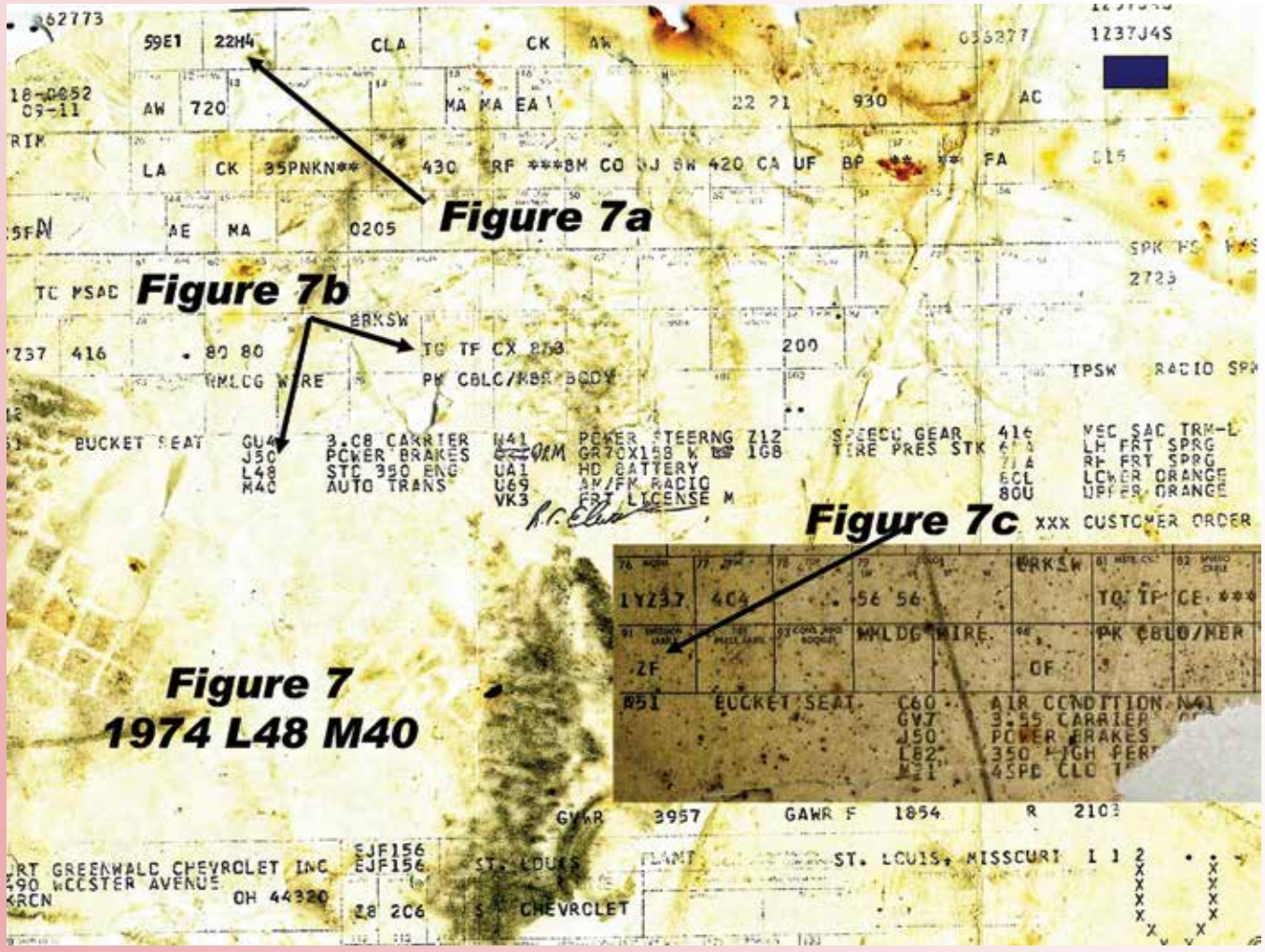
The prominent data sets that are displayed include the RPOs, power team and destination data. Generally, an owner can confirm the power team (motor, transmission and rear-axle gear) installed on the Corvette when the build sheet has been recovered for a given vehicle. In this article, power team is defined as the motor, transmission and rear axle. The data that appears on the build sheet were the broadcast codes for the motor (Figure 6b - Boxes 4 & 26), transmission (Figure 6c - Boxes 5 & 27) and axle (Figure 6d - Box11). Also note that the engine suffix in Box 26 uses only the last two letters of the three-letter code. This format continues until 1977 when all three letters were used in Boxes 4 and 26.

Destination data was displayed and included the dealer of origin, destination charges, GM assembly plant (St Louis), order number, dealer number and GM zone. Interesting enough, the practice of scratching the last three digits of the VIN on the build sheet was still used in 1973 but by 1974, this practice begins to disappear. Note reference to manifest copy number 3 (Figure 6e).

1974-76 Build Sheets

Among 1974 build sheets, a greater display of chassis and mechanical related broadcast codes are seen (Figure 7). Mechanical codes relate to options that included equipment that relate to, attached or ran off engine power or engine vacuum. Additional broadcast codes that were introduced in 1974 include fan belts, radiator, carburetor, alternator, power steering pump and pulley, fan assembly, battery, master cylinder and emission label code.

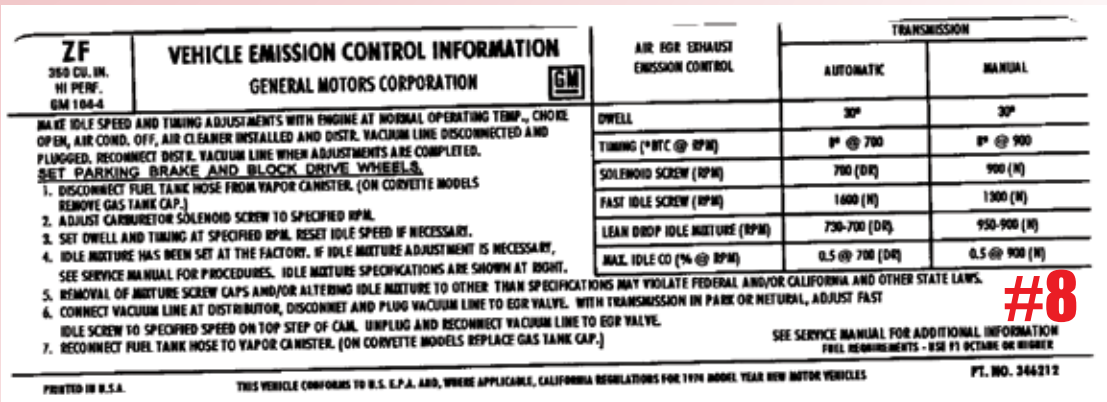
Two examples illustrate how broadcast codes can be used to document factory-installed options. For example, buyers could order RPO J50 power brakes (Figure 7b). The



master cylinder bail wire was wrapped with a broadcast code tag which typically read TG for RPO J50 power brakes. Box 81 on the manifest (Figure 7b) called out the TG broadcast code. The last year for RPO J50 as an option was 1976 and every Corvette built that year was equipped with power brakes. Power brakes became base equipment with model year 1977.

This period paralleled the greater integration of codes for emission control devices, and in 1974 box 91 (Figure 7c) EMISSION LABELS documents the label broadcast code. The label (Figure 8) titled VEHICLE EMISSION CONTROL INFORMATION lists the broadcast code in the upper left corner and a part number in the lower right hand corner. The label lists the recommended idle speed and timing adjustments for a given engine equipped with either an automatic or manual transmission. An owner with an original emission label but questions the power team, could determine the original configuration on the basis of the emission label.

The 1975 build sheets show expanded use of interior trim broadcast codes and the use of abbreviations for trim colors. Among trim components, the steering wheel and the steering column were called out when the buyer specified RPO N37 tilt-telescopic steering column. When RPO N37 was ordered, the vehicle was installed with the



three-spoke steering wheel. Base columns were equipped with the Vega-style steering wheel. Most 1975 and 1976 Corvettes left the factory with this option.

In 1976, RPO YJ8 aluminum wheels were re-introduced as an optional wheel for buyers. The RPO is called out on the manifest, but wheel broadcast codes would have to wait until 1977 for its debut on the manifest.

1977-80 Build Sheets

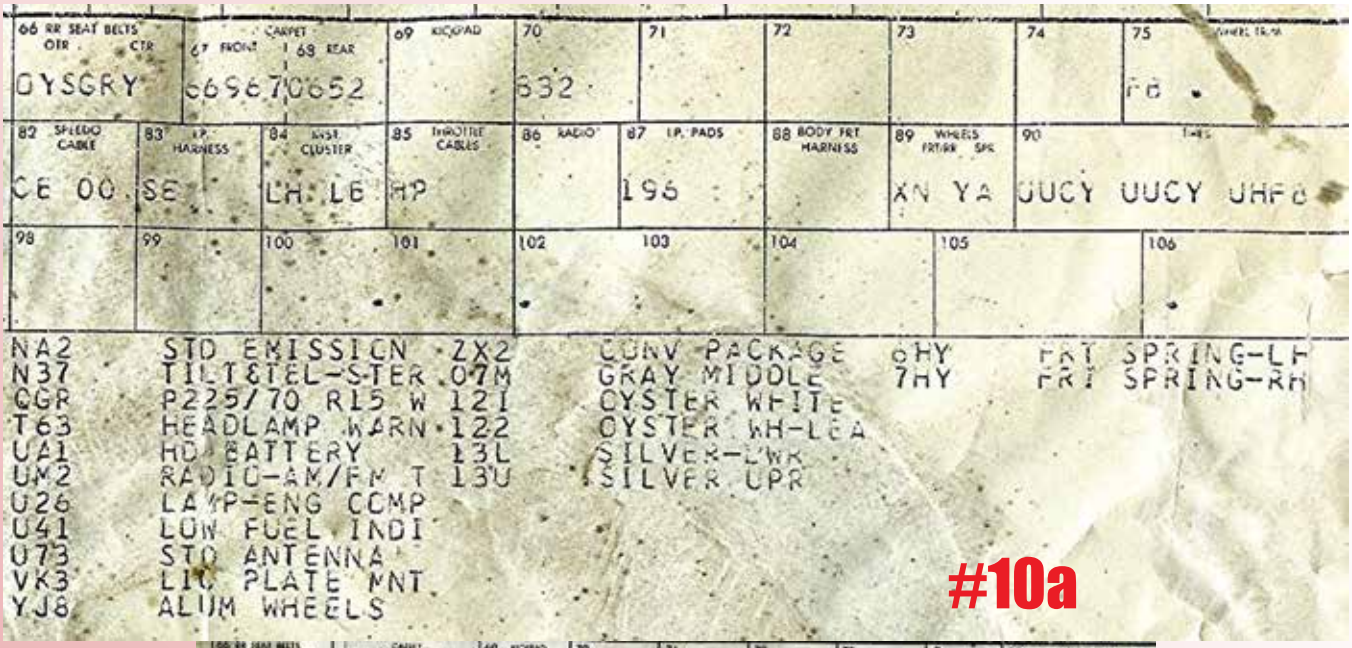
By 1977, build sheets were fully populated with broadcast code data. Unused boxes remained but the data sets displayed would continue through the end of C3 production. In 1977, manifests showed up with DYMO tape concealing key codes (Figure 5b). By 1980, key codes were no longer typed on the build sheets and therefore DYMO tape no longer was used.

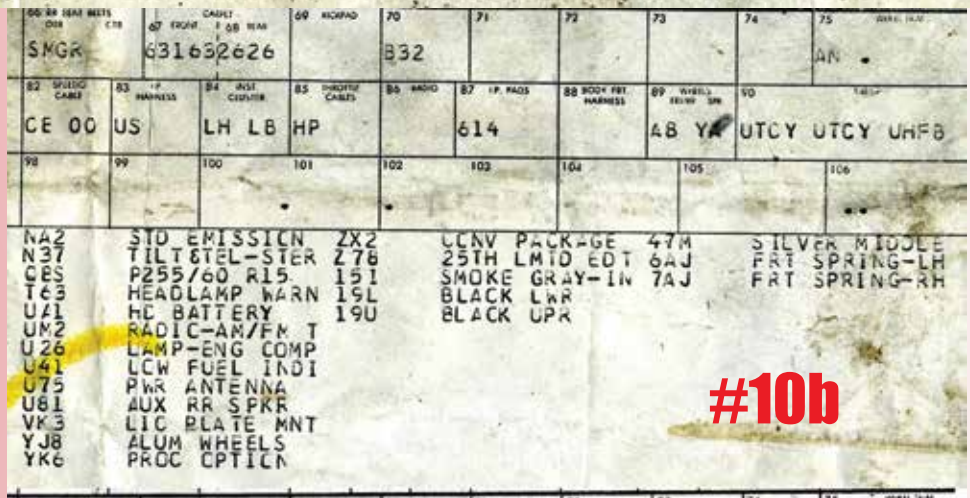
This group of build sheets lists both mechanical and chassis codes. For example, Figures 9a and 9b contrast base suspension codes for an L82 M21 with those for FE7 suspension (ZW is code for M21). Compare the broadcast codes for suspension; front coil springs (Box 15), rear leaf spring (Box 16) and shocks (Box 17, 18). Note that front shock codes were identical for either suspension while coil springs and rear spring show different codes necessary to achieve federally-mandated bumper heights. Also note steering-gear broadcast code WZ. Compare the codes for the front stabilizer bar: base was the 0.875-inch diameter bar while FE7 was the 1.125 diameter bar. By 1978 there were 18 coil-spring applications. The use of the manifest to call out front coil springs dates to 1973 and most likely dates to use of the chassis broadcast copy. Each model year would have a variety of coil spring applications to use based on curb weight. As the manifest was processed, a coil spring was computer-selected based on vehicle curb weight. The broadcast code was printed onto the manifest. During chassis assembly, workers would pick the spring with a matching tag code from the bin.

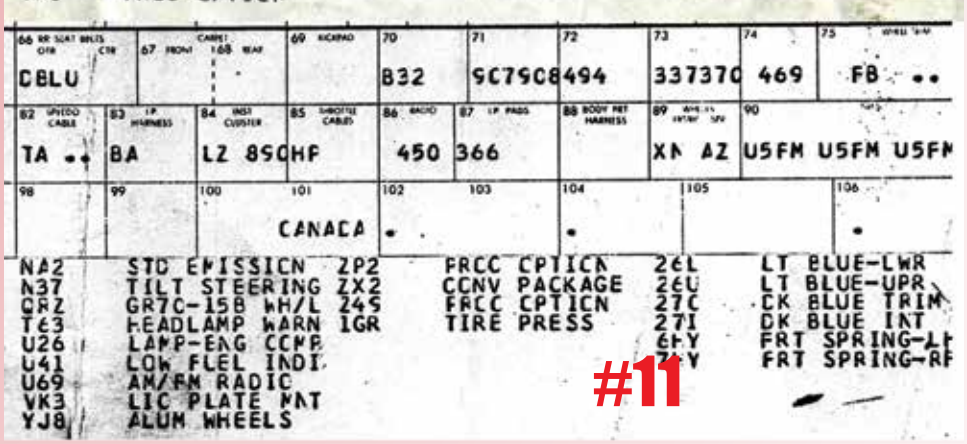
Use of codes to callout labels came to prominence during this period also. Those associated with options were called out such as emission label (Figure 7C Box 91), tire-pressure label (Box 92), fuel-economy label (Box 95) and Canadian export (Box 101). Even the consumer information brochure was called out as well.

Of particular interest during the period, 1977-80 is the broadcast codes as they relate to YJ8 aluminum wheels. In 1976, YJ8 was re-introduced as an option for buyers, but broadcast codes did not show up on the manifest. In 1977, broadcast codes were printed on the manifest and in 1978 codes appear that differentiate both the trim cap for base YJ8 wheels and those intended for Pace Cars. Wheel trim code (Figure 10a Box 75) calls out code FB for YJ8 in 1977 and in 1978. But when Z78 (Figure 10b) is ordered, AN was called out. The trim cap code AN is a chrome cap while trim cap FB has blackout paint on the sides of the cap.

Another RPO observed during this period is process options. Analysis shows all build sheets for 1977-78 reveal that RPO Z78s list both YJ8 and YK6 (Figure 10b). In contrast, all YJ8 for non-Z78s in 1978 and in 1977 list no RPO YK6 (Figure 11). RPO YK6 is labeled PROC OPTION (or process option). It is speculative, but the YK6 broadcast code was probably an override of the YJ8







wheel assembly, and in all likelihood, instructed the factory worker to install the YJ8 wheel with the red pinstripe. Pace Car wheels had a red pinstripe painted around their circumference. YK6 may have also overridden the FB cap for the AN Pace Car cap. The AN trim cap was delivered by the supplier without blackout applied just as the YJ8s were delivered with the red pinstripe. YK6 documented the change-out and was used by factory installers and inspectors. Process RPOs were uncommon until the late model C3 production years.

Also in later model years, merchandising RPOs were linked to special editions, like the Pace Car and the Collector Edition. RPOs were used much more extensively on the manifest to call out subordinate RPOs, parts and processes. One example is RPO Z78 25TH LMTD EDI ('78 Limited-Edition Pace Car). Once Z78 was specified, a number of additional RPOs were listed on the manifest to be included: tires (P255s), decals, spoilers, two-tone

paint scheme, interior, special bucket seats, YJ8s, and even RPO ZX2. As described earlier, ZX2 included dome light, light-vanity mirror, headlamp warning light, and engine compartment lamp.

1981-82 Build Sheets

The use of build sheets to display production data matured during the 1981-82 period. The move of Corvette assembly from St Louis to Bowling Green not only reflected the modernization of Corvette assembly, but was equally accompanied by the use of high-tech, data processing and management systems. It was this system that permits the National Corvette Museum to make build sheet copies available to hobbyists who own a Bowling Green-built Corvette. The seventeen-digit VIN introduced in 1981 with Bowling Green production continues through current Corvette assembly. The difference is that those Corvettes assembled at St. Louis used the seventeen-digit VIN, but it was typed onto the build sheet at the trim-tag station. Once assembly moved to Bowling Green, VIN was printed onto the build sheet along with other data.

So What Does This Mean?

At the conclusion of college research projects, an academic instructor put the question to our class "So what?" He challenged us to articulate the application of what we had accomplished. The point of the question was "What is the practical value of this research?" In the same respect, the question is asked of the study of build sheets? What value is this to NCRS?

We can readily understand the advantage to the owner who holds the DNA for his/her Corvette. But the study of build sheets also has application to document original equipment configurations for publication in NCRS Technical Information Manual & Judging Guide (TIMJG) series. The following illustration shows how build-sheet data can document original installations and how this data can further knowledge published in the TIMJG.

Consider the A.I.R. pump (smog pump) fanbelt installed in 1978: Generally, L48 base applications were not equipped with A.I.R pump while L82s were so equipped to meet federal emission standards. And when C60 air conditioning was ordered, it defined an additional fanbelt application. The tech manual lists two part numbers associated broadcast codes and A.I.R. fanbelt applications shown in Table 1.

As a restorer, I would assume that the tech guide suggests that fanbelt AR is the correct part number for all L82s with A/C. The *1978-79 Corvette Technical Information Manual & Judging Guide*, Third Edition lists Belt #9433616 with code AS limited to L48 applications of high altitude or California emission when the Corvette is equipped with air conditioning. It also lists #9433615 AR as the application for L48 with high altitude or California emission except A/C. So what is the correct application for L82, manual transmission and A/C? Furthermore, what is the part number when the application is either transmission but with L82 and no A/C?

Table 1
1978 A.I.R. Fan Belt Applications (third edition)

Fanbelt Use	GM Part #	Broadcast Code	Application
A.I.R. Pump	9433615	AR	L48 w/high altitude except A/C L48 w/CA emission except A/C L82 with A/C
	9433616	AS	L48 w/high altitude & A/C L48 w/CA emission & A/C

Table 2
1978 A.I.R. Fan Belt Applications (corrected)

Fanbelt Use	GM Part #	Broadcast Code	Application
A.I.R. Pump	9433615	AR	L48 w/high altitude except A/C L48 w/CA emission except A/C L82 with A/C & manual trans
	9433616	AS	L48 w/high altitude & A/C L48 w/CA emission & A/C L82 w/M38 & A/C

The study of 1978 build sheets reveals that fan belt AR was used for L82 manual transmission applications while AS was used with L82 applications when M38 and C60 were called out. Observation of extremely low-mileage Pace Cars confirms that indeed the AR fan belt was installed on L82 manual-transmission applications. Table 2 shows what the TIMJG should look like based on build sheet broadcast code data and field observations.

This example serves to show a greater level of delineation as a result of not only field observation (judging experience) but equally the application of build-sheet broadcast-code data. Judges during field observation could have deducted the recommended points and dismissed the incongruency. But when the vehicle is apparently unmolested, a judge must note and seek confirmation from some third source. Build sheets are the source of data we should turn to in order to confirm field observations when incongruency is noted on the judging field.

Summary

This article has described ten years of late-C3 build sheets and presented an analysis of data applications for Corvette assembly during the waning days of St Louis production. It also describes the transition from St Louis assembly to Bowling Green production and the modern-day build sheet. The later ones are sold routinely through the National Corvette Museum.

The analysis represents the tip of the iceberg of what remains to be learned from the study of build sheets as it relates to late-C3 Corvette production and assembly. It reveals that the knowledge gained from an analysis of original production documents, can influence what we know and the basis for guidance published in NCRS TIMJGs for hobbyists, restorers and judges of 1973-1982 Corvettes.

Hobbyists are quick to segment Corvette generations by either performance or the cosmetics of paint, style and longevity, which are visually discriminating characteristics. This article has demonstrated the continuity that exists among generations and that late-C3 build sheets are a significant piece of Corvette history. It is hoped that this will contribute to a better understanding of later C3s and their unique contributions to this history.

Five observations and/or recommendations are listed for Corvette owners and encourage further study and contribution to the late-C3 knowledge base.

1. Model year 1973 is the least understood in terms of data processing, the transition of data systems and their impact on build documents due to the change from Chevrolet management to GMAD management. This is a subject worthy of additional study.
2. Owners of 1973-1981 St Louis-built Corvettes with known originality and with manifests are encouraged to examine that document, compare installed equipment broadcast codes to codes on the manifest and note discrepancies.
3. 1978 Corvette owners with a non-FE7 Corvette but equipped with L82 and QBS (P255/60R15 tires) and with original shocks are invited to document the GM number of front and rear shocks and correspond with author.
4. Owners of 1979 Corvette owners with a non-FE7 Corvette but equipped with L82 and QBS (P255/60R15 tires) and with original shocks are invited to document the GM number for front and rear shocks and correspond with author.
5. Additional study is required to confirm the body number, assigned sequentially as orders came to the assembly plant prior to both assembly and VIN assignment. It's believed that this BODY NUMBER replaced the hand-written three-digit number described owners discovered on Corvette Order Copies and on body panels.

The author and *The Corvette Restorer* appreciate the C3 owners who have shared their manifests in the spirit that the hobby would benefit. In particular, special thanks go to John Hinckley, Kevin Nelson and Paul Borowski. Kevin and Paul shared their manifests while Paul was the first member to point out the DNA quality of C3 build sheets. John continues to help us understand Corvette assembly.