GM
CHEVROLET TRUCK
1963
#15

178 MODELS ON 19 WHEELBASES ● 8 MODELS ADDED, 32 MODELS DELETED ● SERIES 40
NARROWER FENDERS, BUMPERS FOR MEDIUM AND HEAVY-DUTY MODELS ● SHEAR-TYPE
MODELS ● IMPROVED HOOD LOCK ● AMMETER AND OIL PRESSURE GAUGE FOR MEDIUM-DUTY MODELS ● NEW RADIATOR GRILLE
SIGN FOR LIGHT-DUTY MODELS ● NEW SERIES DESIGNATION PLATES ● NEW SEAT TRIMS ● LADDER-TYPE FRAMES WITH COIL SPR
INDEPENDENT FRONT SUSPENSIONS FOR LIGHT-DUTY CONVENTIONAL MODELS ● I-BEAM FRONT AXLES WITH VARIABLE-RATE FR
SPRINGS FOR MEDIUM AND HEAVY-DUTY MODELS ● VARIABLE-RATE COIL REAR SPRINGS AND OPTIONAL CANTILEVER LEAF-T
REAR SPRINGS FOR CP 10 AND C 20 MODELS ● NEW SALISBURY REAR AXLE FOR CKP 10 MODELS ● SELF-ADJUSTING BRAKES
CORVAIR 95 MODELS ● OPTIONAL POWER BRAKES FOR SERIES 10–30 MODELS ● SIMPLIFIED STEERING SYSTEM FOR MEDIUM
HEAVY-DUTY MODELS ● IMPROVED REAR SHOCK ABSORBER MOUNTING ON MOST LIGHT-DUTY MODELS ● IMPROVED CHASSIS WIR
FOR HEAVY-DUTY MODELS ● INCREASED TIRE AVAILABILITY FOR CORVAIR 95 MODELS ● EXTENDED LUBRICATION INTERVALS
CORVAIR 95 FRONT SUSPENSION AND STEERING ● NEW TRAILER AIR BRAKE OPTION ● NEW 153 CUBIC INCH 4-CYLINDER ENGINE
P 10 MODELS ● NEW 230 AND 292 CUBIC INCH 6-CYLI
SYSTEM DURABILITY FOR ALL MODELS ● NEW TWIN-I
MODELS ● STANDARD EQUIPMENT DELCOTRON GE
NEW 8-SPEED FULLER ROADRANGER TRANSMISSION
SION ● IMPROVED CARRYOVER TRANSMISSIONS ●
8 MODELS ADDED, 32 MODELS DELETED ● SERIES
FOR MEDIUM AND HEAVY-DUTY MODELS ● SHEAR-TY
AMMETER AND OIL PRESSURE GAUGE FOR MEDIUM-DU
SERIES DESIGNATION PLATES ● NEW SEAT TRIMS ● LADDER-TYPE FRAMES WITH COIL SPRING INDEPENDENT FRONT SUSPENSIONS F
LIGHT-DUTY CONVENTIONAL MODELS ● I-BEAM FRONT AXLES WITH VARIABLE-RATE FRONT SPRINGS FOR MEDIUM AND HEAVY-DU
MODELS ● VARIABLE-RATE COIL REAR SPRINGS AND OPTIONAL CANTILEVER LEAF-TYPE REAR SPRINGS FOR CP 10 AND C 20 MODE

CHEVROLET TRUCK 1963

engineering features

1963 CHEVROLET

TRUCK

ENGINEERING FEATURES

ENGINEERING PRODUCT
INFORMATION DEPARTMENT

SEPTEMBER, 1962

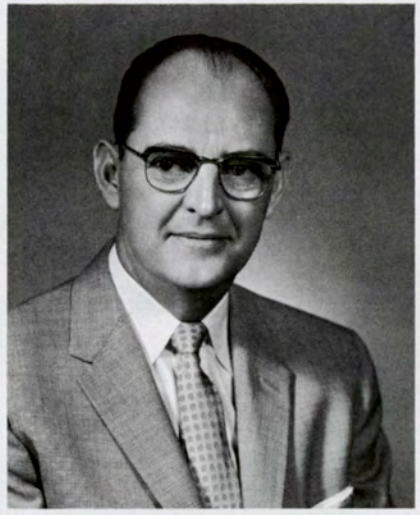

CHEVROLET

FOREWORD

The 1963 truck program – a blend of outstanding new features and important improvements to existing design – furthers Chevrolet policy of providing the best possible product in any competitive category.

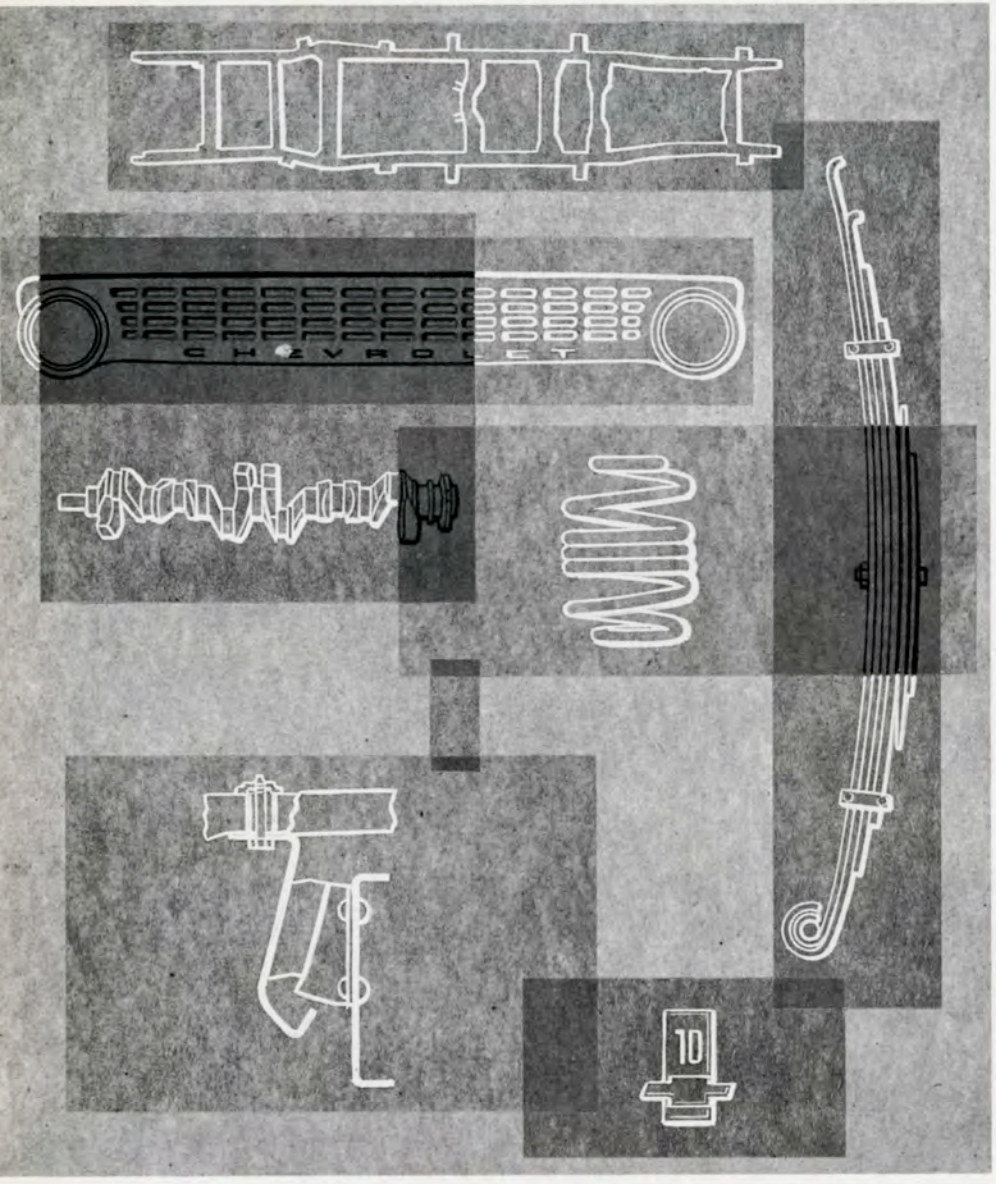
New standards of reliability are evidenced in the job-tailored chassis design; consolidated model line-up; new and improved power teams; and important body refinements. These and other engineering changes for the coming model year are presented in the following pages.

HARRY F. BARR/CHIEF ENGINEER



CONTENTS

THE 1963



CHEVROLET TRUCK

The 1963 truck program establishes new standards of reliability in every weight category, and is a combination of outstanding new features and important improvements to existing designs. Highlights of the new truck line include job-tailored chassis designs; new and improved power teams; consolidated model line-up; important body refinements; and new styling details.

Undoubtedly the most important factor in the new program is the chassis job-tailoring, which provides specific designs to better fit the requirements of each nominal weight rating. Ladder-type frames with gauge increases are released for all conventional line models for greater durability and versatility. Coil spring independent front suspensions for light-duty units and I-beam axles with variable-rate springs for medium and heavy-duty units offer outstanding durability along with very good ride qualities. Increased carrying capacity is featured for Series 10, 20 models with new 2-stage coil rear springs and optional cantilever leaf-type auxiliary springs. A Salisbury rear axle is standard equipment on Series 10 models, furnishing greater durability to the central carrier and the required flexibility to the axle tubes.

Extended-life lubrication, self-adjusting brakes, and increased tire availability are features of the Corvair 95 chassis. A simplified steering system is introduced for medium and heavy-duty models, with one-piece steering gear shafts and more durable flexible couplings to replace the multi-unit shafts and pot-type joints. One-piece steering gear shafts also are released for light-duty models.

Other chassis features include new, improved, optional power brakes for Series 10-30 models; improved rear shock absorber mounting for Series 10-30 models; new, improved insulation for heavy-duty model chassis wiring; and trailer air brake and

emergency air brake options - both new for 1963 - for models with full-air brake equipment.

Another important factor in the new truck program is the power team line-up, featuring new and revised engines and transmissions. A new 153 cubic inch, 4-cylinder engine is standard on Series P10 models. A new 230 cubic inch, 6-cylinder engine replaces the 235 cubic inch unit in all applications, and a new 292 cubic inch, 6-cylinder engine replaces the 261 inch unit. All engines are equipped with either positive or closed positive crankcase ventilation systems. Also, all engines, except the 145 cubic inch Corvair 95 engine, feature increased exhaust system durability and standard equipment Delcotron generators. Other significant changes, with varying applicability, include improved radiator and distributor designs; improved cold weather starting through the use of carburetor heat stoves; a higher compression ratio (9.0-to-1) for Series 10-30 models with the 283 cubic inch engine; and a twin-plate, 12-inch clutch together with an SAE Number two clutch housing for models with the 409 cubic inch engine.

Transmission highlights include a new 8-speed Fuller Roadranger transmission for Series EU80 and models with the 409 engine, eliminating the need for a 2-speed axle; new, larger-capacity, 5-speed Spicer transmission for 409 engine applications; new-design, aluminum-housed, Powerglide transmission for Series CP10,20 models, featuring water-cooling and lighter weight; a new Powermatic transmission for Series CMT80 and models with the 409 engine, having greater input torque capacity; and improved 3, 4, and New Process 5-speed transmissions.

A consolidated model line-up for 1963 eliminates several low-volume units and introduces new vehicles for which the demand is anticipated to be greater. The line-up consists of 178 models on 19 wheelbases -- a decrease of 25 models over the 1962 line-up. In the light-duty category, Model R1244 is discontinued and two new 157-inch wheelbase Series C38 models are added. The medium-duty category comprises the area of greatest change with the deletion of all Series 40 vehicles and the re-rating of all Series 50 vehicles to 1-1/2 from 2-ton. In addition, the three 121-inch wheelbase models in Series 60 are eliminated and replaced with three new 169-inch wheelbase units. Changes in the heavy-duty category consist of eliminating the two 121-inch wheelbase Series 80 vehicles and adding two new school buses, Models S6702H and S6902H.

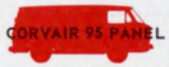
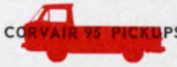
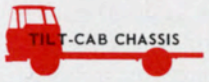
Some GVW ratings are re-aligned: Ratings for Series C10 models are reduced 200 pounds because of front end weight reductions, providing a GVW range from 4100 to 5000 pounds. Also, because of the new 1-1/2 ton nominal rating for Series CL50 models, GVW ratings for these vehicles range from 10,000 to 16,000 pounds. All other ratings are carried forward from 1962 unchanged.

Body and styling refinements, though not extensive, contribute significantly to the 1963 product identification. Highlights include narrower front fenders, running boards, and front bumpers on Series 50-80 models for improved vehicle maneuverability; new hood lock for conventional line models, facilitating hood operation, especially for heavy-duty models; an ammeter and oil pressure gauge for Series 50, 60 models; new radiator grille design for Series 10-30 models; new series designation plates; new seat trims; and important body modifications to Corvair 95 and Series E80 models.

Except for body and styling revisions, the above changes are not effective for Series K10, 20 models until mid-season 1963.

model line-up

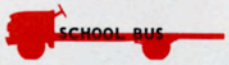
178 MODELS

VEHICLE TYPE	LIGHT-DUTY				MEDIUM-DUTY			HEAVY-DUTY		TOTAL
	1/2-TON	3/4-TON	3/4-TON SPECIAL	1-TON	1-1/2 TON	1-1/2 TON SPECIAL	2-TON	2-TON HEAVY-DUTY	2-1/2 TON	
 CORVAIR 95 PANEL	R1205 (CORVAN)									1
 CORVAIR 95 PICKUPS	R1254 (RAMPSIDE)									1
 STEPSIDE PICKUP	C1404 C1504 K1404 K1504	C2504 K2504	C3604S	C3604						8
 FLAT FACE COWL	C1402	C2502	C3602S	C3602	C5102 C5202 C5302 C5502	C6102S C6302S C6502S	C6102 C6302 C6502	C6102H C6302H C6502H		17
 WINDSHIELD COWL	C1412	C2512	C3612S	C3612	C5112 C5212 C5312 C5512	C6112S C6312S C6512S	C6112 C6312 C6512	C6112H C6312H C6512H		17
 LCF CAB-CHASSIS					L5203 L5303 L5603	L6203S L6303S L6503S L6603S L6903S	L6203 L6303 L6503 L6603 L6903	L6203H L6303H L6503H L6603H L6903H	E8203 E8303 L8203 L8303 L8603	23
 TILT-CAB CHASSIS						T6203S T6303S T6603S T6803S	T6203 T6303 T6603 T6803	T6203H T6303H T6603H T6803H	U8203 T8303 U8303 T8603 T8203 T8803	18
 CONVENTIONAL CAB-CHASSIS	C1403 C1503 K1403 K1503	C2503 K2503	C3603S C3803S	C3603 C3803	C5103 C5203 C5303 C5503	C6103S D6103S C6203S D6203S C6303S D6303S C6503S D6503S C6803S D6803S	C6103 D6103 C6203 D6203 C6303 D6303 C6503 D6503 C6803 D6803	C6103H D6103H C6203H D6203H C6303H D6303H C6503H D6503H C6803H D6803H	C8103 C8203 C8303 C8503 C8803	49
 FLEETSIDE PICKUP	C1434 C1534 K1434 K1534	C2534 K2534								6

8 MODELS ADDED, 32 MODELS DELETED

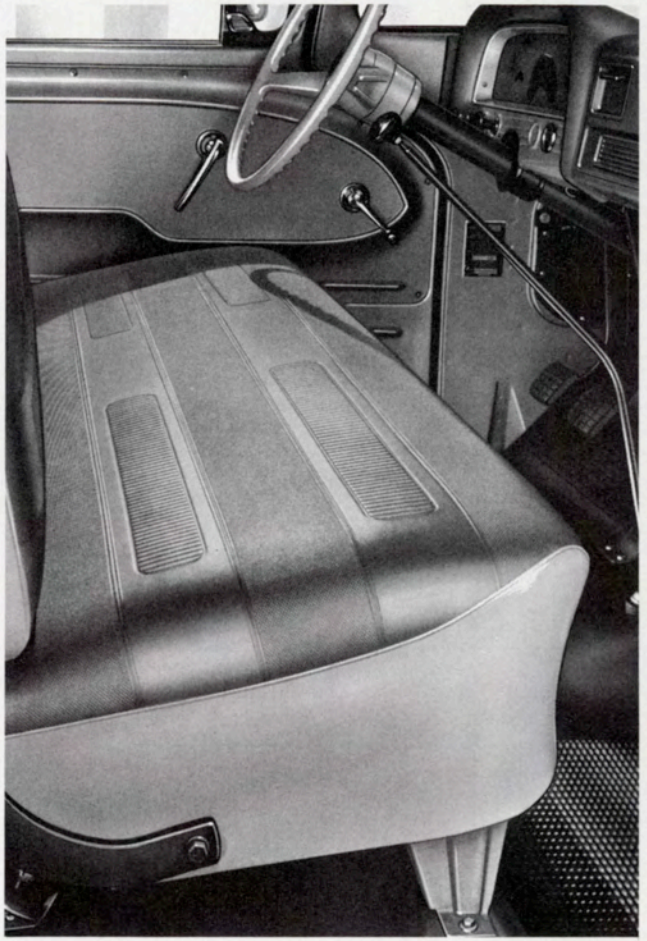
SERIES 50 DOWNGRADED

19 WHEELBASES

VEHICLE TYPE	LIGHT-DUTY				MEDIUM-DUTY			HEAVY-DUTY		TOTAL
	1/2-TON	3/4-TON	3/4-TON SPECIAL	1-TON	1-1/2 TON	1-1/2 TON SPECIAL	2-TON	2-TON HEAVY-DUTY	2-1/2 TON	
 PANEL	C1405 K1405		C3605S	C3605						4
 SUBURBAN CARRYALL	C1406 K1406 C1416 K1416									4
 CONVENTIONAL STAKE		C2509	C3609S	C3609	C5109 C5309					5
 LCF STAKE					L5309					1
 TANDEM									M8303 M8503 M8803	3
 SCHOOL BUS					S5302		S6202 S6402 S6702 S6902	S6702H S6902H		7
 FORWARD CONTROL	P1342	P2342 P2542 P2642		P3342 P3542 P3642						7
 STEP-VAN	P1345	P2345 P2545 P2645		P3345 P3545 P3645						7
GRAND TOTAL	24	15	7	13	19	25	29	27	19	178
	59				73			46		

SERIES 40 DISCONTINUED

NEW SEAT TRIMS



NEW SERIES PLATES

NEW LIGHT-DUTY GRILLE

NARROWER FENDERS, BUMPERS

Exemplifying the newness of the 1963 Chevrolet truck line are handsome and original styling details, both on the inside and outside. The resultant fresh, new appearance not only contributes to pride of ownership, but also to the truck's intrinsic value as a merchandizing tool.

light-duty models

New radiator grille and series designation plate styling enhance Series CK10 through 30 exteriors. Optional narrow-band whitewall tires also contribute to the new light-duty model look.

The radiator grille and headlight bezel assembly illustrated is fabricated of rust-resistant silver anodized aluminum – a carry-over quality feature of the Custom Appearance option. In regular production, the grille and headlight bezels are fabricated of steel and painted Cameo White, with the headlight bezels carrying low-gloss black paint in the flat area surrounding the headlights. Grille lettering is Jet Black for both the regular production and Custom grille.

Except for optional narrow-band whitewall tires, Step-Van styling is carried forward from 1962 without change.

Eye-catching red paint accents on bright and satin-finished chrome distinguish the newly-styled conventional line series designation plates, providing immediate make and model identification to passing truckers. Plate location, too, is new – at the top rear of the front fenders, rather than on the cowl sides. The new plates measure approximately five inches high by four-and-one-half inches wide, overall.


CHEVROLET
1963

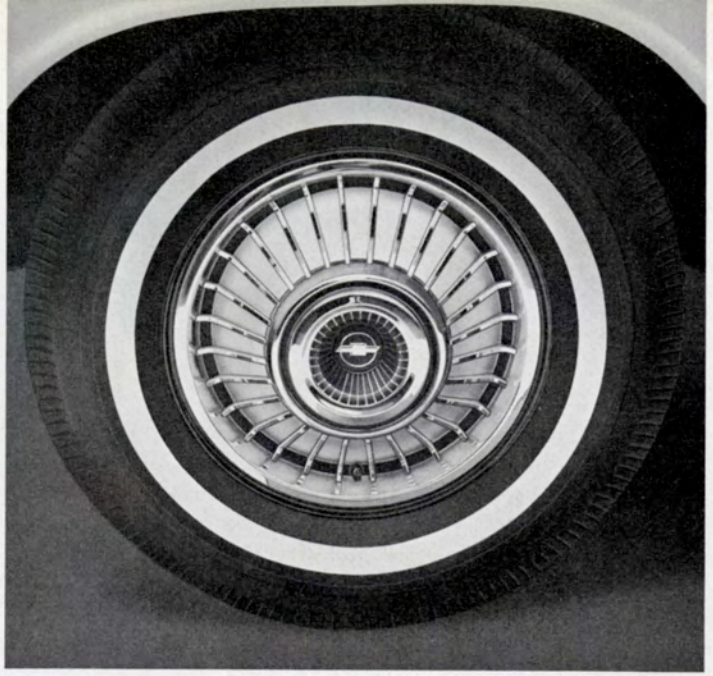

CHEVROLET

medium and heavy-duty models

Narrower production front bumpers, fenders, and running boards; cowl-located front direction signal lights; restyled series designation plates – all contribute to effect in varying degrees a new look for vehicles in the Series 50 through 80 category. C-D-M-S models feature all of the changes; for L models, the new direction signal light location and new series plates are used; E models use only the new series plates. Exterior appearance of T and U models is unchanged for 1963.

Series designation plates for medium and heavy-duty models are identical in design to those of light-duty models. D and E model plates, however, incorporate the word "Diesel" in red paint-filled letters. Plate location is at the top rear of the front fenders, excepting E models where the plates are located low on the cowl sides.

New-design stainless steel accessory wheel trim disks, with painted accents of low-gloss silver and rich black, effectively highlight the handsome Corvair 95 exterior appearance. Wheel color with the accessory disks remains the same as that with regular production hub caps.



Like conventional line models, Corvair 95's display a new series designation plate for 1963. The depressed lettering on the lower portion of the bright chrome plate is filled with black paint, while red paint is used for the depressed Chevrolet trademark field. Plate location remains unchanged.

corvair 95 models

interiors

The 1963 truck interiors generally are carried forward from 1962. Changes other than new seat trims, described below, include a new fawn interior color treatment for T and U models; a new white color for the dome lamp base; a new trim plate for the Corvair 95 instrument cluster; and the elimination of the dispatch box door on Corvan and Rampside models.

T and U model interior body panels, formerly silver and charcoal, are sprayed in 1963 with fawn paint. Fawn also is used for the steering column jacket, seat frame, and seat trim. Color treatment of all other components remains unchanged.

For 1963, the Corvair 95 instrument cluster carries a new silver anodized aluminum trim plate. Formerly embossed, the new plate is finished with alternating bright and dull horizontal stripes.

REGULAR PRODUCTION SEAT TRIM

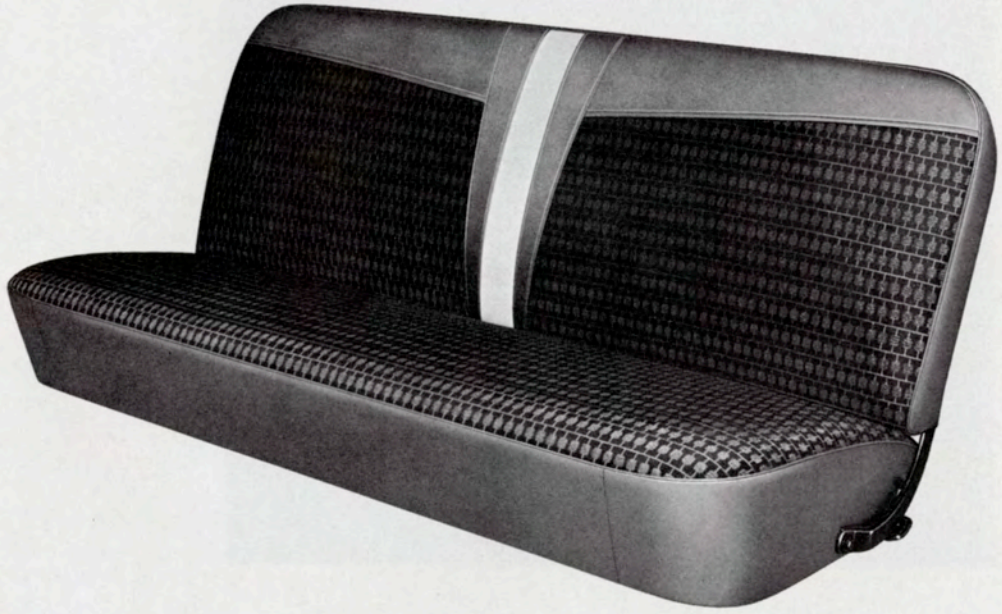
Both the conventional and Corvair 95 line regular production seats feature new, all-vinyl trim. The embossed seat coverings are medium fawn, while light fawn is used for the fine-grain vinyl facings.

Seat trims for E-T-U models are unchanged, except for color which is dark fawn rather than charcoal.

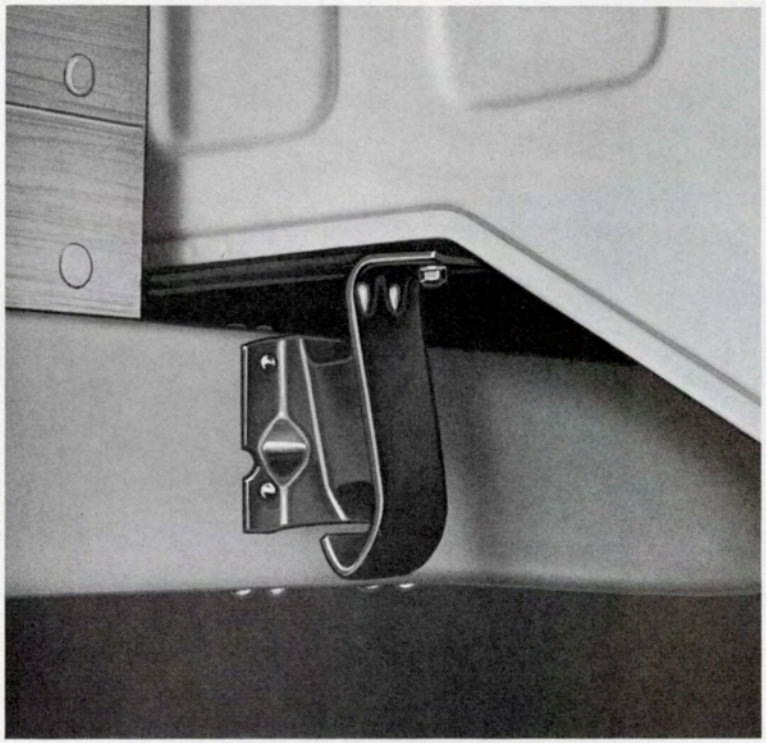
CUSTOM SEAT TRIM

Nylon-faced pattern cloth and fine-grain vinyl comprise the new Custom seat trim for conventional and Corvair 95 models. The cloth coverings are executed in a combination of medium and dark fawn tones, with either medium fawn or red, depending upon exterior body color, being used for the vinyl facings, bolsters, and inserts. Red is used with red, gray, and white exteriors, while medium fawn is used with all other exterior colors. The central backrest insert, however, always remains white.

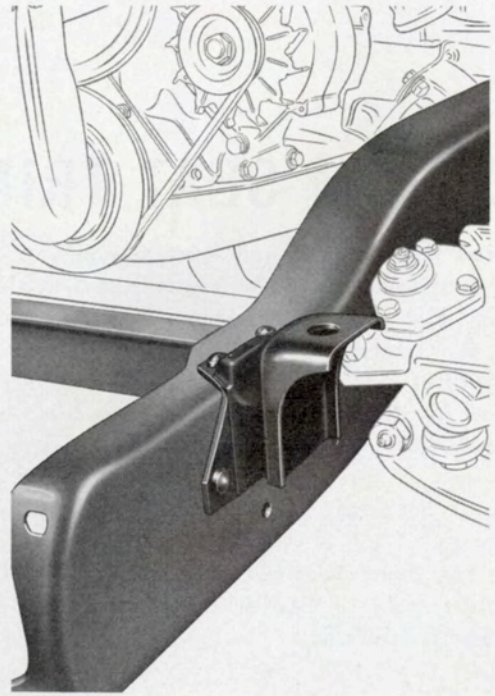
Custom seat construction is unchanged, and the Custom construction again is available optionally with regular production all-vinyl trim.



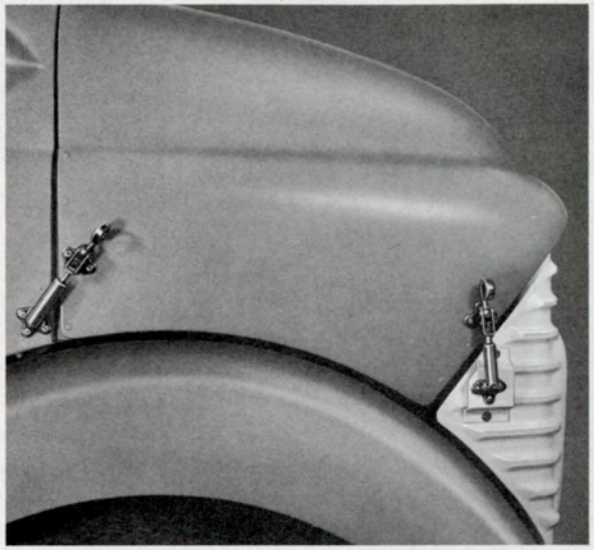
NEW BODY MOUNTS



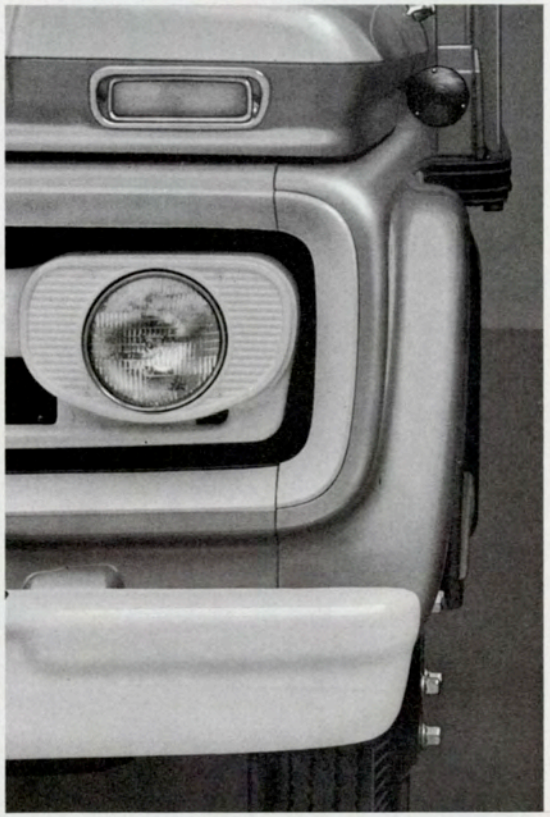
NEW SHEET METAL MOUNTS



NEW HOOD LATCHES



NARROWER SHEET METAL – SERIES 50 THRU 80



SHEAR–TYPE

CAB AND SHEET METAL

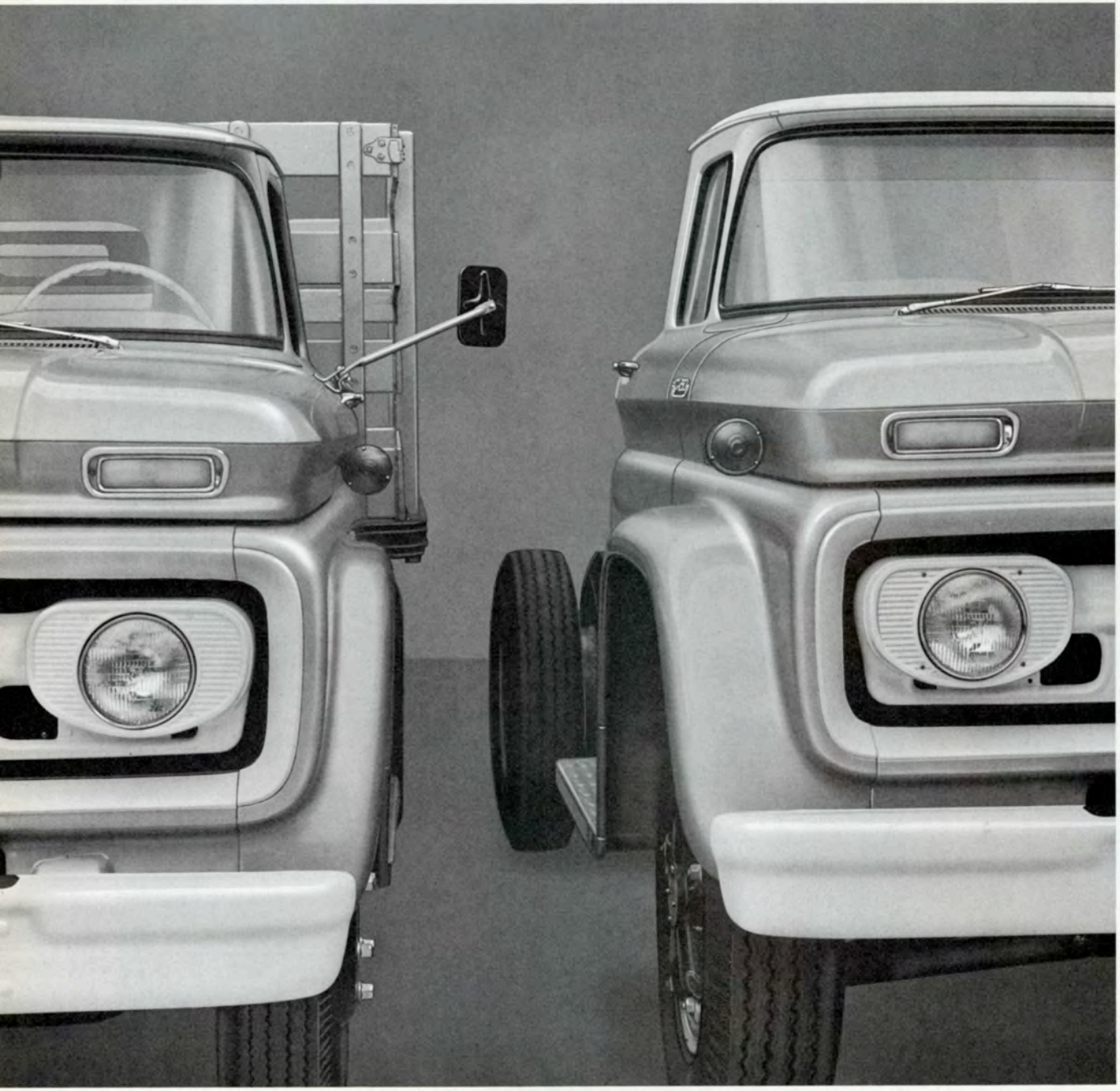
MOUNTS

Both cab durability and ride are improved through the lateral stability and uniform rate achieved with new shear-type body mounts – a Chevrolet first in the industry. The new mounts, consisting of two metal brackets bonded together with a rubber cushion, replace the former double rubber biscuit mounts at the Number 2 body mount position for Series CK20-30 cabs, platforms, and pickups and for Series CDLM50-80 cabs and platforms.

A safety feature of the new mount assembly is that the bracket attaching to the cab curves under the bracket attaching to the frame, providing a means of holding the cab to the chassis should the rubber cushion separate from the brackets during, for example, extremely severe jounce.

Shear-type front sheet metal mounts also are released for Series CK10, 30 single-unit body models and all Series CDLMS50-80 models, replacing the former solid-type mounts. With their inherently more uniform rate achieved through rubber held in shear, the new mounts considerably lessen sheet metal shake, improving the durability potential of these components.

Left and right hand side mounts, shown at the left, are used for the above Series 10, 30 models and a single, central mount, shown above, is used for the above Series 50-80 models.

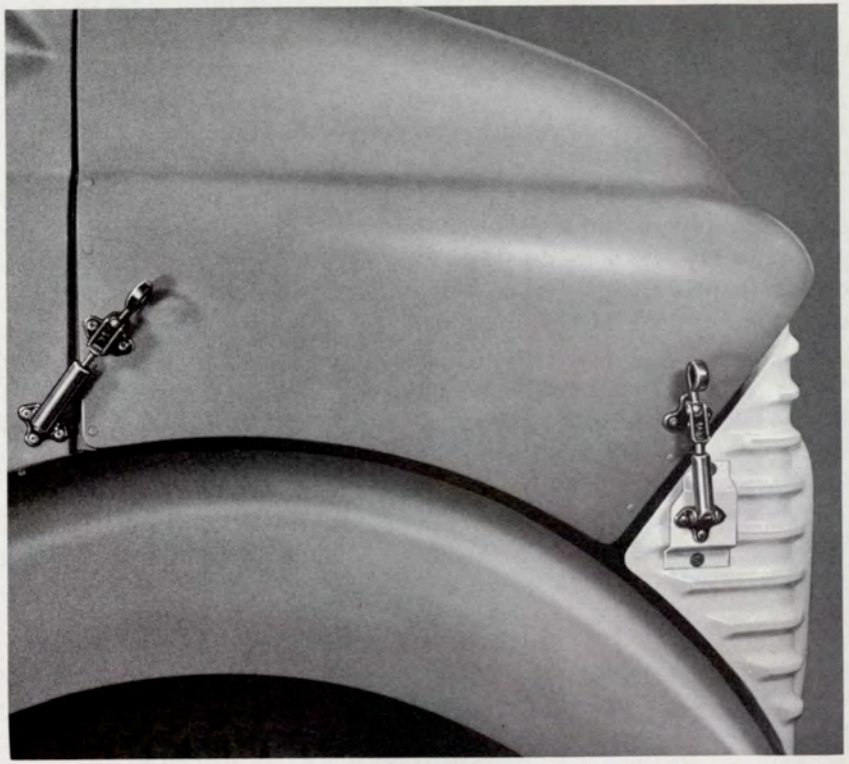


NARROWER FRONT SHEET METAL

SERIES 50-80

The comparison at the left between a 1963 and 1962 vehicle illustrates the considerable decrease in fender, running board, and bumper width for 1963 Series CDMS50-80 models with 4, 5, and 7,000 pound capacity I-beam front suspension equipment. The overall sheet metal width decrease – amounting to 7.2 inches – vastly improves vehicle maneuverability, such as in obstructed terrain. Use of I-beam front suspensions for the above models also reduces front tread width, further contributing towards better vehicle maneuverability.

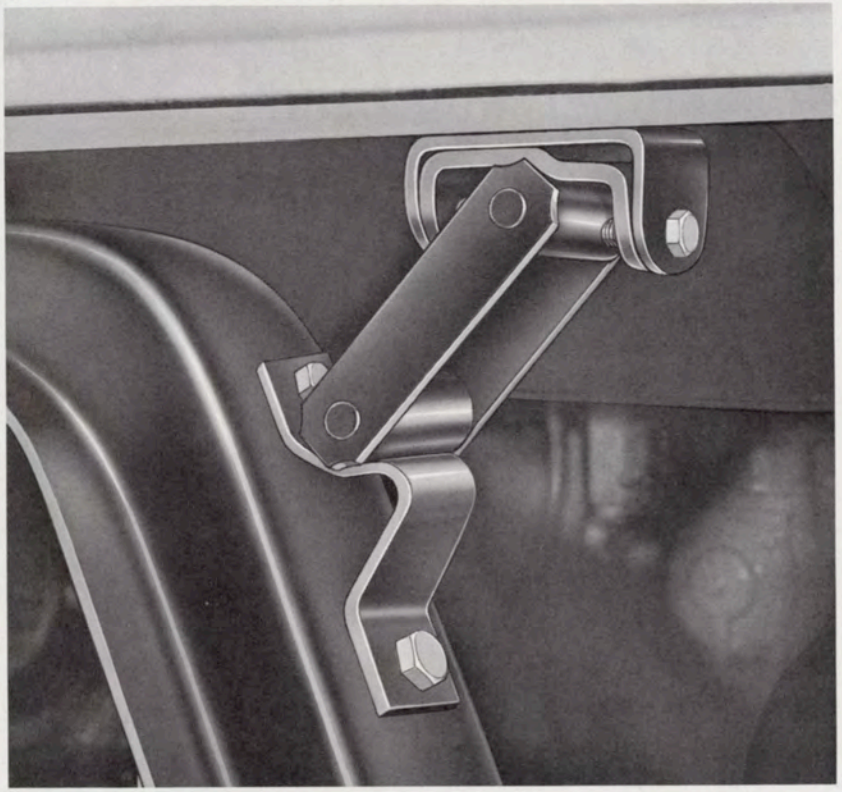
CM80 models with the optional 9,000 and 11,000 pound capacity I-beam front suspensions retain the 1962 front fenders, running boards, and front bumpers. ELTU sheet metal components are carried forward from 1962 dimensionally unchanged.



SERIES E80 IMPROVEMENTS

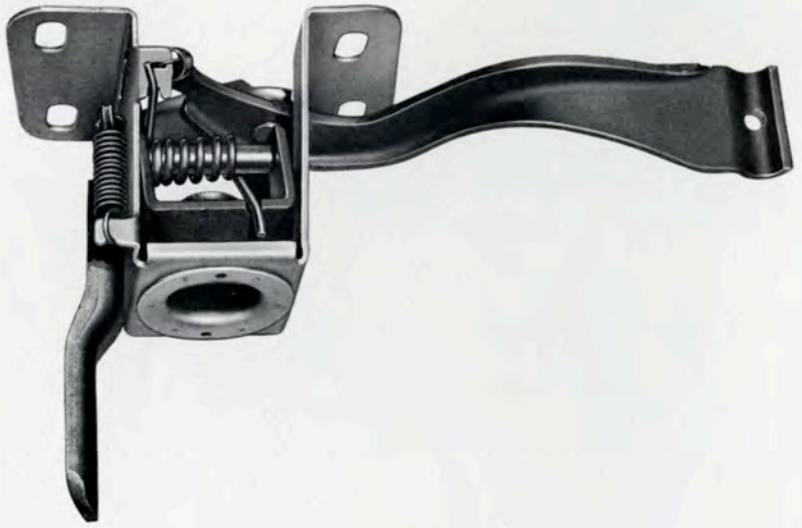
In addition to extensive reinforcing of the body structure, Series E80 cab and sheet metal durability is vastly improved with new flexible hood mounting and shackle-type rear body mounting systems.

The flexible rather than fixed hood panel mounting utilizes a slip-fit attachment of the central hood panel to the cowl and spring-loaded latch-type locks for the left and right hand hood panels. The shackle-type rear body mounts – spaced further outboard of the cab centerline than the former solid-type mounts for more stabilized vertical support – consist of rubber-bushed pendulums connected to the cab and chassis with brackets. The new mounting systems permit the chassis to move both torsionally and laterally without imparting these movements to the cab and sheet metal.



OTHER NEW BODY FEATURES

REDESIGNED HOOD LOCK



NEW HOOD LOCK. A new design hood release for C-D-K-L-M-S models facilitates opening the hood panel by simply pulling outward on the release lever rather than lifting the lever upwards as was necessary in the previous design. Other hood lock assembly components remain basically unchanged.

IMPROVED HEADLAMP AIMING. For 1963, Series CDMS50 through 80 headlamp bezels are attached directly to the radiator grille rather than to the headlamp assemblies, eliminating the change in headlamp aiming which previously could occur through overtightening of the bezel attaching screws.

CORVAIR 95 DISPATCH COMPARTMENT. A new dispatch compartment is released for the Corvan (Model R1205) and the Rampside (Model R1254). The new dispatch compartment is basically similar to the superseded design, but does not incorporate a door. No door is available optionally. For appearance, the former provisions for door stops and door hinging are eliminated.

CORVAN REAR DOOR WINDOWS. For 1963, the regular production rear load doors of the Corvair 95 panel do not incorporate windows. As a result, an outside rear view mirror for the left hand front compartment door is offered as regular production equipment, replacing the former inside rear view mirror. Windows for the rear load doors, however, are available as a regular production option; in this instance, the outside rear view mirror remains as regular production equipment.

CORVAIR 95 ENGINE GRILLE. The engine air outlet grille below the rear bumper of the Corvan (Model R1205) and the Rampside (Model R1254) is eliminated as regular production equipment and released as an additional part of the 1963 Custom Equipment option for these Corvair 95 models.

NEW MIRROR OPTION. Formerly available only as dealer-installed accessories, both the large and small West-coast type outside rear view mirrors now are released also as regular production options. Paint treatment for the West-coast mirrors remains Cameo White for both the mirror case and arms.

NEW DIRECTION SIGNAL LIGHT LENSES. To improve direction signal light visibility, amber lenses are released for the combina-

tion parking and direction signal light units on Series 10-30 models. Since separate direction signal lights with amber front lenses are used on Series 50-80 vehicles, clear lenses are retained for the parking lights of these models.

NEW INSTRUMENTATION, SERIES 50, 60. An ammeter and oil pressure gauge are released as regular production equipment for all Series 50 and 60 vehicles except flat-face cowls and tilt-cabs, replacing the tell-tale lights formerly used. This release is effected with the use of the Series 80 instrument cluster.

NEW TACHOMETER. A new tachometer with an internal electronic transmitter is released for both regular production and optional applications. Because of the electronic transmitter, the new unit affords greater durability, accuracy, and compactness.

The new design eliminates the former vibrators and mercury cells, transforming by electronic means engine electrical impulses into needle movement. Thus, no inter-connecting parts are used as previously. With fewer parts, overall accuracy is improved and durability is increased.

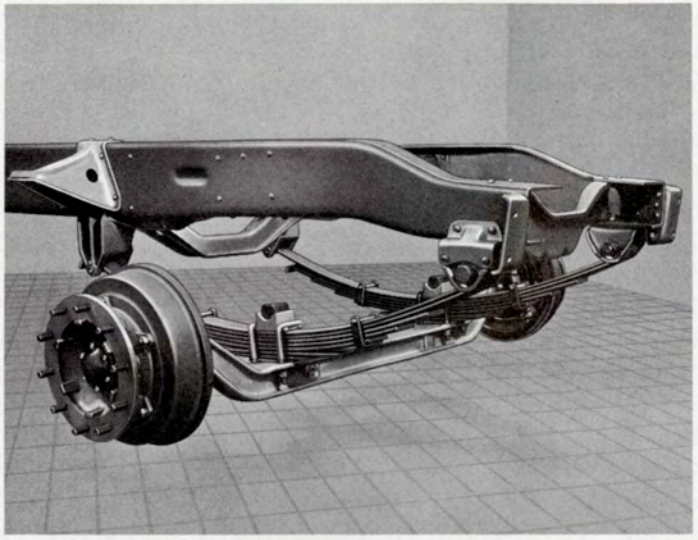
IMPROVED RADIO. A fully-transistorized accessory radio replaces the combination tube and transistor design used in 1962. Transistors offer several advantages such as longer life, which is approximately three times that of a vacuum tube under average operating conditions, and increased resistance to shock. In addition, warm-up time with a transistorized radio is practically negligible when compared to the 30 to 40 second warm-up time of a vacuum tube radio. This feature is mainly attributable to the absence of tube heaters, which not only require time to heat up, but also draw more power to operate the radio. Power consumption with the new fully-transistorized unit is approximately 30 percent less. Coupled with the printed circuit previously used, the all-transistor radio affords increased durability and reliability.

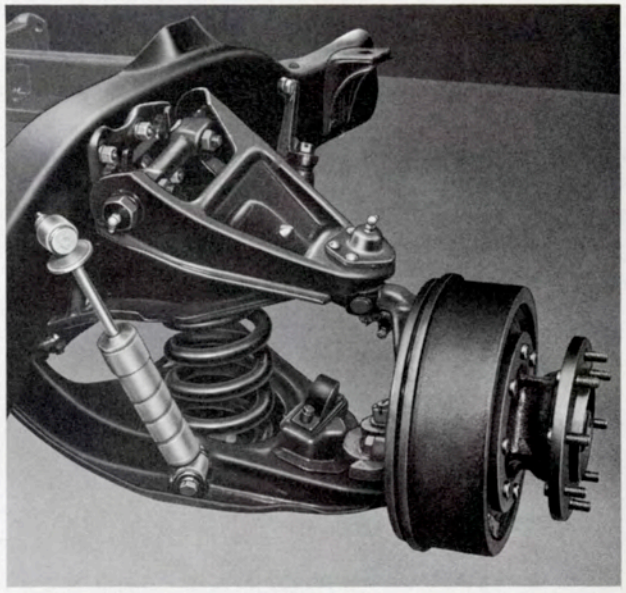
NEW ANTENNA. A new, more durable antenna featuring a hermetically-sealed base is used on all radio-equipped trucks in 1963. Sealed base construction protects the electrical connections from possible structural damage and short circuiting caused by exposure to corrosive elements. The telescoping antenna is of 4-section design, replacing the 3-section design previously used.

SERIES E80 STONE SHIELD. For 1963, a stone shield is added to the front bumper of Series E80 models. Aside from its practical value, the stone shield improves front end appearance by covering the vertical gap which existed previously between the top of the front bumper and the bottom of the radiator grille and side access doors. The stone shield is painted the same color as the bumper, which is either Cameo White or Pure White - depending upon the main body color.

IMPROVED SERIES E80 CAB. Durability of the Series E80 cab structure is immensely increased with additional reinforcements, extended welding, and improved component attachment. A total of five new reinforcements are added to the underbody, including a new side sill-to-front cross sill reinforcement, a new center cross sill reinforcement, and a new floor panel top reinforcement. Fifteen new reinforcements are added to other areas of the body structure such as the cab rear panel, roof header panel, and hinge pillar. Additional body strength is gained through the welding of instrument panel and roof header panel joints and the use of bolts to supplement the cowl-to-dash panel attachment.

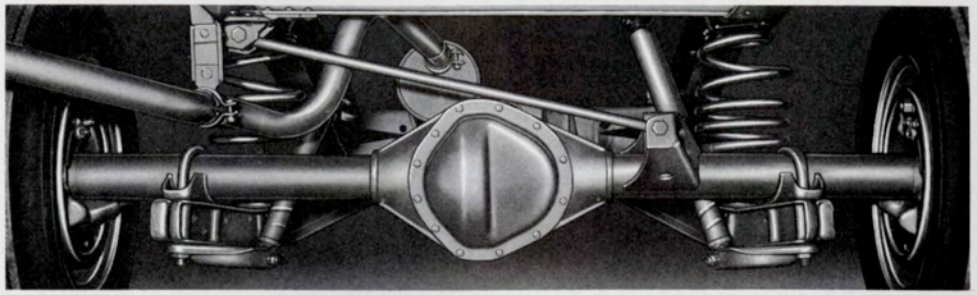
I-BEAM AXLES WITH VARI-RATE FRONT SPRINGS

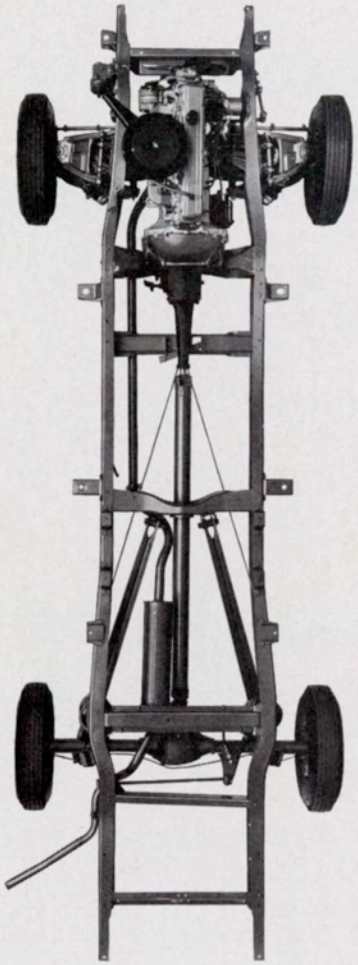




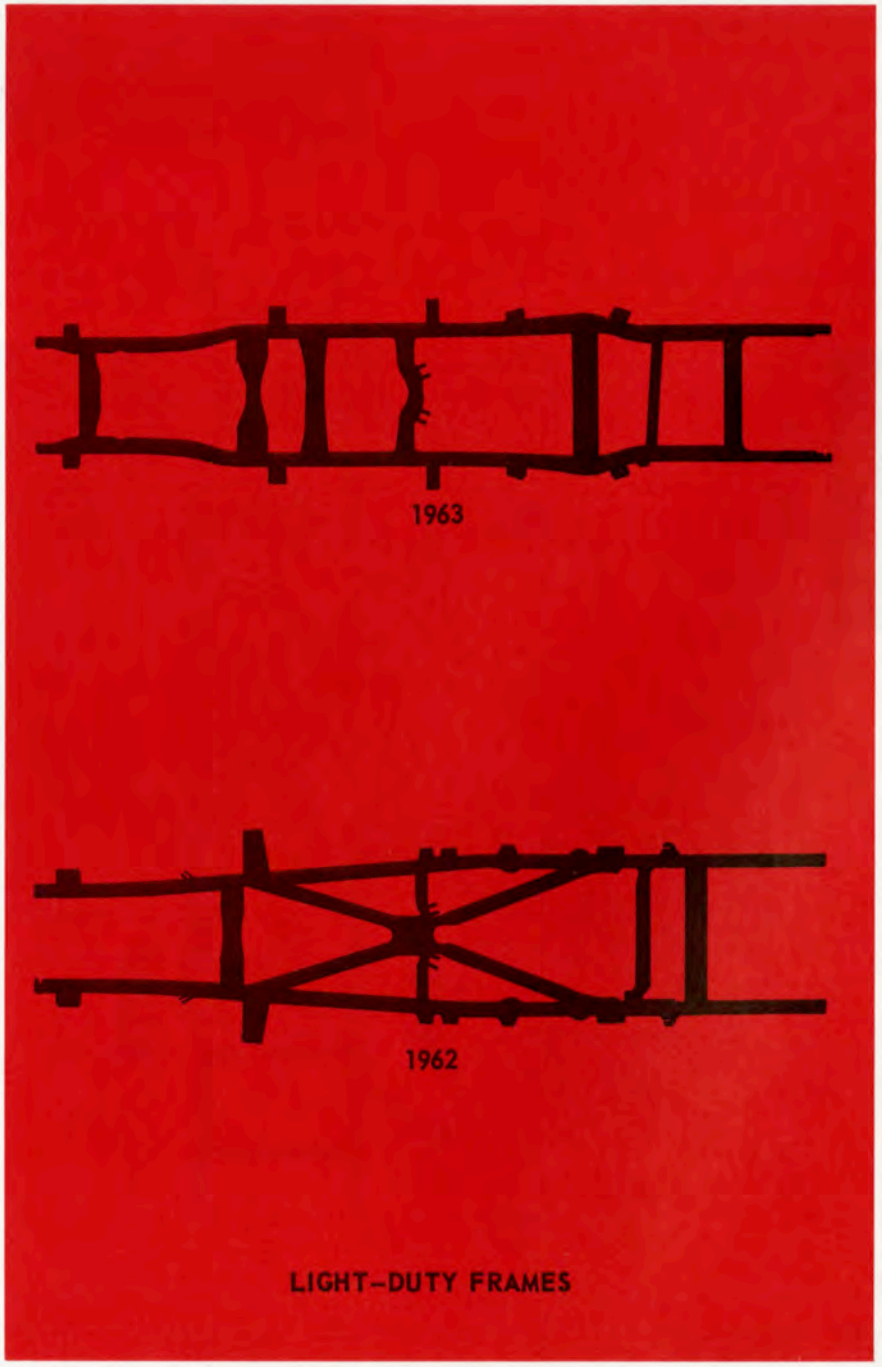
COIL SPRING INDEPENDENT FRONT SUSPENSION

NEW REAR SUSPENSION, AXLE, BRAKE FEATURES





LADDER-TYPE FRAMES



JOB-TAILORED

Exemplifying the major vehicle design objective of job-tailored chassis design, Chevrolet frames for 1963 are extensively revised in all weight categories. In addition to completely new frame designs in most instances, gauge thicknesses of frame side rails are changed to better suit vehicle job requirements. These frame innovations for 1963, like those of other chassis components, point to new standards of reliability in the trucking industry.

LIGHT-DUTY FRAMES. Ladder-type, channel-section frames replace the X-member, box-section frames formerly used on Series C10, P10, and C20 models. Of riveted rather than welded construction, the new frames are generally 34 inches wide, tapered at the front, and slightly widened at the rear kick-up to accommodate the rear coil springs. Overall frame lengths remain unchanged. Among other benefits, the new ladder-type, 34-inch wide frame design facilitates body interchangeability for fleet users and simplifies the accommodation of special bodies by body builders.

Side rail gauge thicknesses of the new frames are substantially increased for greater strength. On C10 and P10 models, gauge thickness of the side rails is increased to 0.156 inch from 0.119 inch, and, on C20 models, to 0.194 inch from 0.149 inch. The frame material yield point strength remains at 39,000 psi.

In addition to utilizing more crossmembers per unit, the new frames feature new-design crossmembers in all positions, such as the Number 3 crossmember which not only supports the frame side rails, but also provides the means of attaching the rear suspension control arms. The front ends of the frame side rails are considerably modified, too, for a more rigid bumper attachment, utilizing a cup design in place of the former slotted arrangement.

Series C30 frames are generally the same as their 1962 counterparts from the 15-inch line rearward. Ahead of this point, however, the right hand side rail is flared upwards to permit access to the new 230 engine. The side rail forward sections also incorporate the improved bumper attachment feature of the lighter vehicles. Series K10, 20 frames incorporate the same revisions as the Series C30 frames. Side rail

FRAME DESIGNS

gauge thickness, however, is reduced from 0.194 to 0.141 inch.

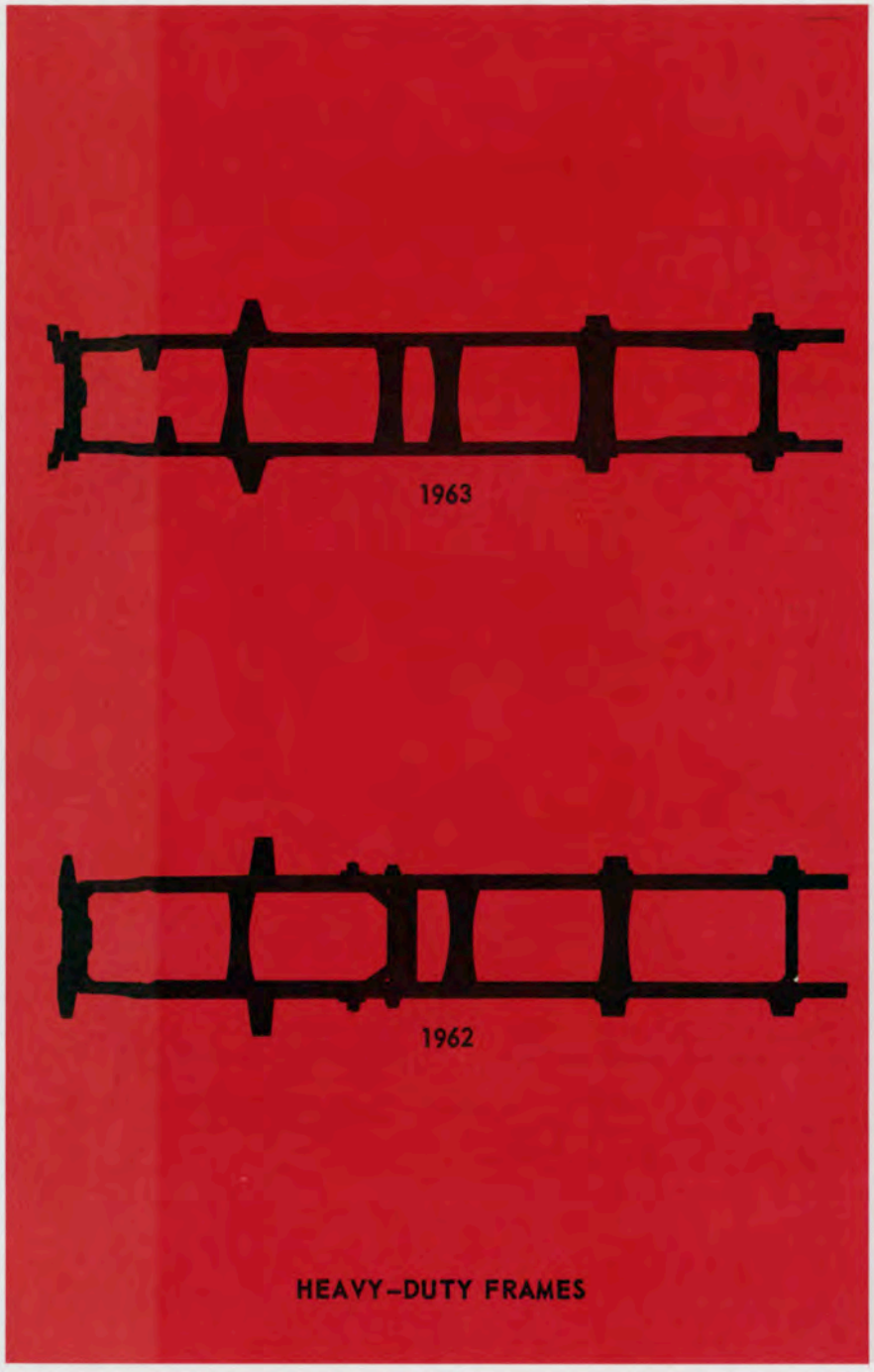
Frame assemblies for Series P20, 30 models are essentially unchanged except for a new tubular engine front support crossmember and the flaring downwards of the lower side rail flanges to accommodate the drop-center transmission support crossmember used for Powerglide transmission installations.

MEDIUM AND HEAVY-DUTY FRAMES. Straight channel-section frames replace the box-section design of the previous year on all Series 50 through 80 models. Although the basic side rail configurations are not appreciably different, side rail gauge thicknesses for most models are substantially increased. This, together with a more optimum combination of torsional and beaming strength, provides for significant increases in durability.

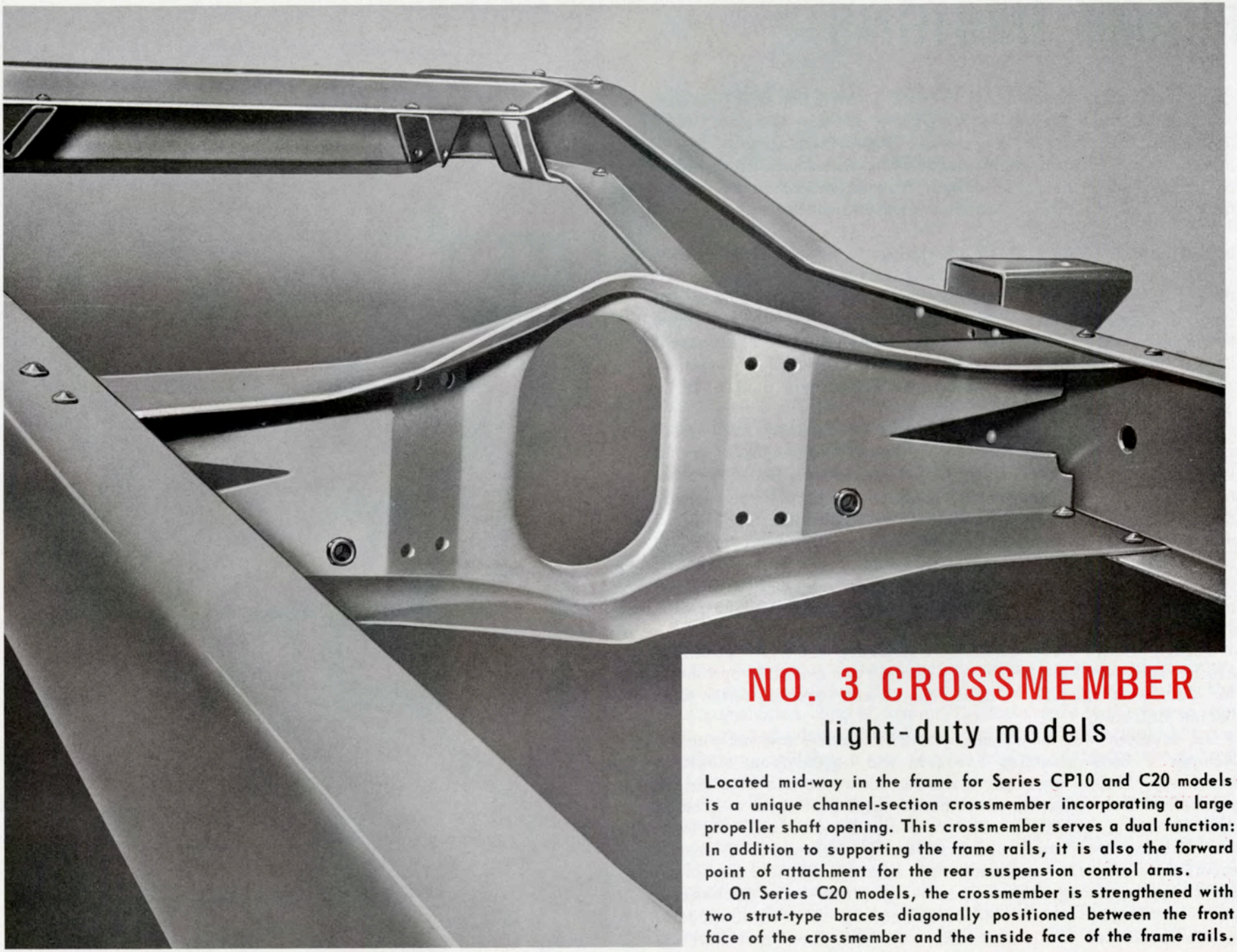
Discontinued for 1963 are the 30 and 49-inch frame outer reinforcements and the base equipment full-length outer frame reinforcements for Series E80 models. Availability of optional full-length outer frame reinforcements -- 3.16 inches longer than those of the previous year -- is confined to Series CELT80 models, Series D60 models, and Series CLT60 models with RPO FO3, Heavy-Duty Frame Equipment. On Series M80 models, where outer frame reinforcements are base equipment, the reinforcement lower flange width is increased 2.03 inches for greater durability.

Though Heavy-Duty Chassis Equipment (Beaver option) is discontinued for 1963, heavy-duty frames are available optionally for Series 60 models. These frames are identical to the base Series 80 frame.

All medium and heavy-duty models feature new hat-section Number 1 body mounting brackets and engine front mounting brackets. Frame crossmembers for these models also incorporate several design improvements which contribute to greater overall frame durability such as a new hat-section, alligator-jaw Number 2 crossmember, replacing the former K-shaped member; a new rear crossmember adjacent to the rear spring front hanger, having an attachment integral with that of the hanger; and a new dropped-center rear crossmember for Series 80 models, which facilitates trailer hook-up with fifth wheel installations.



HEAVY-DUTY FRAMES



NO. 3 CROSSMEMBER

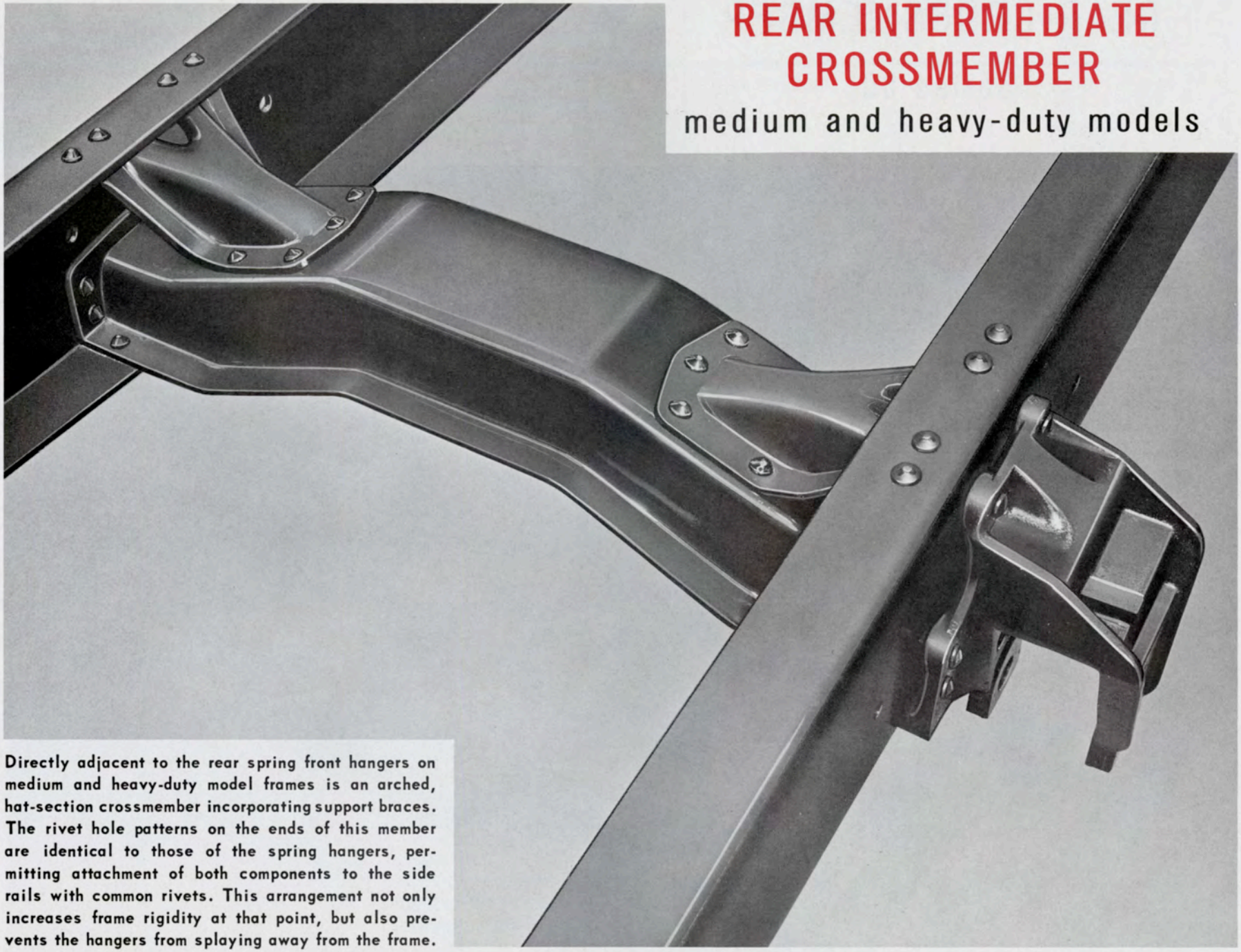
light-duty models

Located mid-way in the frame for Series CP10 and C20 models is a unique channel-section crossmember incorporating a large propeller shaft opening. This crossmember serves a dual function: In addition to supporting the frame rails, it is also the forward point of attachment for the rear suspension control arms.

On Series C20 models, the crossmember is strengthened with two strut-type braces diagonally positioned between the front face of the crossmember and the inside face of the frame rails.

REAR INTERMEDIATE CROSSMEMBER

medium and heavy-duty models

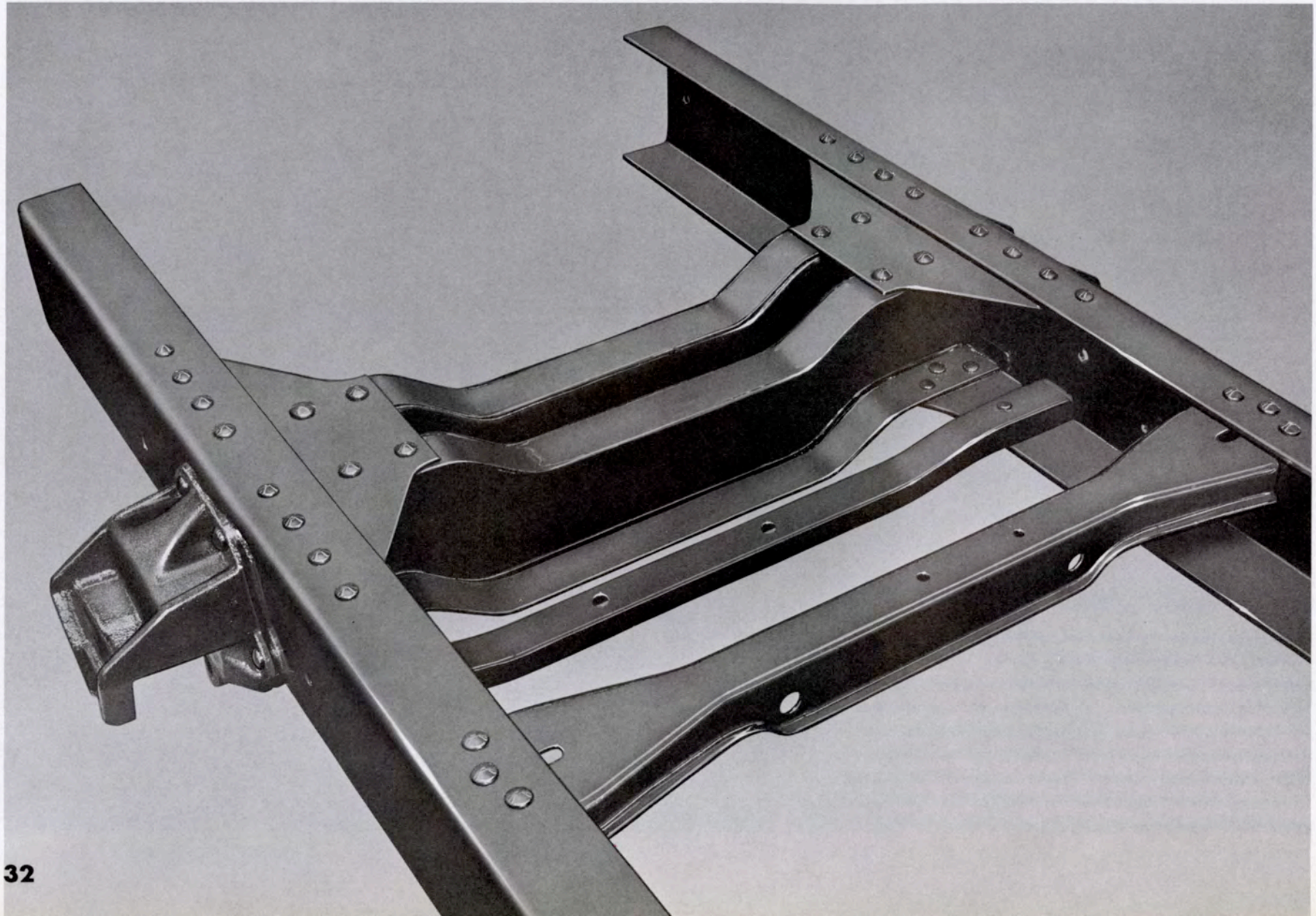


Directly adjacent to the rear spring front hangers on medium and heavy-duty model frames is an arched, hat-section crossmember incorporating support braces. The rivet hole patterns on the ends of this member are identical to those of the spring hangers, permitting attachment of both components to the side rails with common rivets. This arrangement not only increases frame rigidity at that point, but also prevents the hangers from splaying away from the frame.

REAR CROSSMEMBER

Series 80

The rear crossmember arrangement on all Series 80 frames consists of two drop-center, channel-section crossmembers placed back-to-back. These sturdy members are reinforced with triangular-shaped gussets riveted to the top flanges of the members and to the frame side rails. The drop-center design of the crossmembers affords clearance for trailer hook-ups with fifth wheel installations, eliminating the former rework of rear members.

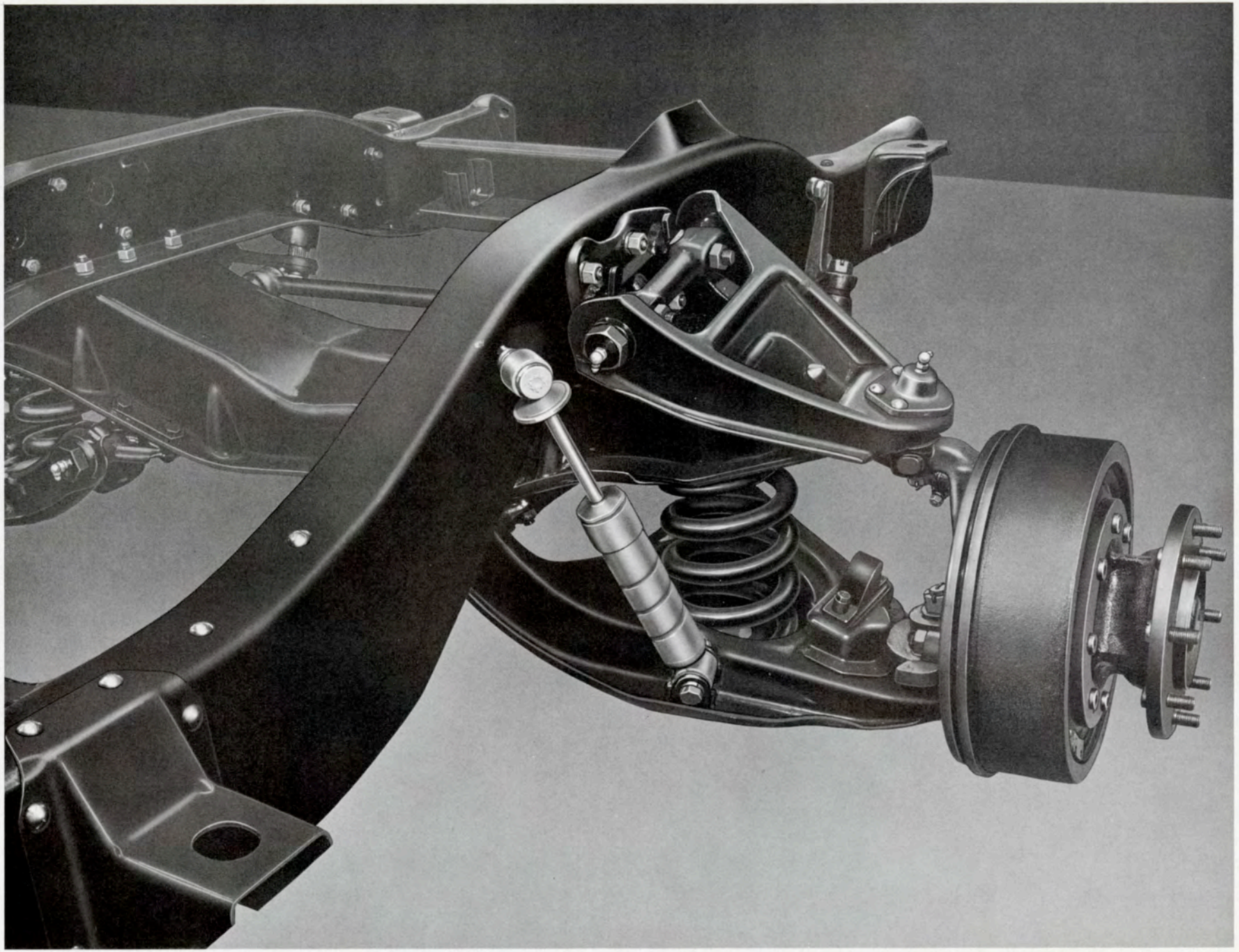


FRAME COMPARISON CHART

1962 vs 1963

Base Models	Depth 1962	Depth 1963	Width 1962	Width 1963	Thickness 1962	Thickness 1963	Sect. Modulus (in.^{3}) 1962	Sect. Modulus (in.^{3}) 1963
C14; P13, 15	5.46	6.03	2.24	2.42	.119	.156	3.39	2.98
C25	5.52	6.11	2.27	2.46	.149	.194	3.91	3.71
K14	7.19	7.09	2.75	2.71	.194	.141	5.09	3.62
K15,25	7.19	7.18	2.75	2.76	.194	.186	5.09	6.19
P20,30	7.24	7.21	2.74	2.72	.219	.201	5.70	5.17
C36	7.19	7.20	2.75	2.77	.194	.194	5.09	5.14
C38	None	8.18	None	2.97	None	.224	None	7.29
C51,52,53; L52,53	9.06	9.12	2.97	3.00	.219	.250	11.69*	9.38
C55; L56	9.12	9.12	3.00	3.00	.250	.250	18.47@	9.38
S53	9.06	9.12	2.97	3.00	.219	.250	11.69*	9.38
C61,62,63	9.06	9.12	2.97	3.00	.219	.250	15.70@	9.38
C65	9.12	9.12	3.00	3.00	.250	.250	18.47@	9.38
C68	9.18	9.18	3.03	3.03	.281	.281	15.68*	10.59
L62,63	9.06	9.12	2.97	3.00	.219	.250	11.69*	9.38
L66	9.12	9.12	3.00	3.00	.250	.250	14.47*	9.38
L69	9.18	9.18	3.03	3.03	.281	.281	15.68*	10.59
L65	None	9.12	None	3.00	None	.250	None	9.38
D61,62,63	9.06	9.24	2.97	3.06	.219	.312	17.30@	11.80
D65	9.12	9.24	3.00	3.06	.250	.312	18.47@	11.80
D68	9.18	9.24	3.03	3.06	.281	.312	15.68*	11.80
T62,63	9.06	9.18	2.97	3.03	.219	.281	13.31*	10.59
T66,68	9.18	9.18	3.03	3.03	.281	.281	15.68*	10.59
S62	9.18	9.18	3.03	3.03	.281	.281	15.68*	10.59
S64,67,69	9.24	9.24	3.06	3.06	.312	.312	16.88*	11.80
CLT60H	9.06	9.24	2.97	3.06	.219	.312	17.30@	11.80
C81,82; L81,82,83	9.06	9.24	2.97	3.06	.219	.312	17.30*	11.80
C83,85; L86	9.12	9.24	3.00	3.06	.250	.312	18.47%	11.80
C88	9.18	9.24	3.03	3.06	.281	.312	15.68*	11.80
T82,83	9.06	9.18	2.97	3.03	.219	.281	13.31*	10.59
T86	9.12	9.18	3.00	3.03	.250	.281	14.47*	10.59
T88	9.18	9.18	3.03	3.03	.281	.281	15.68	10.59
E80	9.06	9.24	2.97	3.06	.219	.312	17.30*	11.80
U80	9.06	9.16	2.97	3.03	.219	.281	17.30*	14.69$
M80	9.24	9.24	3.06	3.06	.312	.312	23.11@	23.24$

* - Includes inner liner.
@ - Includes inner liner and outer reinforcement.
% - Includes inner liner and outer reinforcement on Series C83 and C85 models.
$ - Includes full-length outer reinforcement.



LIGHT-DUTY FRONT SUSPENSION

Job-tailored chassis design again is exemplified in the area of the 1963 front suspension. In the light-duty category, where ride qualities are of significant importance, a coil spring independent front suspension is provided Series CP10, C20, and C30 models, replacing the former torsion bars. Though generally unchanged, the Corvair 95 front suspension system features extended-life lubrication through revisions to the upper and lower spherical joints. Forward control and 4-wheel drive model front suspensions are carried forward from 1962 unchanged.

In the replacement of torsion bars with coil springs, ride qualities are not significantly affected since the coil spring is as effective and friction-free an elastic member as the torsion bar. The new coil springs are of the right hand helix type, with the upper end pig-tailed. Coil spring capacities and wheel rates are comparable to or greater than those of the torsion bars they replaced.

With the absence of the torsion bar rear-mounted crossmember and other related components, ground clearance of the vehicle is increased. Maintenance, too, is practically eliminated since subsequent spring adjustments are not required after assembly. Other features of the new springing system include a sturdier front suspension crossmember, a simplified upper control arm attachment, new-design upper and lower control arm pivot shafts, and single-piece control arms.

In addition to revisions in the front suspension crossmember for accommodating the coil springs, the bottom plate is heavily reinforced in the lower control arm pivot shaft attachment areas, enabling the crossmember to more efficiently withstand loads and forces from the lower control arms and pivot shafts.

New, simplified, stamped lower control arms replace the multi-piece welded units formerly used. The new lower control arm pivot shafts, constructed of round bar stock, are cradled in brackets riveted to the front suspension crossmember bottom plate. The shafts are secured to the brackets with U-bolts. A specially designed rivet in the forward position has a head on the bottom side which serves as a gauge pin to locate the pivot shaft in its proper position. When the attaching U-bolts are tightened, the shaft efficiently resists movements.

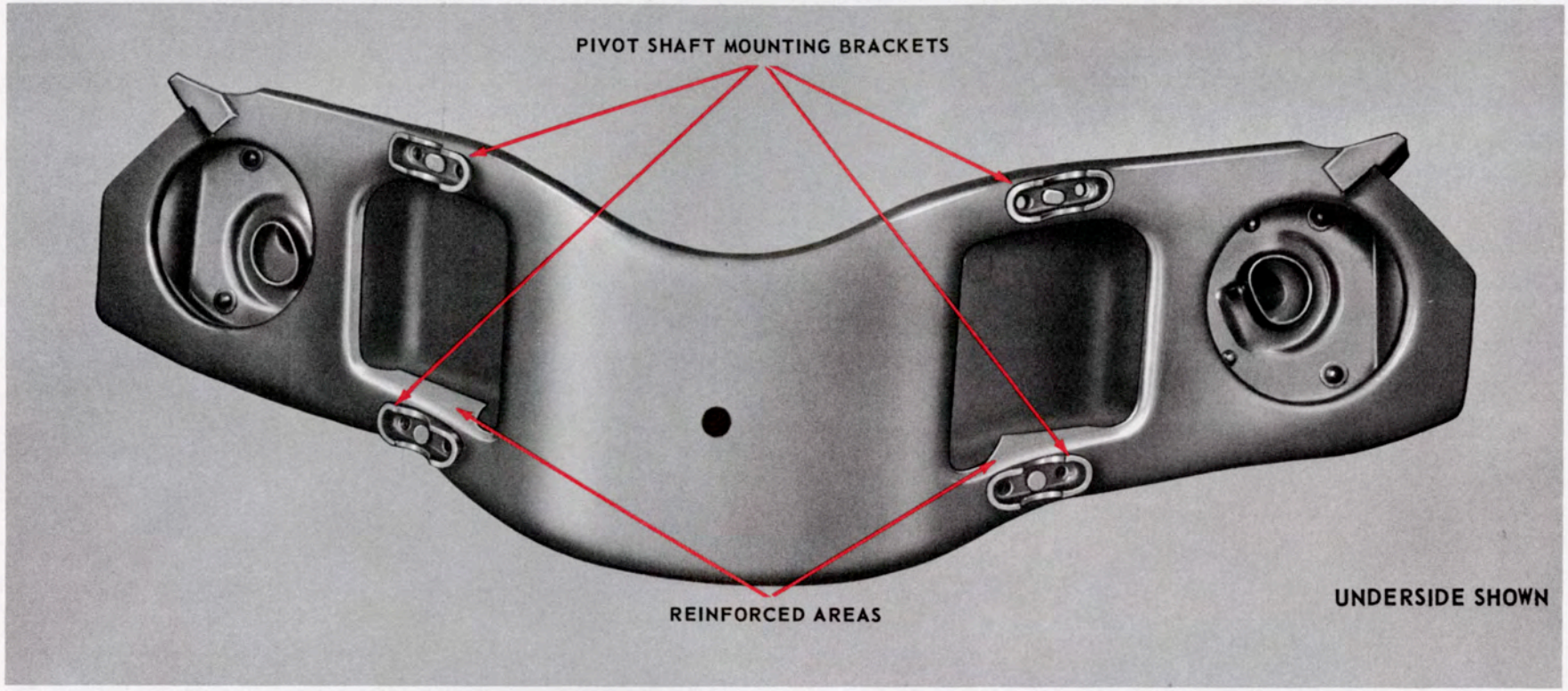
A new system utilizing pressed-in bolts and special spacers is employed to attach the upper control arm pivot shafts positively to the frame suspension brackets. With this system, bolt torque is better maintained in direct line with the axis of the attaching bolts, providing a rigid attachment in which bending stresses are reduced, attaching nuts resist loosening, and bolt life is extended. Additionally, the loss of caster-camber shims is virtually eliminated. The pivot shafts are secured to the brackets with serrated bolts pressed in the brackets, rather than bolts with spherical heads. Concave and convex spacers with flat opposite sides are used to align the pivot shaft attaching bolt holes with the bolts. On CP10 models, spacers with one convex side mating with spacers having one concave side are used between the pivot shafts and frame brackets. C20, 30 models use spacers whose one convex side mates with the concave depressions in the pivot shaft mounting bosses. Pivot shaft attaching bolt holes are of sufficient diameter to compensate for any lateral or angular movements, in relation to the brackets, without imposing appreciable bending loads on the bolts.

To accommodate the new lower control arm design, the front shock absorber method or attachment is reversed from that of the former design. The shock absorbers are now stud-mounted at the top and clevis-mounted at the lower control arm. Tapered roller front wheel bearings replace the ball-type bearings on Series C20 and C30 models.

A new upper control arm spherical joint, especially designed for 1/2-ton units, is released as regular production equipment on Series CP10 models. The basic difference between the new upper joint and that of the previous year is that loading is now accomplished through the use of a rubber spring compounded of a material with a high resistance to compression set. This type of spring is of a relatively high rate, and has the advantage of building up load rapidly as forces tend to unseat the ball stud. Formerly, a steel coil-type spring was used in the upper spherical joints.

Except for the housing and slight gauge differences, lower spherical joint construction and materials remain unchanged. The spherical joint housing is now pressed into an extruded hole in the lower control arm rather than being riveted. Upper and lower joints are essentially unchanged for Series C20, 30 models.

LIGHT-DUTY
FRONT SUSPENSION CROSSMEMBER

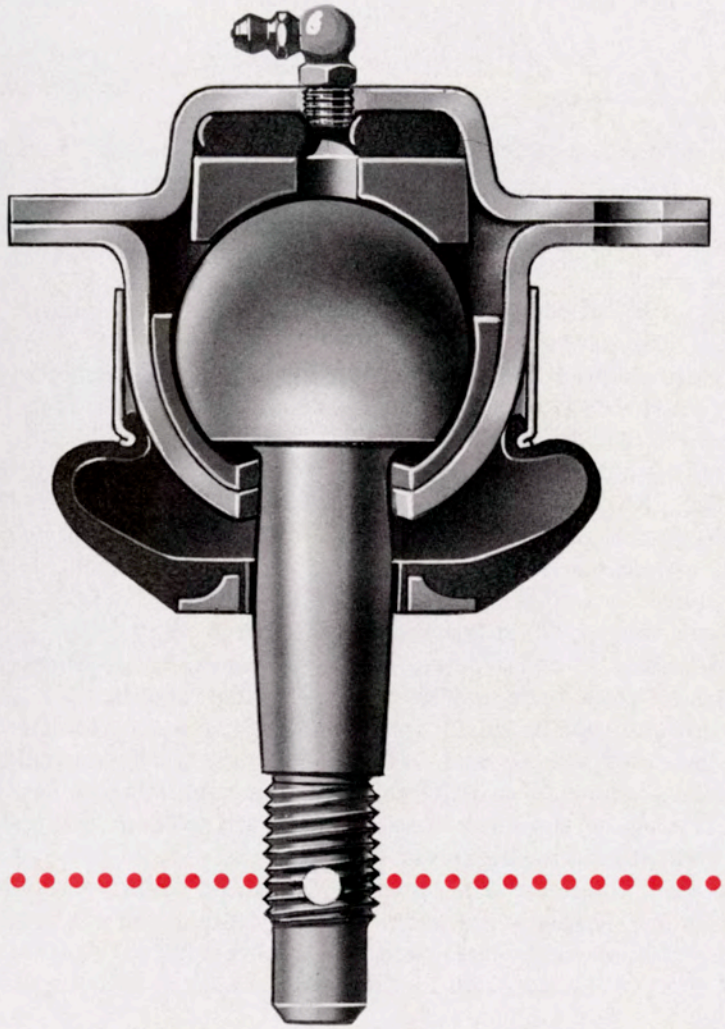


Loading from the lower control arms and their pivot shafts is more efficiently withstood by the new light-duty front suspension crossmember, which is reinforced in the pivot shaft mounting bracket areas. In forming the access openings in the bottom plate, the material is wrapped and welded onto the vertical walls of the hat-shaped upper stamping, forming a double-wall thickness of metal for added strength.

CORVAIR 95 SPHERICAL JOINTS

Improved bearing seat surfaces, more positive sealing, and a special lubricant extend the life of Corvair 95 front suspension spherical joints and reduce their lubrication intervals from 1000 to 6000 miles.

Bearing seat surfaces are improved with a teflon coating having high impact strength, excellent stability, and a low coefficient of friction. With the teflon coating on the bearing seat surfaces, the spherical joints actually could function without lubrication, but to positively assure that contaminants do not reach the bearing surfaces, the joints are packed with a special, high-quality lubricant. Positive sealing is further assured with a rubber boot tightly secured to the spherical joint.



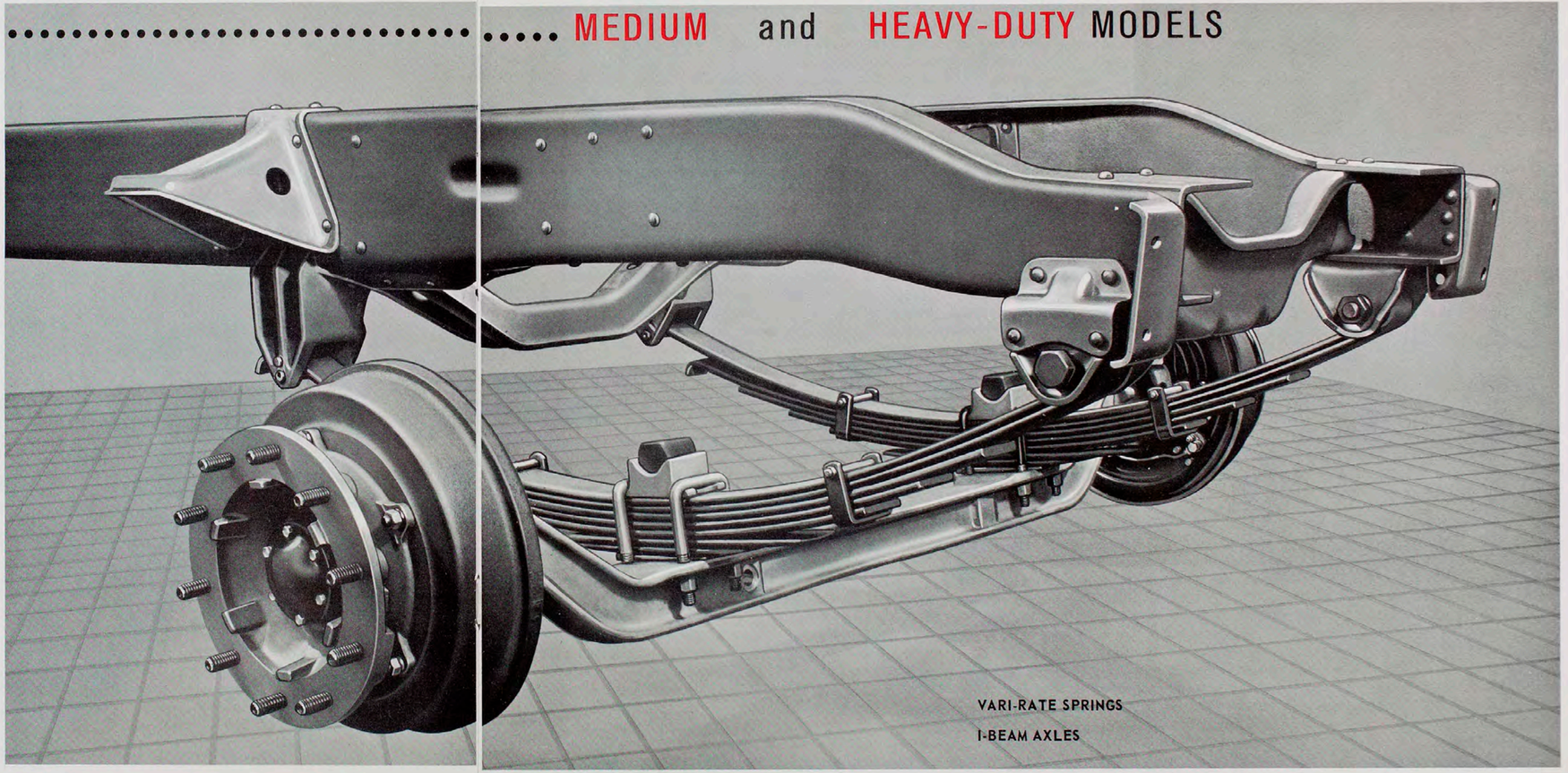
FRONT SUSPENSIONS for MEDIUM and HEAVY-DUTY MODELS

In the medium and heavy-duty category, where tire life, durability, payload capacity, and vocational versatility are primary considerations, the 1963 job-tailored chassis design is evidenced to a marked degree in the new front suspensions. Replacing the 1962 independent front suspension with no appreciable loss in ride quality are variable-rate front springs and I-beam front axles for all Series 50 through 80 models. Also, to meet national minimum school bus standards, 1-3/8 inch diameter front shock absorbers are released as regular production equipment for Series S50, 60 models.

Five separate axle assemblies are used with rated capacities of 4000, 5000, 7000, 9000, and 11,000 pounds. The 9000 and 11,000 pound capacity axles are carry-over from the previous year, except for the variable-rate front spring feature. Although the above axles are similar in design, material gauge and strength vary in accordance with their rated capacities.

I-beams are constructed of heat-treated, drop-forged steel. Section moduli dimensions taken in the equalized I-section between the spring pads are 1.60, 2.15, and 3.00 inches cubed for the 4000, 5000, and 7000 pound axles, respectively. All axles are designed to provide maximum resistance to deflection under load. Thus, definite control of directional movement is provided without undue driver fatigue.

Constant diameter kingpins are protected from contamination by diamond-shaped plate seals bolted on either end of the kingpin bore. Upper and lower kingpin bushings are constructed of steel-backed bronze, while the thrust bearing is comprised of



VARI-RATE SPRINGS

I-BEAM AXLES

AVAILABLE CAPACITIES

- 4000 LBS.
- 5000 LBS.
- 7000 LBS.
- 9000 LBS.
- 11,000 LBS.

a sintered bronze washer sandwiched between two steel washers. The upper and lower bushings are provided with distribution grooves to ensure uniform lubrication. Tapered front wheel bearings are used on all units.

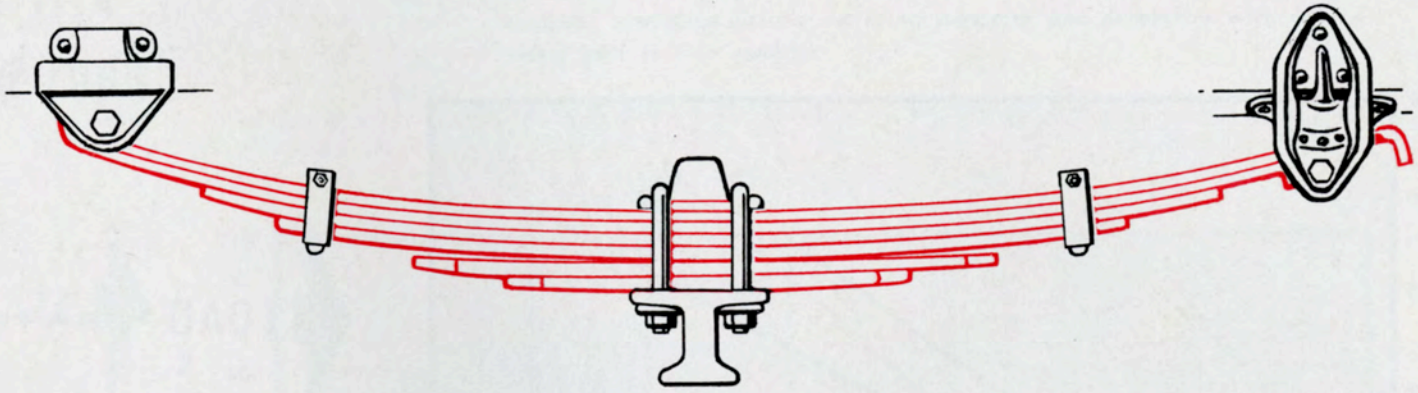
The nominal track dimension for the 4000, 5000, and 7000 pound capacity axles, except those used on tilt-cab models, is 70.00 inches. Because of the canted spring arrangement on tilt-cabs, the track dimension is 76.00 inches. Spring seat centers are spaced 32.25 inches apart on CDLMS models and 35.90 inches apart on the tilt-cab models. The track dimension for Series E80 models is 76.00 inches; however, because of multiple-hole piercings in the spring pads, spring centers are the same as those of the conventional models.

The new variable-rate front springs incorporate the good ride and handling and large payload-carrying capacity characteristics associated with past Chevrolet suspensions. Like conventional leaf springs, the leaves are placed in a vertical pile with the lower leaves being progressively shorter in length. Spring piles range from 5 to 11 leaves, with rated capacities from 2000 to 7000 pounds at the ground. Spring assemblies used with the 4000 and 5000 pound axles are 2-1/2 inches in width, while those used with axles of 7000 pound capacity or higher are 3 inches wide.

Unlike the variable-rate rear springs, the two top leaves are formed into a military-type eye at the front and fixed to a stamped hanger by means of a 3/4-inch diameter pin on 2-1/2 inch wide springs, and a 15/16-inch diameter pin on 3-inch wide springs. Spring eye bushings are of natural rubber or steel-backed bronze, depending upon capacity.

At the rear, the top leaf rides against a specially hardened cam surface in the central section of the hanger. On 2-1/2 inch wide hangers, this cam consists of an induction-hardened steel wear plate welded to the front and rear faces of the stamped hanger; on 3-inch hangers, the cam is a flame-hardened, integral part of the cast hanger. The cam surfaces are designed for a maximum of rate change as the load increases and for a minimum of scrubbing friction between the hanger and the spring leaves.

Safety wraps are provided in the top two leaves of each spring pile, assuring satisfactory vehicle control in the event of spring leaf failure. The wrap in the first leaf extends beyond the front spring rear hanger. Thus, the possibility of total disengagement between the spring and hanger, in severe jounce or while being towed, is precluded. On the second leaf, the wrap butts against the hanger pin, preventing the spring leaf from shifting rearward.



VARI-RATE SPRING DESIGN

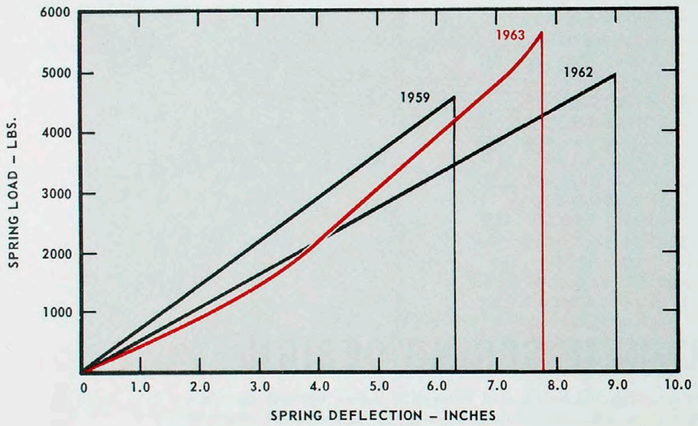
The new variable-rate springs for medium and heavy-duty models not only provide a ride comparable to that of an independent front suspension, but also offer the simplicity and versatility of design to which truckers are accustomed. Further, the inherent qualities of a variable-rate spring limit the gyroscopic effect and resultant wheel fight and shimmy common to the pinned and shackled leaf spring.

The variable rate feature of the new spring design is effected by reducing the spring beam length, or distance from the centerline of the spring eye to the point of contact on the rear hanger cam surface. Under light load, the top spring contacts the cam surface near its outer edge, reducing slightly the spring beam length to effect a low rate. As the load increases, the line of contact moves inward until at full load, it reaches the inner edge of the cam, reducing the spring beam length by more than five inches to effect a high rate.

1963 VARI-RATE SPRING

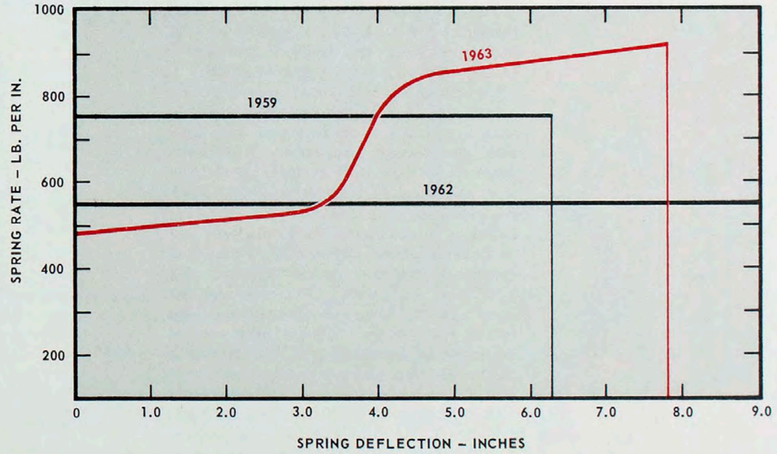
a comparison with 1959 and 1962

LOAD ..... RATE



The typical spring load comparison above illustrates that in the beginning the 1959, 1962, and 1963 springs deflect almost equally under similar loads. At maximum deflection, however, the new 1963 spring is carrying a load of 5500 pounds – considerably more than either the 1959 leaf spring or the 1962 torsion bar spring.

The typical spring rate comparison below illustrates that at curb load both the 1962 and 1963 front springs deflect about three inches. At this deflection, the rate for both springs is almost identical. Thus, with the vehicle unloaded, differences in ride are negligible. Under load, the rate of the 1963 spring increases over those of the 1959 and 1962 springs, providing greater carrying capacity and durability with only a small loss in ride quality.



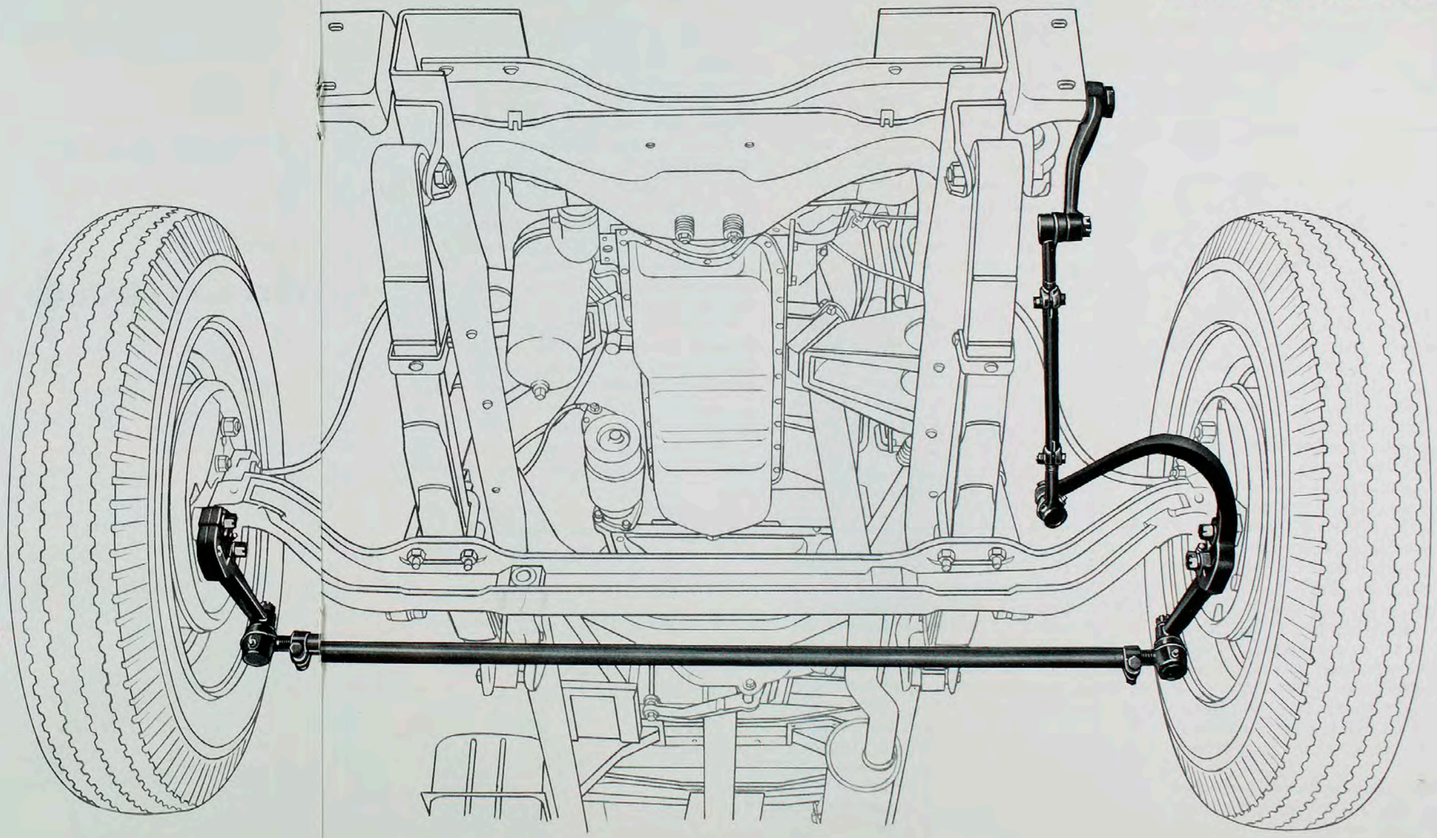
STEERING

Chevrolet truck steering systems for 1963 are simplified and improved for increased durability. Changes include new single-piece steering gear shafts for Series C10, 20, 30 models and most Series 50 through 80 models, including new flexible couplings for models in the Series 50 through 80 category; improved linkage components for Series CP10 models; new steering gear mounting provisions for Series K10, 20 models; and completely new steering linkage systems for Series 50 through 80 models.

The new steering systems for Series 50 through 80 models are designed to provide improved steer and handling characteristics, plus increased component life. A conventional steering linkage system having a fore-and-aft drag link replaces the parallelogram linkage arrangement employed with the former independent front suspensions. With this system, the pitman shaft is connected to the pitman arm through a horizontally-mounted ball-stud. The drag link then runs longitudinally rearward just past the I-section of the axle. Here, it is secured to the steering and third arm with a vertical ball-stud. The steering and third arm is designed to wrap over and behind the I-beam. On the other end of the steering and third arm, the tie-rod is connected with another vertical ball-stud socket assembly. The tie-rod then travels transversely across the chassis where it connects to the right hand steering knuckle arm bracket with a similar ball-stud.

Although the linkage arrangement on tilt-cab models is somewhat more complex, its design is substantially less complicated than that of the previous year. On these models,

MEDIUM AND HEAVY-DUTY STEERING SYSTEM



a 2-piece drag link, connected by an idler bracket located intermediately between the pitman arm and the steering and third arm, is used. Otherwise, the linkage travel is basically the same as that of the conventional models. All linkage systems are designed to provide neutral steer characteristics with a minimum of wheel fight. Steering linkage ball-studs are of the half-ball design.

To provide maximum tire turning clearance, the pitman shaft overall length is reduced two inches on all medium and heavy-duty models. Pitman shaft diameters also are slightly reduced on certain models. The shaft diameter on Series CLS50, CDLST 60, and TU80 models is reduced to 1-3/8 inches from 1-1/2 inches. This change was necessitated because of the new pitman shaft angle. In 1963, the shaft is positioned at 90 degrees in relation to the side rail. In 1962, the shaft was in a more vertical position in relation to the frame.

The steering components used with the 4000 and 5000 pound front suspensions are identical to each other, as are those used with the 9000 and 11,000 pound front suspensions. Components for the 7000 pound front suspension are peculiar to themselves.

Steering gear housings are modified to suit the new chassis design. In 1963, the gear housings are secured to the frame side rail web by three attaching bolts. This full side-mounting arrangement permits greater angle positioning latitude, thus reducing the number of gear assemblies required to accommodate the various cab installations. Formerly, the gear was bolted to the frame side and lower flange by two bolts in each surface.

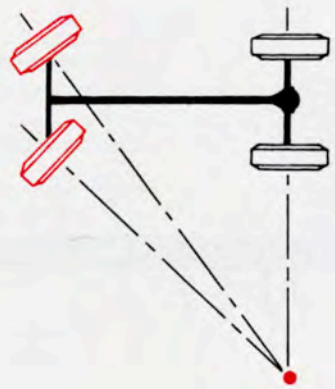
All steering gears again are positioned ahead of the front axle to take advantage of the I-beam and variable-rate springing arrangement. With this type of suspension, particularly, it is most desirable to have the steering gear and pitman arm on the same side of the axle I-beam as the fixed eye on the spring since the fixed eye of the spring actually controls the third arm path. With the pitman arm in this location, the tie-rod arc and third arm orbits are traveling in the same direction. Thus, their paths can be more readily matched for the most favorable steer conditions. Additionally, by holding the third arm ball-stud center relatively close to the center of the top spring leaf, brake steering characteristics are minimized because the third arm ball-stud rotates freely without influence from linear travel.

Single-piece steering shafts and flexible couplings replace the multi-piece shafts and pot-type joints of the previous year on most Series 50 through 80 models. Flat face cowls, windshield cowls, school buses, and tilt-cab models employ multi-piece shafts coupled by trunnion-type universal joints.

The mast jacket installation consists of a rubber-bushed strap mounting at the instrument panel with a floating-type seal at the toe pan. Overall diameter of the mast jacket is 1-3/4 inches, except at the top where it is swaged-out to 2 inches. The diameter is increased at the top to accept a standard turn signal housing and steering gear upper bearing.

In the light-duty category, single-piece steering gear shafts eliminate the use of pot-type joints on Series C10, 20, 30 models, and Series K10, 20 steering gear housing mounting bosses are modified to improve durability and to eliminate the mounting spacer used in the former method of attachment. In addition, a straight 3/4-inch diameter steering relay rod replaces the kinked relay rod used formerly on Series C10 and P10 models. Use of a straight relay rod assembly was made possible by the change in the front suspension crossmember configuration. This particular revision eliminated the sharp radius on the top surface of the crossmember to provide more clearance. Also, the steering gear and linkage components are moved slightly forward. Although the tie-rod is 1/8-inch smaller in diameter than that of the previous design, column strength remains unchanged because of its straight configuration. A new spring-loaded idler arm bracket-to-idler arm socket replaces the vertical ball-stud mounted bracket and idler arm attachment previously used.

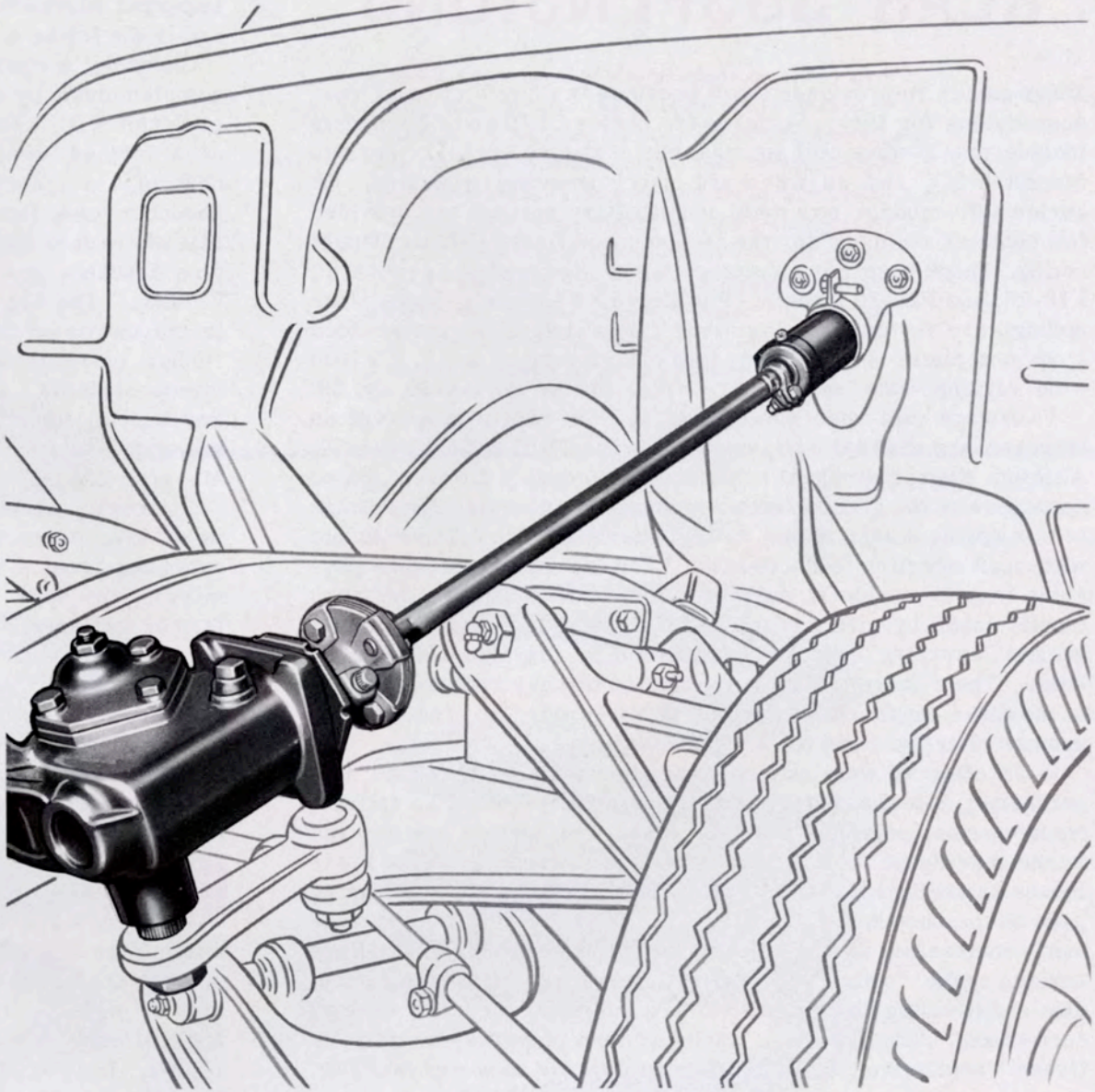
Corvair 95 models feature extended steering linkage lubrication intervals - from 1000 to 6000 miles - with new sliding rubber seals and a special lubricant.



STEERING SHAFTS

With the use of single-piece steering gear shafts rather than multi-piece units, pot-type joints are eliminated, vastly improving the durability of the steering shaft assemblies for most Series 10 through 80 models.

In addition, a new flexible coupling rather than a pot-type joint is used on most medium and heavy-duty models to provide a more durable attachment of the steering shaft to the steering gear. Body motions, which otherwise would be transmitted to the frame through the steering column, are efficiently isolated with the new coupling. Similar to the flexible coupling used for most light-duty models, the new coupling is a 3/8-inch thick molded unit comprised of 16 laminations of rayon fabric impregnated with rubber.



REAR SUSPENSIONS

Many design improvements are provided in Chevrolet truck rear suspensions for 1963. Features for Series CP10 and C20 models include new 2-stage coil springs, new leaf-type auxiliary springs (except P10), and an improved shock absorber mounting. On Series C30 models, new main and auxiliary springs are provided for vehicles equipped for the 10,000 pound Gross Vehicle Weight rating. Shock absorber mounting also is improved on Series C30, K10-20, and P20-30 models. For Corvair 95 models, higher rate springs are featured for improved ride and handling and reduced front end pitch. In the heavy-duty classification, new 2-1/2 inch wide variable-rate springs are released for Series 50 and 60.

Two-stage coil rear springs replace the single-stage type as standard and optional equipment on Series CP10 and C20 models. Although the spring wheel rates are considerably different, rated capacities at the ground remain unchanged. An outstanding feature of this spring design is that spring rates are more commensurate with each specific load condition. The low-rate first stage provides improved ride at curb and also helps to protect the more fragile loads by virtue of the softer, smooth spring action, while greater carrying capacity is afforded by the high-rate second stage. The 2-stage principle is effected through a closer spacing of the three center coils which compress under load, reducing the number of active coils for a higher rate.

In an effort to anticipate customer needs and preferences, new cantilever, 3-leaf auxiliary rear springs are provided as optional equipment on Series C10 and C20 models. The springs are secured to the outside of the frame side rails at the rear, with the lower leaves extending forward into the vicinity of the rear axle mounting pads on the suspension control arms. Only after the base springs are compressed to the design load condition do the auxiliary springs make contact with the axle mounting pads. Therefore, ride and handling characteristics are unaffected at curb or no-load conditions. Although these springs do not permit an increase in Gross Vehicle Weight rating, they do improve rear end stability, provide further assurance against bottoming-out conditions, and increase the spring carrying capacity by 500 pounds per side.

Rear shock absorbers for Series CP10 and C20 models are mounted ahead of the rear axle in 1963, with the upper attachment being made near the rear node point on the frame which is relatively free from vibratory motions. Thus, any forces imparted to the frame by the shock absorbers do not appreciably excite the frame nor adversely affect vehicle ride characteristics.

Chevrolet's truck parts interchangeability program is further complemented by an improved rear shock absorber attachment on Series K10, KP20, and CP30 models. The upper mount consists of a formed, wedge-shaped bracket riveted within the frame channel. A 3/4-inch diameter bolt fits through the upper shock absorber eye, through the bracket, and through the frame side rail where it is secured by a jam nut. At the lower end, straddle-type brackets are welded on either side of the axle differential housing. The big feature on Series P20-30 models, however, is in the increased durability resulting from the use of integral eye rubber bushings instead of the loose piece rubber grommets previously used. Also, to make these vehicles more competitive, one-inch diameter shock absorbers replace the 1-3/8 inch shock absorbers as base equipment. The 1-3/8 inch shock absorbers are available optionally.

Formerly, Series C30 and K10-20 model rear shock absorbers were attached to a special crossmember at the top and to a stud extending from a spring spacer at the bottom. On Series P20-30 models, the upper end was bayonet-mounted to a bracket on the frame; stepped, U-shaped brackets were welded to the axle housing for the lower mounting.

Rear spring equipment requirements for Series C30 models equipped for the 10,000 pound GVW rating are revised from that of the previous year. Eight-leaf, 2-stage main and 5-leaf auxiliary springs replace the 10-leaf springs formerly required. Rated capacity at the ground remains the same as that of the former 10-leaf springs. Benefits derived from this type of rear spring arrangement include improved vehicle trim and ride characteristics.

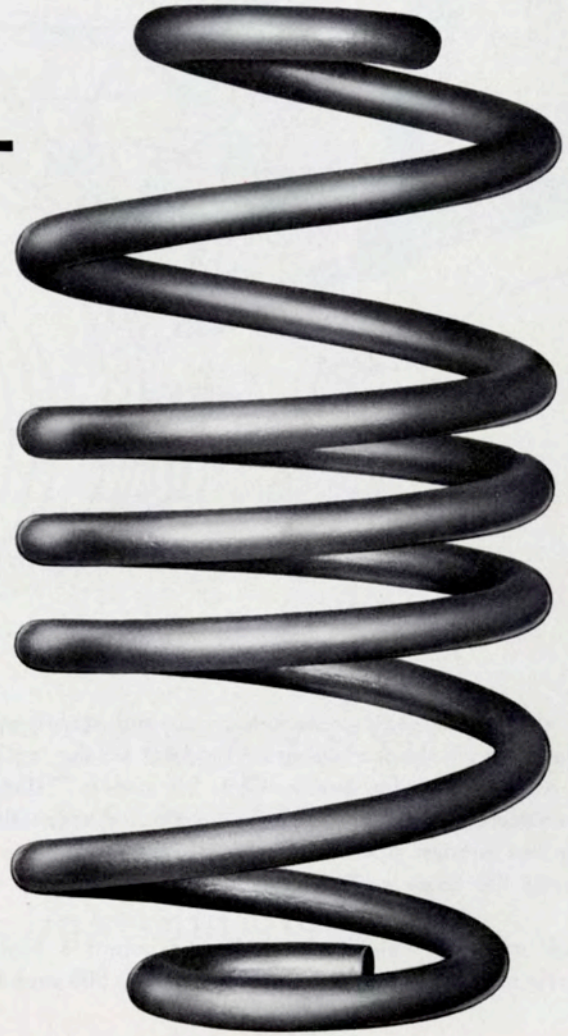
Three new 2-1/2 inch wide, 2-stage, variable-rate rear spring assemblies are added to the rear spring line-up for 1963. The springs are released as base and optional equipment for Series 50 and 60 models, replacing the 3-inch wide springs in certain applications. Rated capacities at the ground for these units are 11,000, 15,000, and 17,500 pounds. The 3-inch wide spring formerly rated at 15,000 pounds is discontinued.

Higher rate rear springs are released for models in the Corvair 95 line, improving ride and handling characteristics and reducing front end pitch. In addition, camber is reduced on the pickup from five to three degrees at curb weight.

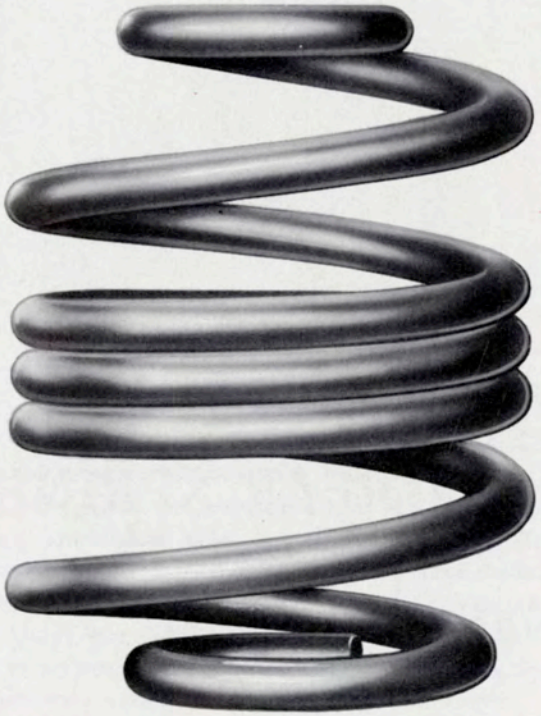
2–STAGE COIL SPRINGS

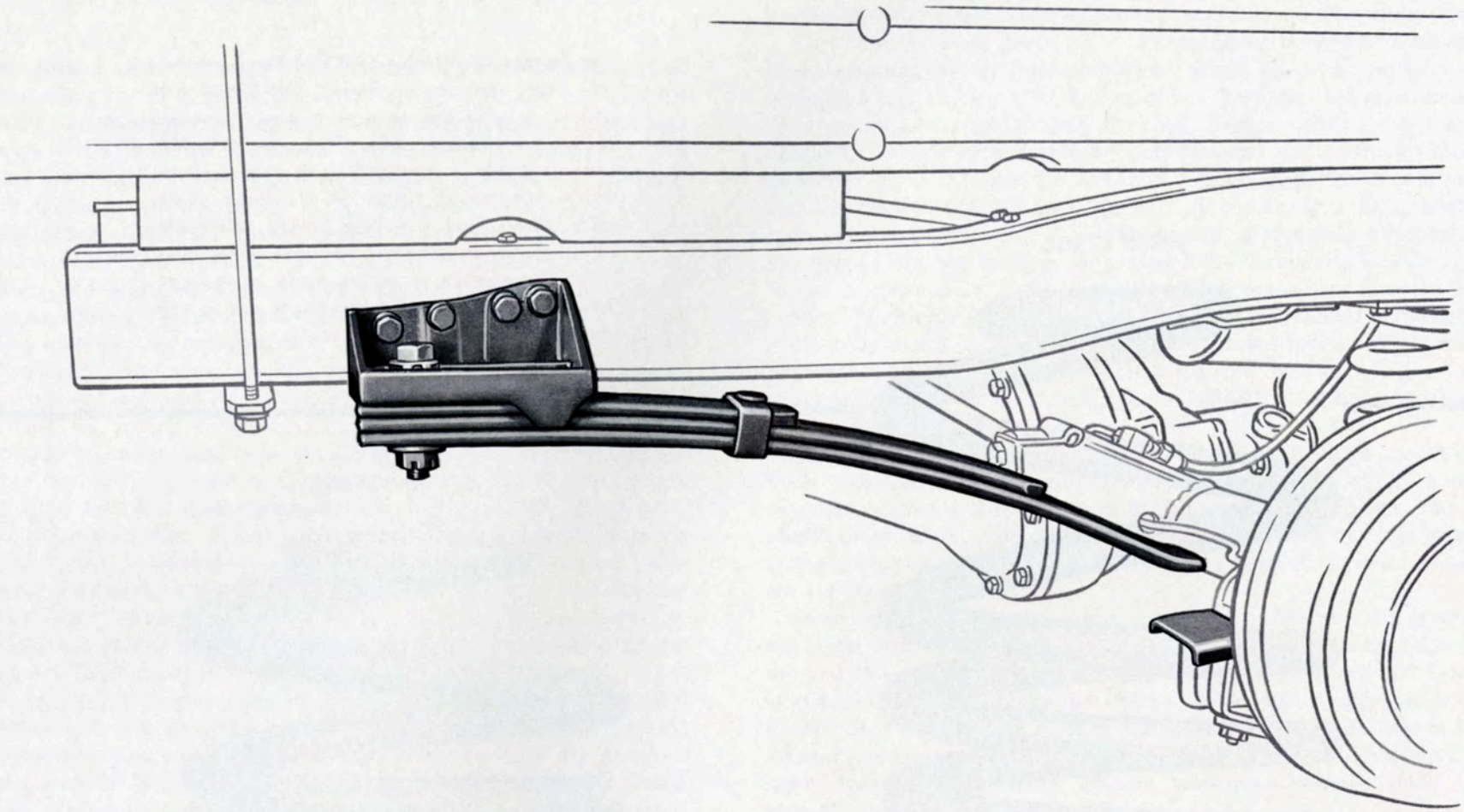
The 2-stage or variable-rate feature of the new coil rear springs for Series CP10 and C20 models is effected through a closer spacing of the three center coils. Thus, in the loaded condition, ride is provided by the entire spring within the travel limits of the three center coils. Under load or severe jounce, the center coils compress together, becoming inactive. Since the number of active coils is reduced, the spring achieves a higher rate and a subsequent greater carrying capacity.

FIRST STAGE



SECOND STAGE



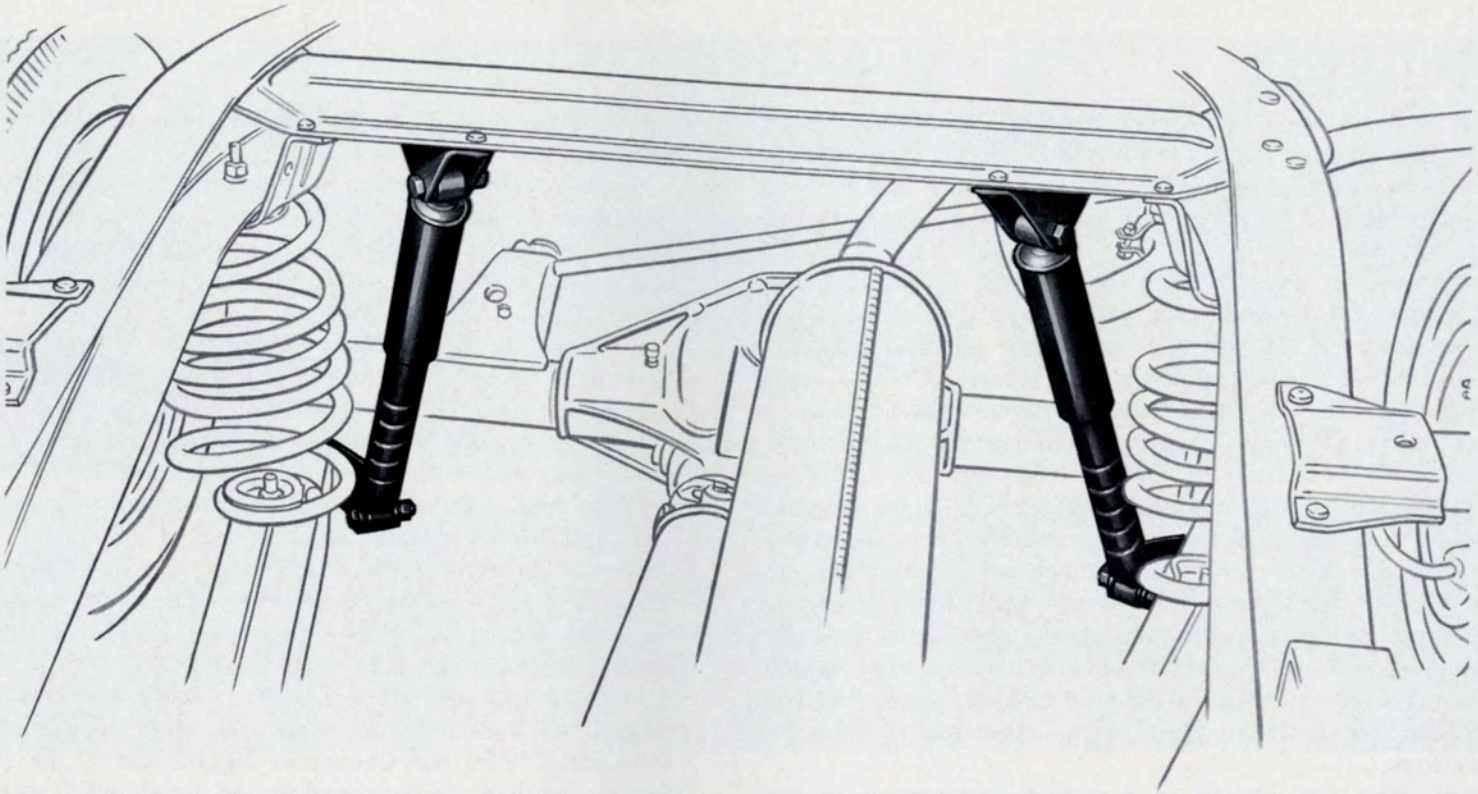


AUXILIARY REAR SPRINGS

light-duty models

Increased carrying capacity, improved rear end stability, and assurance against full spring bottoming are features of the optional cantilever auxiliary rear springs for Series C10, 20 models. Under no-load conditions, vehicle ride and handling are unaffected since the new auxiliary springs do not become operative – by contacting the rear axle mounting pads – until the base coil springs are compressed to the design load condition.

Although auxiliary rear springs do not permit a higher GVW rating, they do increase rear spring carrying capacity by 500 pounds for each side.



REAR SHOCK ABSORBER ATTACHMENT

light-duty models

Improved vehicle ride and handling are benefits of the new rear shock absorber mounting system for Series CP10 and C20 models. In this system, the shock absorbers are mounted ahead of rather than behind the rear axle, with the attachment at the upper end being made near the frame rear node point which is relatively free from vibrations. Thus, forces imparted to the frame by the shock absorbers do not build-up excitements which would adversely affect vehicle ride and handling.

Rear shock absorbers for Series K10, KP20, and CP30 models continue to be mounted ahead of the rear axle in 1963, but feature a common and extensively simplified method of attachment.

REAR AXLES

Twenty-nine rear axles of different capacity, ratio, or design complement the revised 1963 power train line-up. Significant improvements to existing axles as well as entirely new designs result in the most complete rear axle availability ever offered for Chevrolet trucks.

Salisbury-type rear axles give increased durability and greater flexibility with reduced weight for all Series 10 models. Gear ratios are revised for improved performance and fuel economy with the new engine line-up. CK10 models use a 3.73-to-1 ratio as base equipment while P10 vehicles are equipped with a 4.11-to-1 ratio to suit the 4-cylinder engine. Optional ratios of 4.11-to-1 and 3.07-to-1 are released for C10 models with the 3.73-to-1 ratio being offered for P10 models using the 6-cylinder engine.

Three-piece housing construction constitutes the Salisbury design for greater versatility. Axle tubes of different lengths may be used with the same differential unit, thus extending differential applicability with different spring seat arrangements. The tubes, as separate members, are pressed and puddle-welded into the cast central differential carrier housing at one end and attached to the brake flange plate at the other end through the use of serrations.

Reinforcing ribs are placed to maximum advantage in the carrier casting to provide good gear mountings for quieter gear operation. For example, a full rib extends between the pinion and differential bearings, affording excellent support for the gear teeth at the mesh point. Durable, hypoid, 2-pinion differential design is utilized because of its inherently quieter operation and better durability. Improved sealing characteristics, too, are achieved with the Salisbury design, which results in a stiffer cover opening. Blind-drilled and tapped cover bolt holes also are utilized.

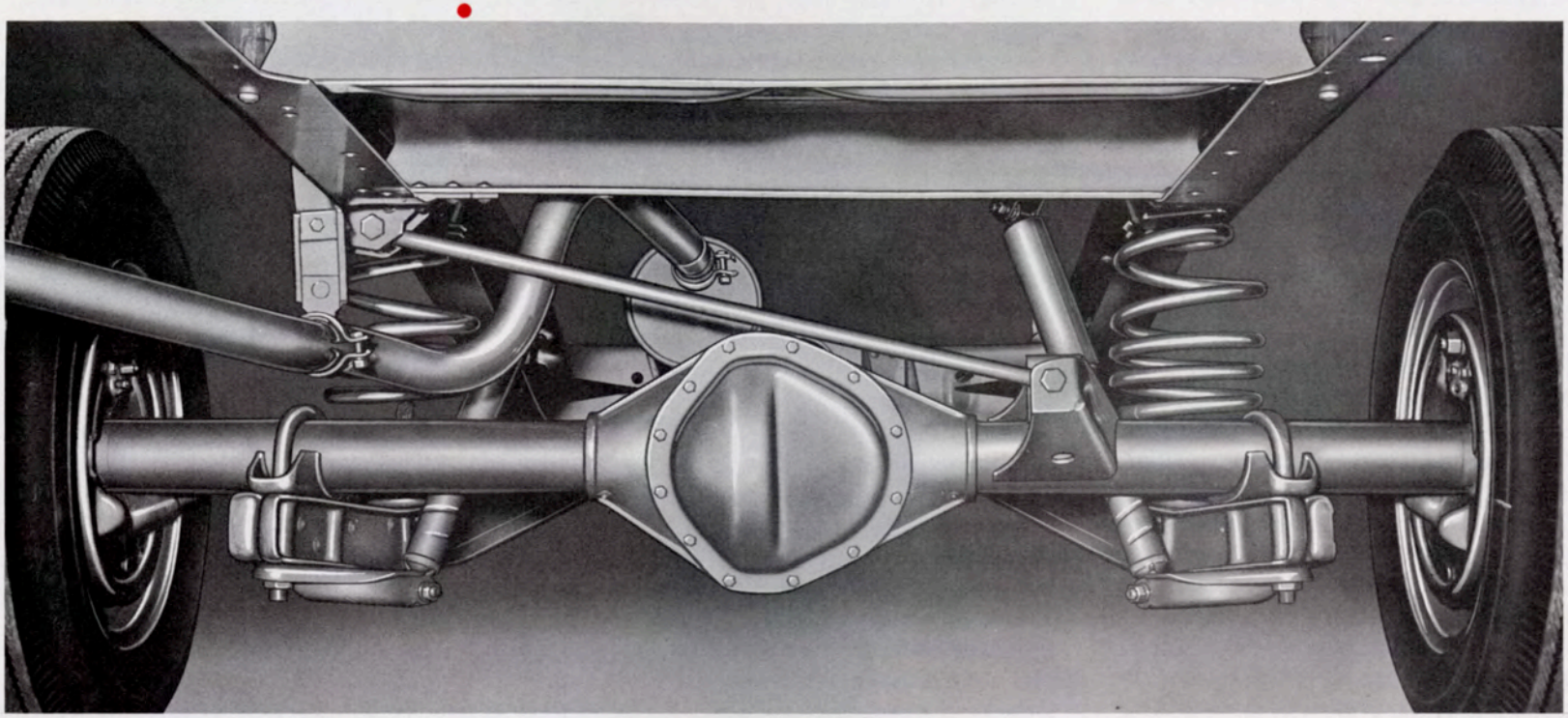
A new axle hub design is released for C20 models as part of the 16-inch dual rear wheel option. Otherwise, Series 20 axles are unchanged except for minor housing revisions to accommodate new rear suspension spring centers and control arm mounting locations.

Positraction and NoSpin differentials are again available on light-duty models for improved traction under adverse operating conditions.

Base equipment for Series 50 models is the Chevrolet 11,000 pound rear axle with a new higher ratio of 6.17-to-1 for improved performance. Greater capacity axles, both single and 2-speed, are available as optional equipment.

Series 60 vehicles retain the same axle line-up as used in 1962. The Chevrolet 15,000 pound single-speed rear axle is again used as base equipment, with a Chevrolet 17,000 pound single-speed axle, Chevrolet vacuum shift 15,000 and 17,000 pound 2-speed axles, and an Eaton electric shift 17,000 pound 2-speed axle being offered as regular production options. Planet gear bushings are eliminated from the Chevrolet 15,000 and 17,000 pound 2-speed axles, resulting in improved pinion durability from the metal-to-metal contact between the planet gear inner diameter and the support surfaces.

Improved axle life and vehicle fuel economy are achieved through the new base rear axle ratio of 7.17-to-1 for CLT80 models. EU80 models retain a 2-speed axle as base equipment, but a single-speed Eaton 18,500 pound axle with a 5.57-to-1 ratio is released as part of the Roadranger transmission option.



SERIES 10 SALISBURY REAR AXLE

New Salisbury-type rear axles for Series 10 models feature 3-piece housing construction, proven hypoid design, increased durability, improved sealing characteristics, and greater versatility. Separate axle shaft tubes are pressed and welded into a central cast differential carrier housing, thus permitting ideal placement of reinforcing ribs in the carrier. The design also allows a weight savings while still maintaining the same rated capacities.

Revised ratios of 3.73-to-1 for CK10 models and 4.11-to-1 for P10 models are tailored to suit the new engine line-up. Other ratios are available for use with optional engines and for purposes of increased performance or fuel economy.

BRAKES

Brake improvements for 1963 are concentrated in the areas of conventional line power brake equipment and Corvair 95 line regular production brakes. Brake sizes and drum designs are basically unchanged except for minor revisions to accommodate the new conventional line front and rear axle designs.

Standard equipment for Corvair 95 models are self-adjusting brakes at all four wheel locations. Improved pedal response and reduced maintenance because of the constant level of adjustment are the primary advantages of the self-adjusting mechanism.

This feature, a part of the brake assembly itself, is mounted on the secondary shoe, and consists of a wire link, stamped actuating lever, stamped pawl, over-ride spring, and return spring. The linkage is attached at one end to the anchor pin, while at the opposite end, a pawl automatically manipulates the adjusting screw wheel. The degree of adjustment is regulated by the coil spring which connects the actuating lever and pawl.

Actual adjustment occurs during reverse stoppage and only as the linings wear and require the adjustment. The self-adjuster mechanism is activated when a certain amount of reverse shoe movement occurs during reverse stops. If the lining wears enough to cause this amount of movement, the pawl turns the adjusting screw starwheel, thus spreading the brake shoes apart as in manual brake adjustments.

For certain models, single reservoir brake master cylinders replace the dual type brake-clutch cylinders previously used because of new mechanical clutch linkages.

Power brake availability is extended to include a greater number of light-duty models. A new vacuum-suspended unit, requiring no vacuum reserve tank and similar to that used for Chevrolet passenger cars, offers greater parts interchangeability and service simplification.

Single and double diaphragm-type booster units for Series 50-80 models feature greater capacity, with resulting higher pressure outputs and lower pedal efforts. Mounting locations and piping are the same for all models, contributing to greater interchangeability and ease of service.

A new Bendix-Westinghouse Tu-Flo 500 air compressor featuring a 12 cubic foot per minute capacity is available optionally for Series D60H and all Series 80 models with full-air brakes. The Tu-Flo 400 compressor with a 7-1/4 cubic foot per minute capacity is continued for all other air-compressor applications. Water-cooled compressors replace the previously used air-cooled design on all diesel models.

Full-air brake option availability now includes D6103H, D6203H, and D6303H models. Previously, only hydraulic with booster and air-hydraulic systems could be obtained for these models.

Available for all tractors equipped with full-air brakes is the new trailer air brake option. The system of controls, valves, hoses, and couplings is designed to comply with Interstate Commerce Commission regulations.

Two hose assemblies, each 117 inches long, attach to the trailer through the use of glad hand type couplings. Opposite hose ends are screwed into the tractor protection valve mounted on a plate at the rear of the cab. Two coil springs are used to support the hose assemblies when they are connected to dummy couplings at the left rear of the cab. Both ends of each spring attach to a hole in the rear cab roof molding, forming a loop.

The tractor protection valve, a spring-actuated, plunger-diaphragm unit, automatically shuts off the air supply to the trailer in the event of emergency.

A push-pull type emergency valve is located on the instrument panel to the left of the steering column. This valve allows manual application of the trailer brakes by the operator, shuts off the air supply to the trailer when the tractor is used alone, and automatically applies the trailer brakes when air pressure is low.

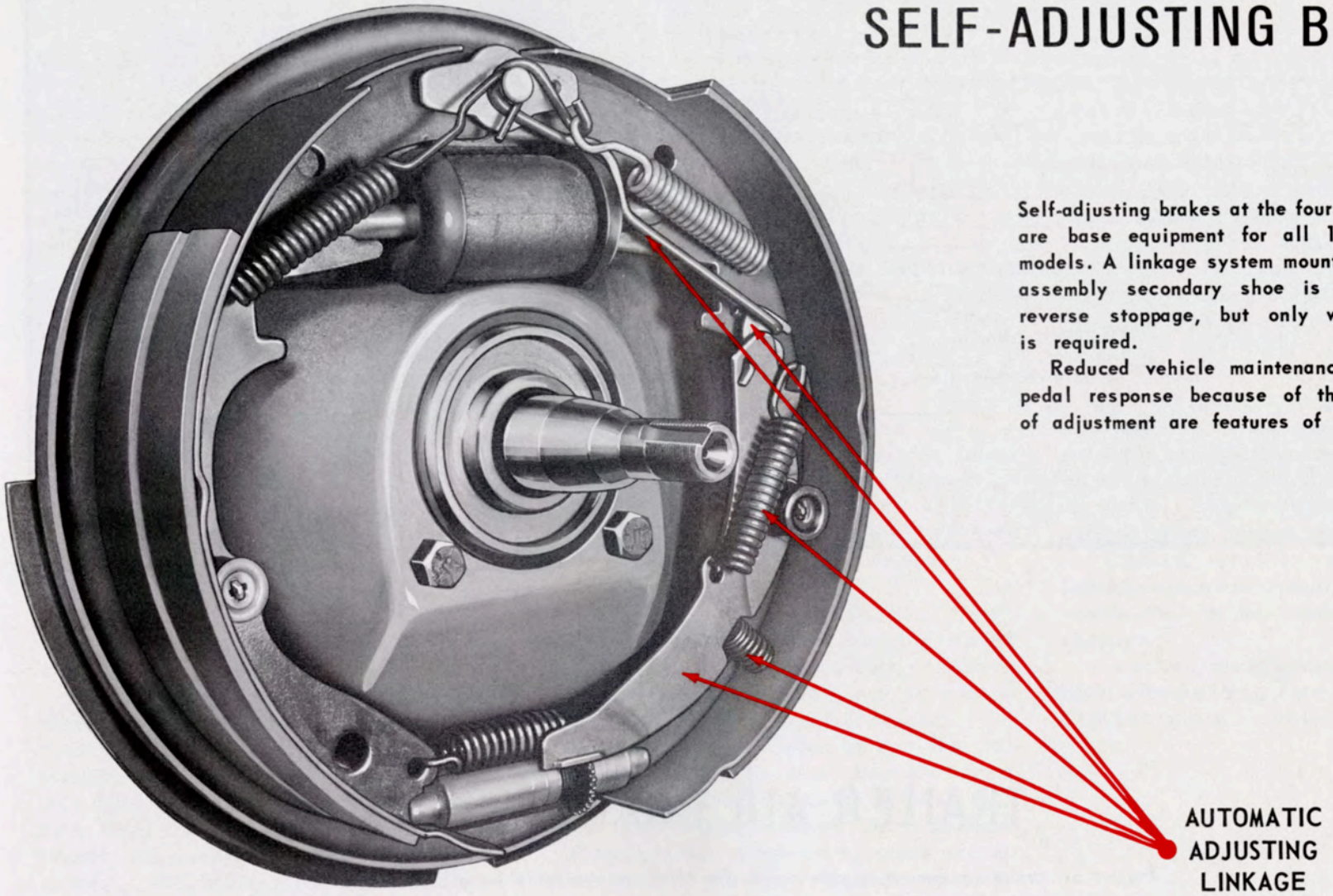
Also located inside the cab, but on the steering column, is a metering, cam-actuated type hand control which allows regulation of braking pressure to the trailer brakes in direct proportion to hand movement. A 2-way check valve, located in line between the hand control valve and the foot control valve, locks out the hand control valve when the foot brakes are applied.

Emergency air brake equipment is released as optional equipment for all models equipped with full-air brakes. The system, designed in compliance with the California Brake Law, consists of push-pull, 2-way, relay, and check valves in combination with new piping and an additional reservoir tank. In effect, front and rear brakes are made independent of each other through this system.

Failure of either the front or rear brakes does not affect the operation of their counterpart, thus assuring adequate remaining braking capacity to stop the vehicle.

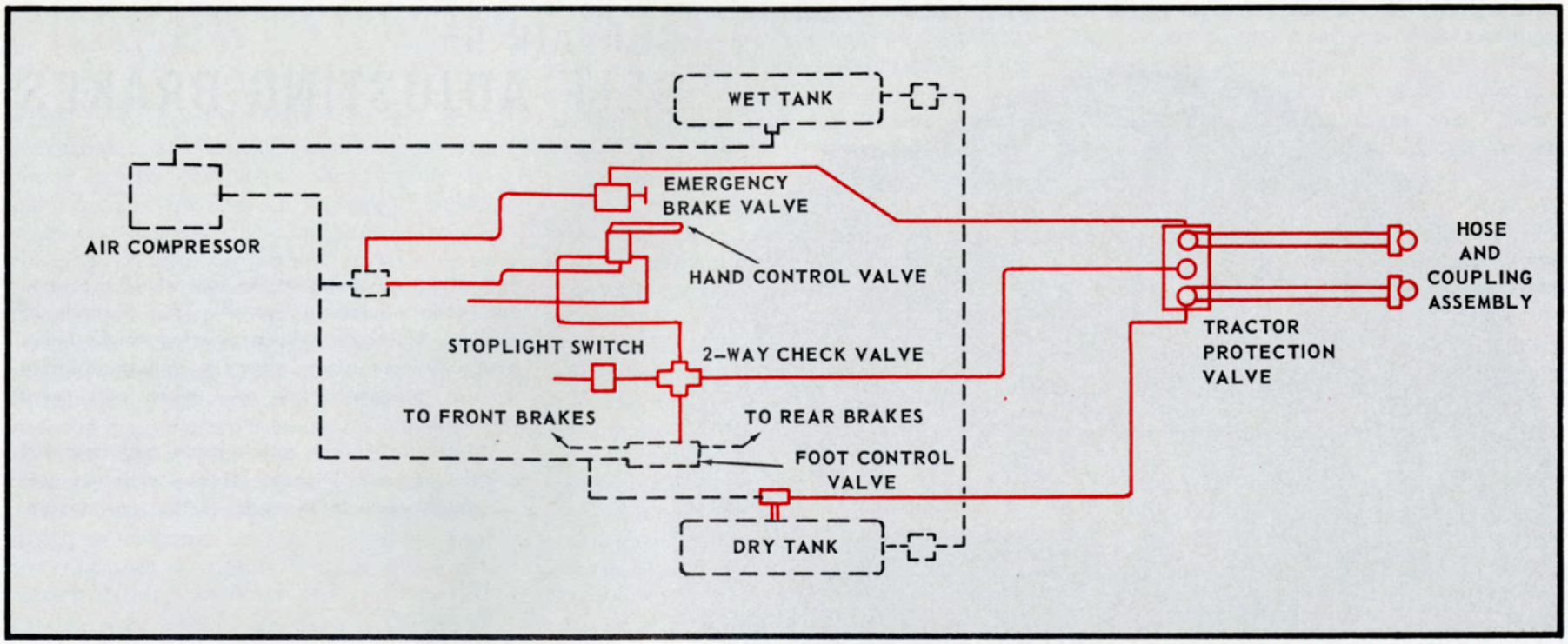
Both the trailer air brake equipment and the emergency air brake system options may be obtained either independently or in combination with each other.

CORVAIR 95
SELF-ADJUSTING BRAKES



Self-adjusting brakes at the four wheel locations are base equipment for all 1963 Corvair 95 models. A linkage system mounted on the brake assembly secondary shoe is actuated during reverse stoppage, but only when adjustment is required.

Reduced vehicle maintenance and improved pedal response because of the constant rate of adjustment are features of the new design.



TRAILER AIR BRAKES

Trailer air brake equipment, a new option for 1963, is available for all models with full air brakes. The Chevrolet trailer air brake system complies with Interstate Commerce Commission regulations, and includes components such as hand controls, tractor protection valve, hoses, and glad hand couplings.

The system of controls and valves, both manual and automatic, allows separate or combined application of the tractor and trailer brakes. Looped coil springs support the two hose assemblies when connected to dummy couplings on the rear of the cab.

OTHER CHASSIS FEATURES

WHEELS AND TIRES. Excellent tire selectivity is continued in 1963 for all weight classifications. Tires of varying sizes and corresponding capacities as well as choices of rayon, nylon, highway, on-off, or off-road construction enable the owner to custom tailor his truck tires to suit his particular needs.

Tire option availability for all Corvair 95 models is extended to include 7.00-14-6PR and 7.00-14-8PR truck-type tires. Their sturdy construction and larger capacities make them well-suited for the more severe types of service. The 14 x 5J short spoke disk wheel, utilized in combination with the passenger-type tires, is also used with the new tire options.

Narrow-band whitewall tires replace the wide-band type for all 1963 conventional line light-duty applications. Narrow-band whitewall tires were previously released in mid-season 1962 for Corvair 95 models. Tire size, capacity and availability are not affected by this change.

The light-duty tire line-up is complemented by the availability of 16-inch dual rear wheels for Series C20 models. Previously, dual rear wheels were available only on Series 30-80 models. Only 6.50-16-6PR tires in combination with 16 x 5.50 wheels are used for this new Series C20 option. Availability of tire sizes with 16 x 5.50 wheels for Series 30 models, however, consists of either 6.50-16-6PR, 7.00-16-6PR, or 7.50-16-8PR rayon highway-type tires.

Base equipment for Series 50 models are 7-22.5-6PR rayon highway-type tires because of the revised base GVW ratings for these models. Other medium and heavy-duty tire options remain basically unchanged.

Disk wheels used for Series 10-30 single rear wheel models continue to be of the stamped disk design. The ventilated disk type wheels are used on Series 20-80 models with dual rear wheels.

Ventilated disk wheels for Series 20-30 models contain four hand holes. All Series 50-80 disk wheels contain five hand holes, except the 6-stud, Budd-type attachment wheel having six hand holes.

SERIES K10 FRONT DRIVING AXLE. Commensurate with the new rear axle ratio, Series K10 front axle ratio is changed to 3.73-to-1, replacing the former 3.92 ratio. The lower numerical ratio results in longer axle life and improved fuel economy.

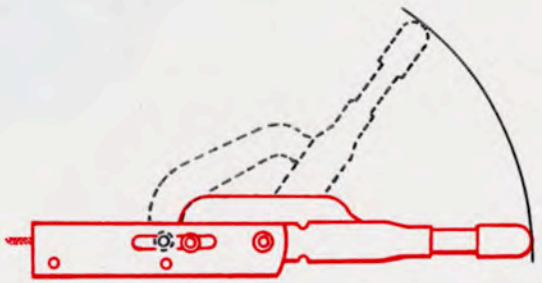
CHASSIS ELECTRICAL SYSTEM. New, improved chassis electrical wiring is used in 1963 as standard equipment on Series D60 and Series 80 trucks, and as a mandatory option on Series 60H trucks. The wiring components affected are the instrument cluster harness, the main wiring harness, the front extension harness, and the engine wiring harness. Wires in these assemblies not protected by fuses are so insulated that if a short circuit or overload occurs, the heat generated will not affect the surrounding wires. Thus, only the overloaded circuit will have to be repaired.

The individual lead consists of a stranded copper wire covered with special synthetic rubber insulation, which replaces the vinyl insulation used previously. The special synthetic rubber insulation will not melt, and, thus, is effective in keeping the heat of an overloaded wire localized.

In addition to the change in the insulation of the individual wires, an improvement is made in the material binding together the wires in the harness assemblies. Previously, the wires were bound with plain vinyl tape. This is replaced in 1963 with vinyl-coated cotton friction tape, which cannot be destroyed by overheating.

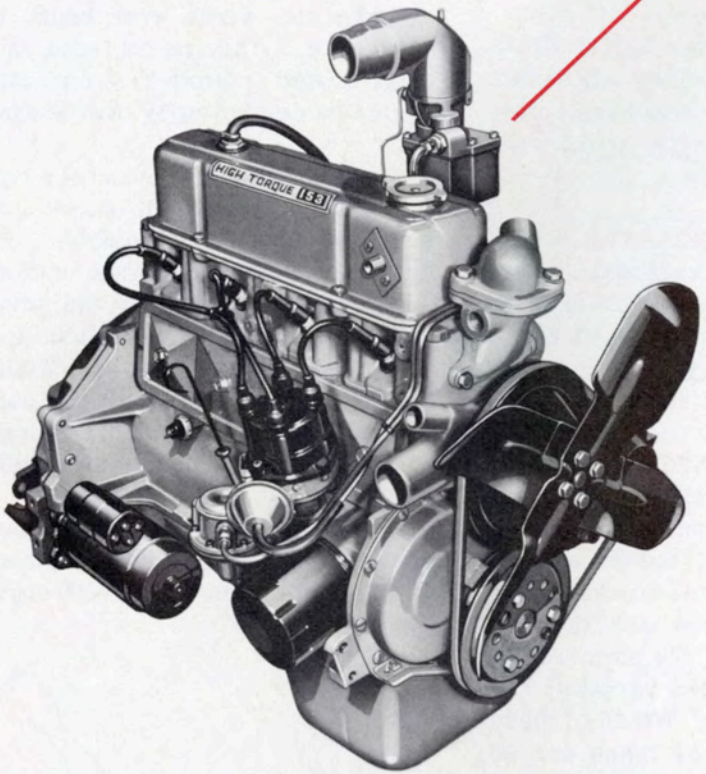
PARKING BRAKES. Orscheln-type parking brake lever equipment is now standard for all Series P20-30 models. Previously available as an extra-cost option, the Orscheln equipment offers the advantages of versatility, ease of operation, and positive parking brake application. The lever may be mounted anywhere in the cab, and its linkage design and dynamic characteristics assure full brake cable travel with no slippage.

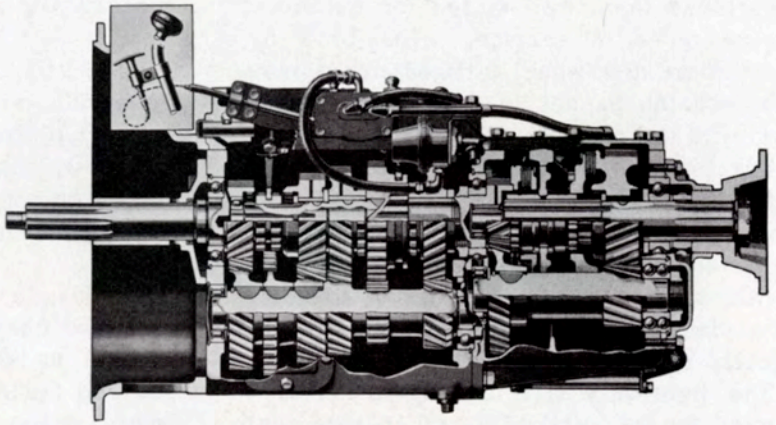
In addition, the advantages of the Orscheln parking brake design are extended to Series CLMT80 vehicles with the 409 engine option.



power teams

NEW 153 CU.IN. 4-CYLINDER ENGINE

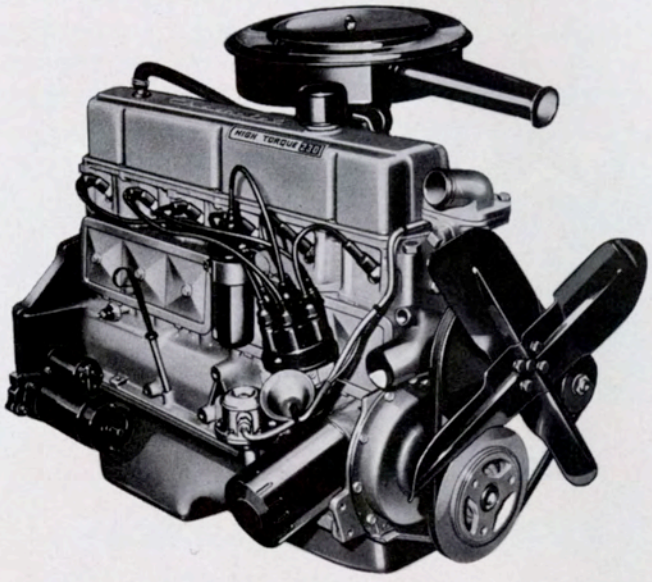


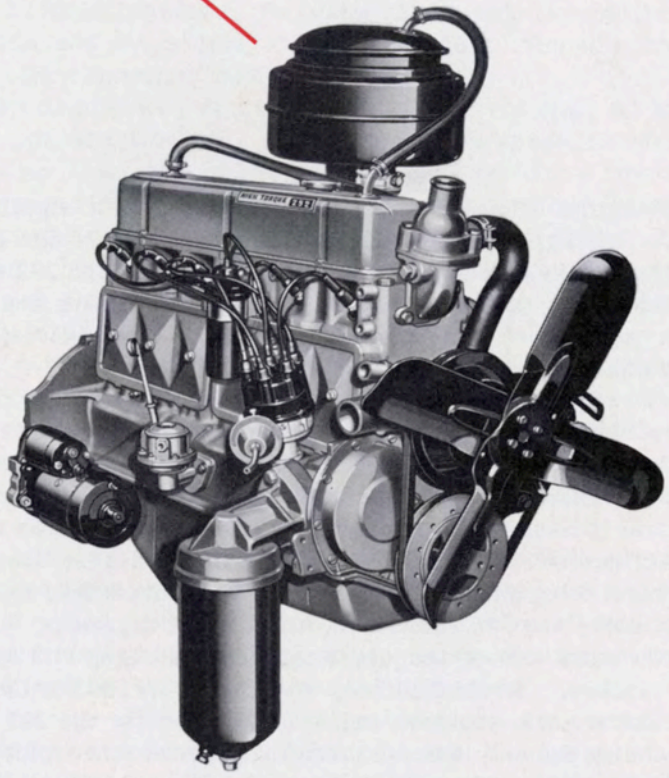


IMPROVED POWERGLIDE

NEW 8-SPEED TRANSMISSION

NEW 230 AND 292 CU.IN. 6-CYLINDER ENGINES





IMPROVED EXHAUST SYSTEMS

POSITIVE VENTILATION

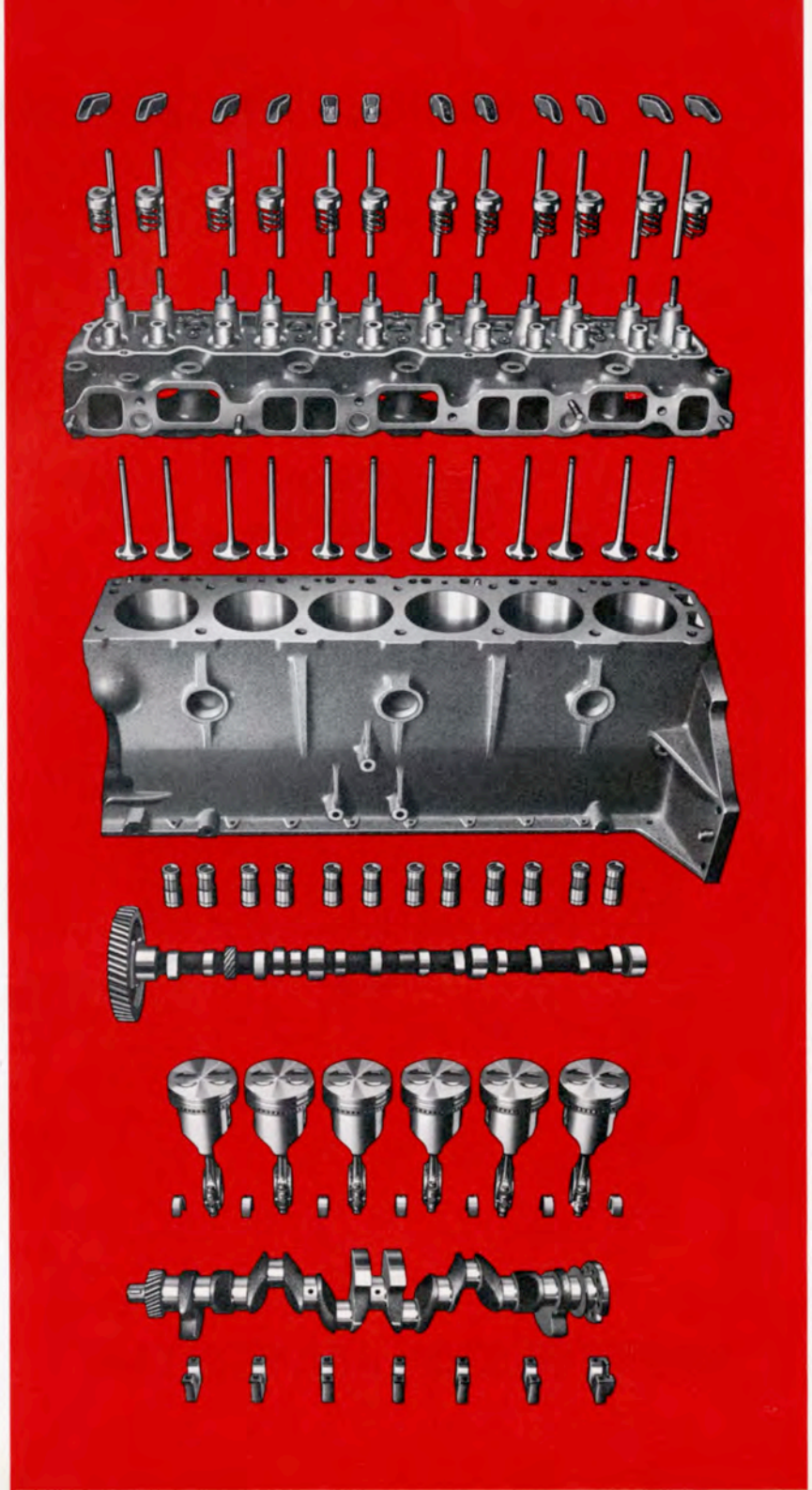
153 and 292 engines are derived from BASIC 230 ENGINE

The 1963 engine line-up incorporates a number of significant changes. Highlighting the program are a family of new 4 and 6-cylinder, in-line, gasoline engines of 153, 230, and 292 cubic inch displacement; numerous improvements to existing engines; Delcotron generator systems on all except R10 models; and increased exhaust system durability.

The new engines, one with four cylinders and two with six cylinders, represent thoroughly modernized power plants, introduced to increase performance and economy, reduce weight, and lower manufacturing and maintenance costs. All three engines are identical in basic concept and the discussion of features deals mainly with the 230 cubic inch, 6-cylinder unit. This is, however, followed by a description of the differences incorporated into the 153, 4-cylinder, and 292 cubic inch, 6-cylinder, engines.

All three units are of the overhead valve design, with a bore of 3-7/8 inches. Strokes differ, with 3-1/4 inches for the 153 and 230 cubic inch engines and 4-1/8 inches for the 292 unit, the latter being the only under-square engine in the Chevrolet line.

In application, the 230 cubic inch engine completely replaces the 235 unit. The 4-cylinder, 153 engine is used exclusively on P10 models, while the new 292 cubic inch, 6-cylinder engine replaces the former 261 engine. While these power plants retain all the favorable characteristics of their former counterparts, the 230 engine is almost 2 inches shorter and 3 inches lower in overall height than its predecessor, while the 292 is shorter by a like amount and is approximately 1/4 inch lower. Because of



the lower engine silhouette, the updraft carburetor, formerly used on Series P20 and P30 models is discontinued.

A listing of the power ratings of the new engines is contained in the Appendix.

A major objective of the new engine program called for compactness and light weight with good power-to-weight ratio. This has been more than realized. The cylinder block is constructed of cast-alloy iron, and, except for the number of main bearing supports, is generally of conventional design. However, improved and modernized foundry processes permit thin-wall casting techniques which materially reduce size and weight.

The full-depth front and rear bulkheads are designed to contribute to the rigidity of attaching parts. The rear bulkhead, which incorporates reinforced right and left hand side flanges, affords a rigid foundation for the clutch housing. Because of its compactness and inherent rigidity, the lower extremity of the block is only 0.12 of an inch below the main bearing centerline.

Water jackets extend the full length of the bore. Bulkhead spacing is such that a main bearing support is located on either side of every crankshaft throw, resulting in a total of seven main bearings for a 6-cylinder engine.

Precision thin-wall casting techniques, combined with high chromium alloy iron, provide the new cylinder head assemblies with greater strength at less weight. An efficient combustion chamber, large inlet and exhaust passages, and good water flow characteristics also are featured.

Openings at the rear of the cylinder block register with holes in the cylinder head to permit coolant flow through various passages to the front of the engine. Cored passages surround the base of the spark plug hole to assure coolant movement around the spark plugs at all times.

Bosses around each valve stem form integral valve guides. These bosses also are exposed to the coolant, providing excellent heat transfer from the valves.

Cylinder head attachment to the block is arranged in a pattern of four bolts around each cylinder bore. This attaching method places the bolt bosses far enough away from the cylinder bores to eliminate the possibility of distortion of the cylinder barrels. Fourteen 1/2-13 high-quality steel bolts are used to secure the head.

Crankshafts are manufactured of drop-forged steel, with nodular iron crankshafts being introduced sometime after the start of production. The crankshafts revolve in removable, steel-backed, Moraine 100A main bearings. Crankshaft thrust is taken by the Number Seven bearing.

Forged carbon steel, I-beam section connecting rods are fitted with precision, replaceable, insert-type Moraine 100 bearings. Connecting rod center-to-center dimension is 5.7 inches, contributing to the compactness of the engine.

Light weight, autothermic (strut-type), cast aluminum alloy pistons are utilized in the new engines. Design features include an open slipper skirt to provide the required clearance for the crankshaft counterweights; a notched top face to eliminate the possibility of interference with the valves; and a piston pin boss offset 1/16-inch towards the major thrust side to promote quieter operation and longer life. Chromium steel piston pins are firmly held in the connecting rods by a shrink fit.

Two compression rings and one oil control ring, all above the piston pin, are provided. Both compression rings, constructed of cast alloy iron, are of the inside bevel type with a tapered face. The upper ring outside diameter is coated with a flash chrome plating, while the lower ring face is covered with a wear-resistant coating. The oil control ring is of the multi-piece type with two rails and a spacer. The control ring assembly is similar to that used in other Chevrolet engine assemblies.

The valve operating mechanism features low inertia for high speed efficiency. Large, high alloy steel inlet valves and special steel exhaust valves assure unrestricted breathing of the engine. The rocker arms are individually mounted on separate studs and pivoted on ball seats. Actuation is through hydraulic valve lifters and hollow push rods.

The cast iron camshaft is designed to provide timing which produces optimum performance and economy in the low and medium speed ranges. Inlet and exhaust valve lift is 0.335 inch, and the firing order is 1,5,3,6,2,4. An aluminum camshaft gear is used for good durability and quiet operation.

Neither the inlet nor exhaust valve faces are coated, nor are exhaust valve rotators provided with the 230 cubic inch engine.

To facilitate engine timing readings, especially when a dual pulley and belt arrangement is used, the harmonic balancer timing tab and marker are located on the left hand side of the engine.

The water pump is located on the front face of the block, and discharges coolant into the plenum formed by the front face and the Number One cylinder barrel. The main body of the water moves rearward to the back of the case from where it passes

through two large cast openings into the cylinder head and then forward to the water outlet. Full-circle spark plug cooling is provided by means of a 3/16-inch hole at the base of each plug.

Effective cooling in such critical areas as the exhaust valves and ring belts is assured by the relatively high velocity provided by the water pump. Flow rate is 70 gallons per minute at 4400 rpm. A 170-degree, pellet-type thermostat assures quick warm-up. An internal by-pass to the pump is provided by a small hole in the forward section of the head. A 4-blade fan is released as base equipment. Fan diameter is 17.62 inches for Series 10-30 and 20 inches for Series 50.

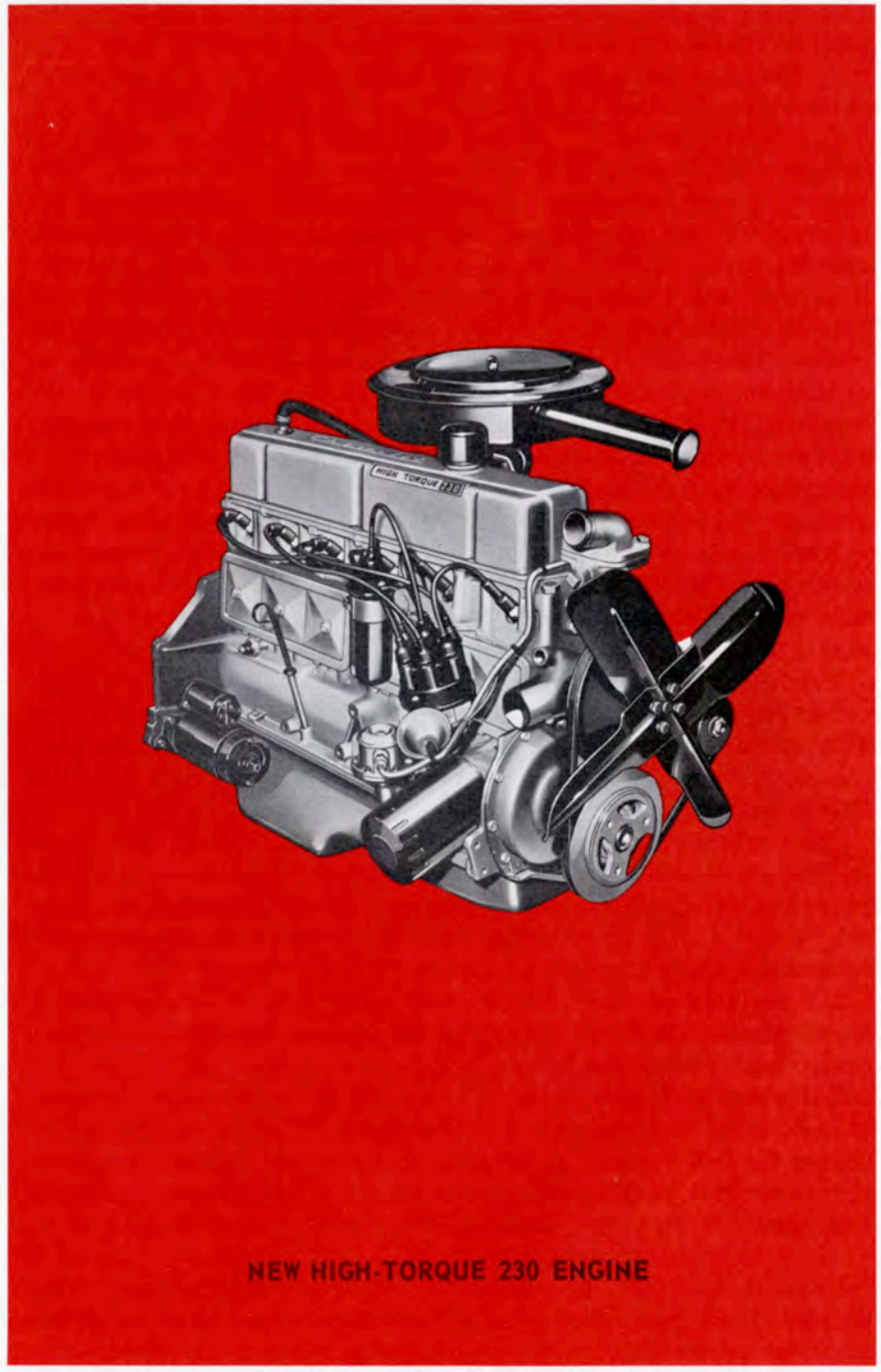
The short exhaust ports, efficient water flow, and compact overall engine design result in reduced coolant capacity and radiator core size. The radiator core is of the tube-on-center type, is 1-1/4 inches thick, and has a frontal area of 314 square inches. A 13-pound pressure cap is used to increase the boiling point of the coolant and reduce overflow losses.

All new engines feature a controlled, full-pressure lubricating system with gear-type oil pump. The pump is distributor driven, and utilizes a stationary pump with screen. Oil from the pump is fed through the oil filter directly to the main and tappet galleries. Oil holes carry the lubricant to the main and camshaft bearings. The top half of the main bearing shell is grooved, and registration with the oil hole in the crankshaft provides connecting rod bearing lubrication. Cylinder wall oiling is accomplished by throw-off from the sides of the connecting rods.

The valve train is lubricated through the valve lifters and hollow push rods. Oil, under pressure, is also metered to the stamped rocker arms. Oil drainback holes channel the oil back to the crankcase. By-pass oil from the front camshaft bearing is fed through an orifice in the block to an outlet nozzle which directs oil to the timing gears.

A one-quart, full-flow, throwaway oil filter is provided as standard equipment. A by-pass valve, which opens at 10 psi, is pressed in the block and assures a continuous flow of oil, in the event the filter becomes plugged. The by-pass valve need not be replaced when the filter is changed.

Both inlet and exhaust manifolds utilize the thin-wall casting technique and are located on the engine left side, with a conventional "over-under" arrangement conveniently providing hot exhaust gases to heat incoming fuel. Inlet and exhaust manifold design is carefully worked out to accomplish good fuel distribution to the cylinders, and quick, effective exhaust gas removal. Valves



NEW HIGH-TORQUE 230 ENGINE

are arranged in the cylinder heads so that inlet valves of adjacent bores are side-by-side, and inlet ports are siamesed. The resulting inlet manifold design is thus simplified, for a single passage feeds two cylinders. Similar advantage is taken in the exhaust manifold design where adjacent ports occur.

The large flat floor surfaces of the rectangular inlet passages improve distribution, by helping to maintain vaporization as the fuel mixture passes to the chambers. Abrupt angles at the joining of longitudinal and lateral passages maintain high velocities at turns, further assisting mixture vaporization.

Dropping down beneath the inlet manifold, the exhaust passages converge at a central point within the manifold. At this point, exhaust gases may follow one of two courses dependent upon engine operating temperature. During engine warm-up, the thermostat control positions the exhaust manifold heat valve, to route hot gases upward into the hollow rectangular housing which surrounds the inlet manifold and serves as the carburetor mounting base.

THE 153 CUBIC INCH ENGINE is basically nothing more than two-thirds of the 230 cubic inch version, with identical features. Thus, all components such as pistons, connecting rods, and valve trains are the same for both units. Items such as crankshafts, camshafts, blocks, heads, oil pans, manifolds, and rocker covers, although similar to the larger version, are tailored to the 4-cylinder design.

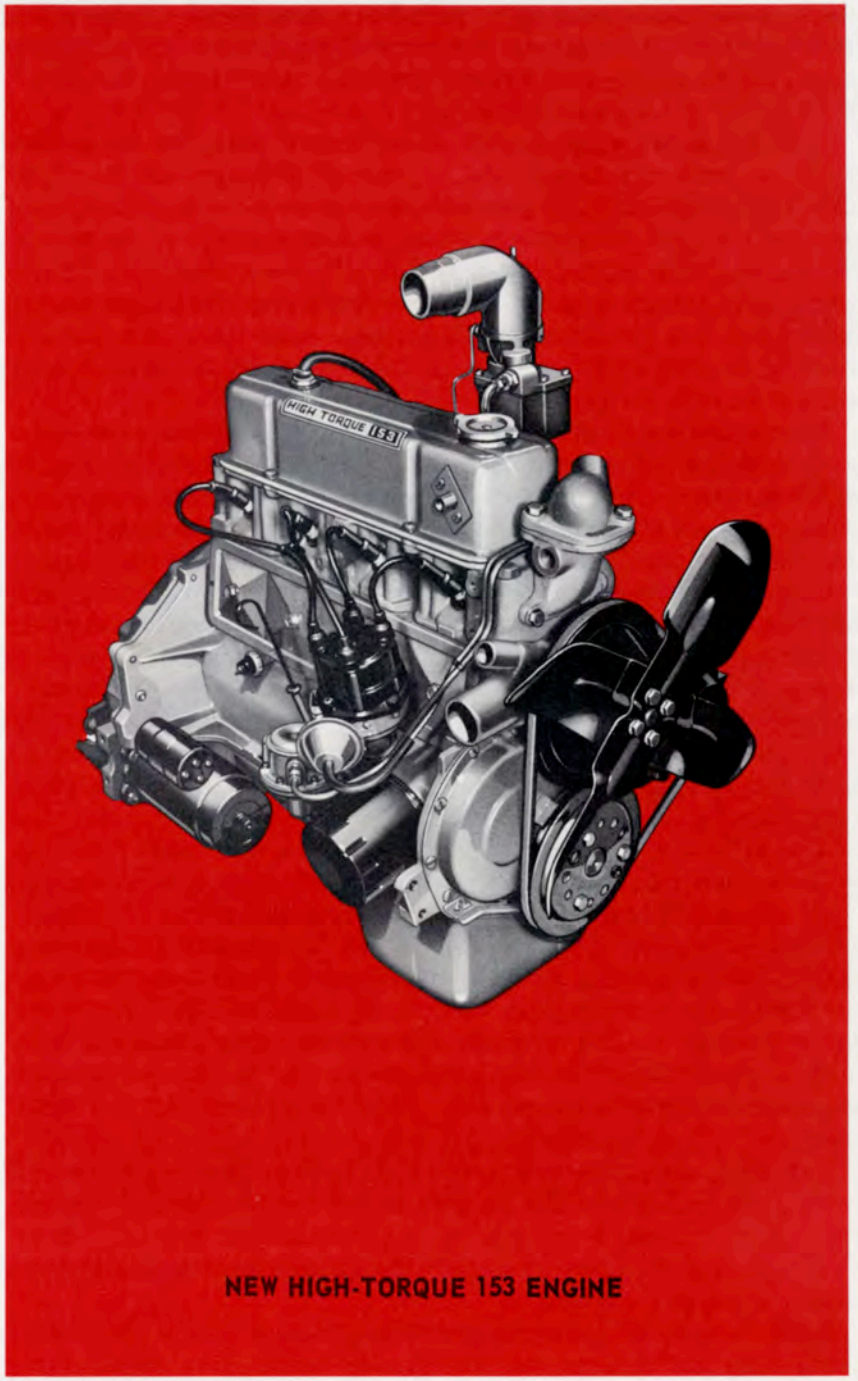
THE 292 CUBIC INCH ENGINE. While the design features and objectives for the 292 cubic inch engine are similar to those of the 153 and 230 engines, several components are of significantly greater capacity to be compatible with its heavy-duty usage.

This engine is of under-square design, primarily for reasons of parts interchangeability. Design experience shows that under-square engines are not without merit, having such proven features as good thermal efficiency and good low end torque.

The water jackets are extended slightly further over the exhaust ports in the cylinder head to satisfy the additional cooling requirements of the higher displacement.

The crankshaft, of forged steel construction, is approximately 21 pounds heavier than that of the parent 230 engine for greater crankshaft rigidity. Heavier-duty, M400, precision removable bearings are used with this crankshaft also for greater durability.

Full-skirt aluminum pistons are equipped with a specially contoured sump, centrally located in the piston top, to provide



NEW HIGH-TORQUE 153 ENGINE

the 8.0-to-1 compression ratio and necessary valve clearances. For optimum performance and durability, pistons are of larger section throughout, with heavier domes, heavier lands, and more rigid piston pin boss supports.

The dome is actually .010 inch thicker than that of the 230 engine and the additional metal not only provides greater strength to withstand the high gas pressure stresses encountered in heavy-duty service, but also affords better heat transfer from the piston to the cylinder walls. Heavier ring grooves and lands afford additional protection to the rings from high temperature conditions existent in the piston top. The pistons incorporate a continuous steel insert in the top side of the upper compression ring to reduce wear in the groove.

Inlet valve faces are aluminized, while the exhaust valves are stellite-faced. Optimum valve life also is assured with exhaust valve rotators. Except for the additional hole drilling required to accommodate the positive-closed ventilation system, valve rocker cover configuration is identical to that of the 230 engine.

Connecting rod I-sections, because of the longer stroke, are heavier and longer than those of the 230 engine. Otherwise, construction and appearance details are identical. Connecting rod center-to-center dimension is 1.05 inches longer on this engine. Crankpin bearings also are 0.10 inch larger in diameter.

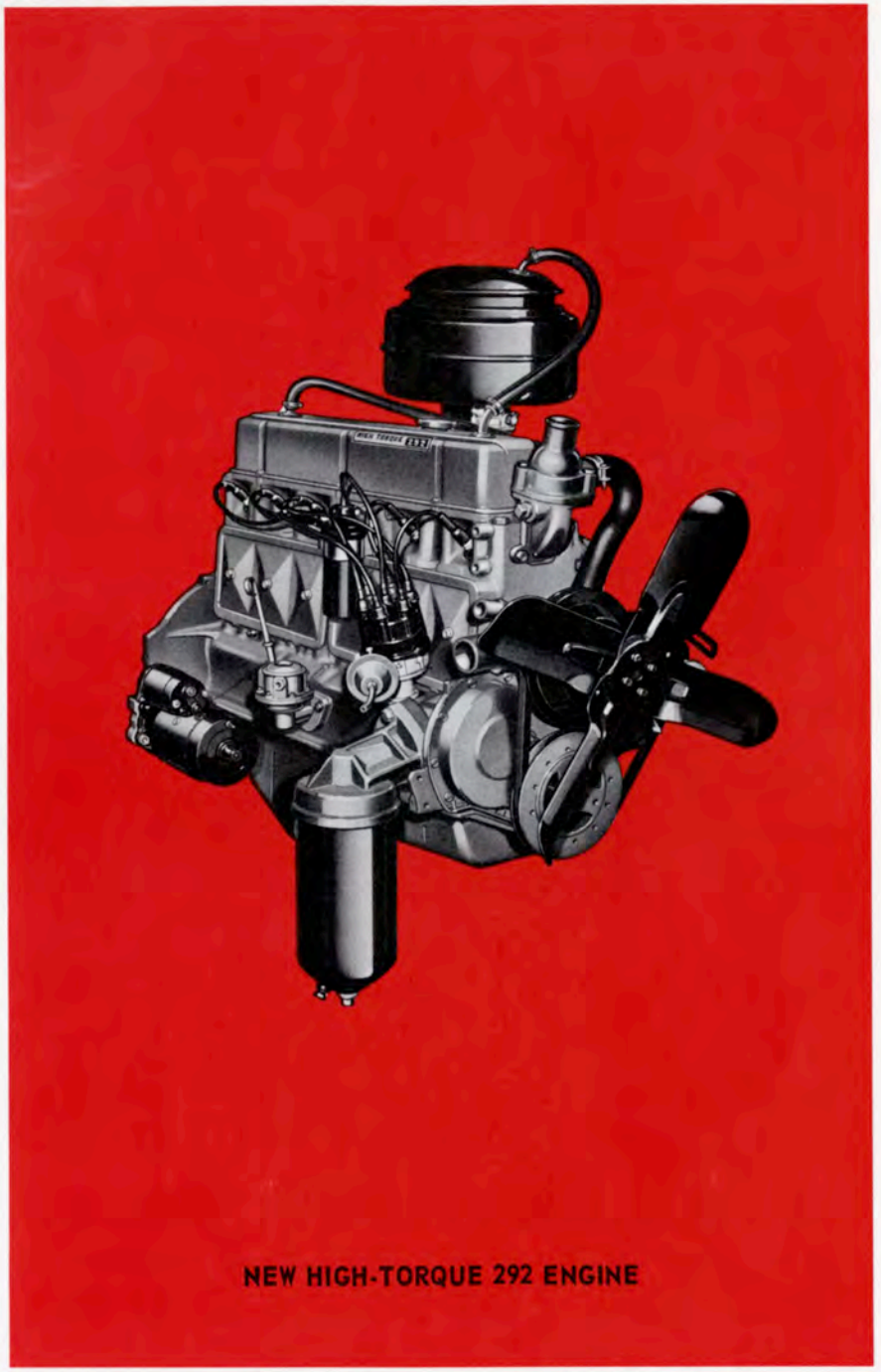
As on the 230 engine, the base oil filter is of one-quart capacity. However, a replaceable element, 2-quart capacity filter is available optionally.

The harmonic balancer is equipped with a dual track pulley to accommodate the use of other crankshaft driven accessories.

External visible differences between this unit and the 230 engine include a screw type oil filler cap; an oil bath air cleaner, incorporating a fitting for adapting the positive-closed crankcase ventilation hose; a different water inlet, complete with provisions for a by-pass cooling system; a manifold fitting, designed with dual vacuum take-off ports; unsymmetrically positioned forward engine mounting provisions; and a right hand clutch fork arrangement.

For 1963, the carburetor venturi I.D. is increased to 1.62 inches from 1.46 inches and the throttle bore is boosted to 1.75 inches from 1.68 inches over that of the former 261 engine. These revisions are designed to satisfy the greater breathing requirements of the new engine.

Also, to satisfy the increased cooling requirements, the water pump body and thermostat are slightly larger than those of the



NEW HIGH-TORQUE 292 ENGINE

lower displacement 6-cylinder engine. A 4-blade, 20-inch diameter fan is released as base equipment, with a 5-blade fan available optionally.

Several noteworthy features are common to all three of the new engines. Included is a positive crankcase ventilation system, which is provided as standard equipment on the 230 cubic inch engine; and the positive-closed system common to both the 153 and 292 cubic inch engines. With both systems, the road-draft tube is eliminated.

In the positive-closed system, fresh air is admitted through the air cleaner and channeled through the forward section of the valve rocker cover, down into the crankcase. From there, the air stream picks up vapors which pass up through the tappet deck ventilation holes. The air stream is then piped to the fuel mixture passage in the intake manifold, through a fitting tapped into the passage. Ventilating air mixes with the fuel mixture, is burned in the cylinders, and is expelled through the exhaust system. A plain, blocking-type oil filler cap is used with this type of system. A regulating valve is mounted at the rear of the valve rocker cover, between the cover and the exhaust hose. Securely sealed and held in place by a rubber grommet, the lower end of the valve extends into the rocker cover and is shrouded by a rectangular sheet metal shield. During periods of relatively high manifold depression, at idle or part throttle, the valve limits air flow from the engine crankcase. Thus, the quantity of crankcase vapors introduced into the induction system is controlled, and the possibility of fuel-to-air ratio disruption is avoided.

The positive ventilating system functions similarly. However, fresh air is introduced through a breather-type oil filler cap.

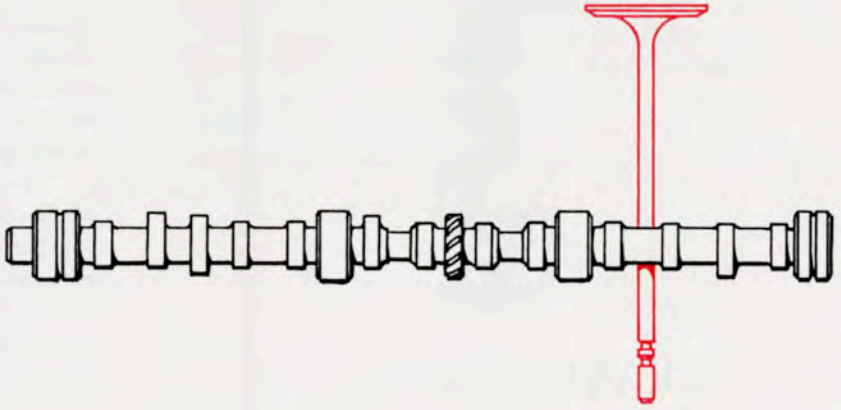
Exhaust systems are also more durable for 1963. A heavy gauge stainless steel exhaust pipe extension, designed to prevent premature burn-out, is welded to the exhaust pipe in place of the slip-fit method used previously. This is done not only to prevent crimping the extension bead when the manifold-to-exhaust pipe attaching bolts are secured, but also to provide additional strength in this area. Gauge thickness of the extension is increased to .074 from .060 inch.

All Series 10 through 30 model mufflers are increased in size and incorporate certain material changes which greatly increase life expectancy. Contributing factors include the increased overall length and circumference and the aluminized heads. Head thickness is also increased from 22 to 18 gauge. Overall dimensions are now 6 by 22 inches compared to 5 by 21 inches for the previous design.

As part of the 1963 Chevrolet truck reduced maintenance and increased durability programs, several noteworthy improvements have been incorporated into the ignition systems for the 153, 230, and 292 cubic inch engines. A urethane cam lubricator, impregnated with a special lubricant, is installed over the breaker plate pivot post. In position, the lubricator is in contact with the cam, providing full time lubrication. A more durable distributor shaft drive gear roll pin, 3/16 inch in diameter, replaces the 1/8-inch pin used previously. On the exterior, a rubber dust shield over the vacuum advance opening prevents the entry of contaminants to the distributor.

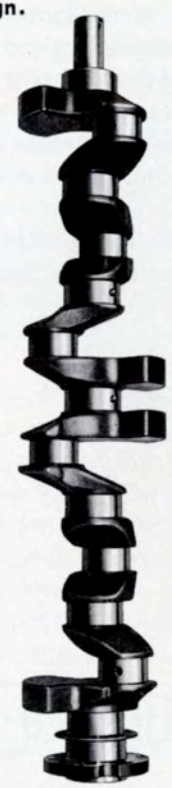
All new engines utilize a 4-point mounting system with synchro-mesh transmissions, and a 3-point system with Powerglide. The molded rubber mounts are designed to provide maximum fore and aft stability and to minimize the transfer of engine vibrations to the chassis and driver compartment. Series 10 through 30 models utilize 40 durometer rubber, while Powerglide-equipped vehicles and Series 50 and 60 models use 60 durometer rubber mounts.

Still another improvement is the availability of 37-ampere capacity Delcotron generators on the three new engines as standard equipment.



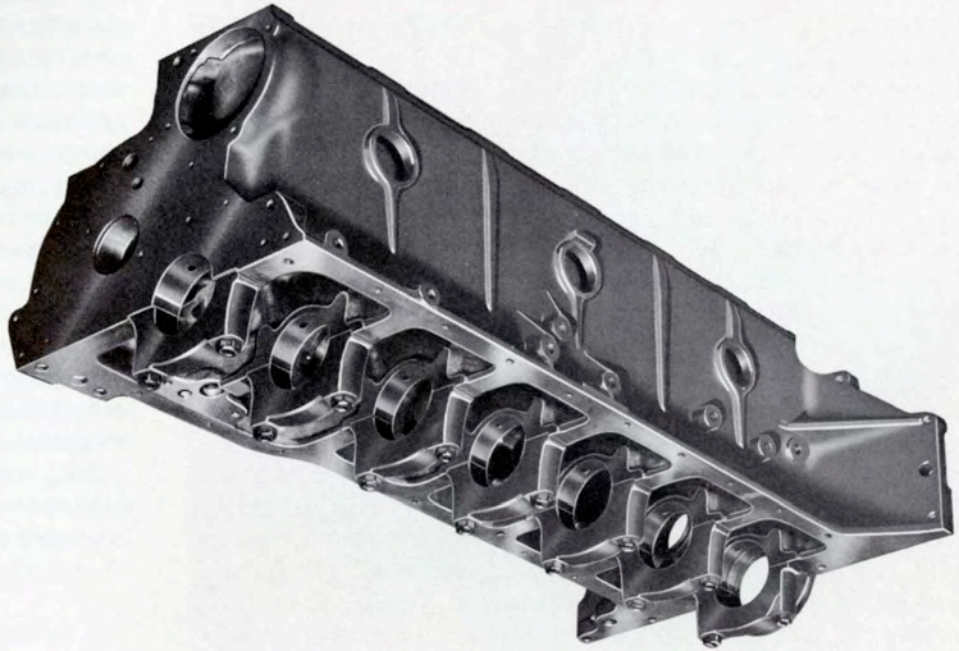
Crankshafts of both the 230 and 292 cubic inch engines are of the seven main bearing design, with a resultant gain in stiffness and durability over the former four bearing unit. Large crossover arms and the heavy center counterweight are eliminated for a substantial weight saving. The 230 engine crankshaft has four counterweights, while the 292 engine has six counterweights.

The 4-cylinder engine crankshaft is basically similar, but of a shorter, five main bearing design.



CRANKSHAFT

CYLINDER BLOCK



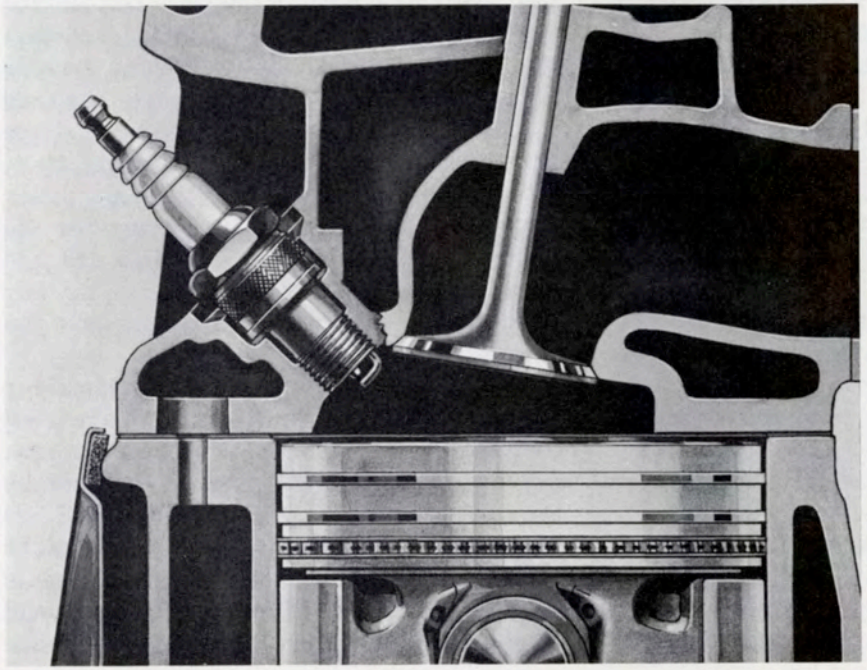
A most interesting feature of the new 4 and 6-cylinder engines is the wall casting technique and the number of stiffening and supporting bulkheads within the cylinder blocks. Walls in unstressed areas are generally specified at 0.15 inch, whereas conventional foundry practice is 0.18 – 0.21 inch. A lighter and smaller engine design is thereby made possible.

The 4-cylinder engine has five bulkheads and main bearing supports, while the 6-cylinder units have seven. Thus, a main bearing support is located on either side of every crankshaft throw. This arrangement contributes significantly to engine smoothness, durability, and noise reduction. It greatly minimizes crankshaft deflections, materially increases bearing area, and provides a minimum distance for the transfer of shock loads from the crankshaft to the block.

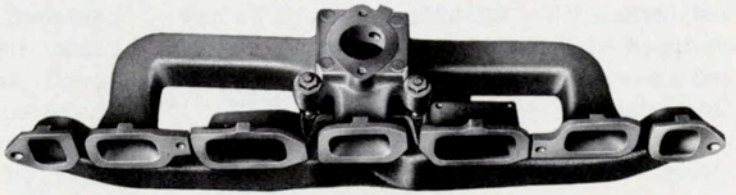
COMBUSTION CHAMBER

The combustion chamber of all three new engines is of identical modified-wedge design, with a large quench area for good combustion control. During compression, the quench area also serves as a squish surface which imparts turbulence to the fuel mixture, assuring more complete utilization of the fuel. The combustion chamber is very compact not only because of the valve arrangement, but also because of the spark plug location.

Large inlet ports permit efficient, low-velocity fuel mixture flow, while short exhaust passages minimize exchange of heat to the coolant, permitting a more efficient cooling system.



MANIFOLD



The same thin-wall casting technique as used on the cylinder blocks and heads is also used for the manifolds. Further weight reduction is gained through the siamesing of the inlet manifold ports so that each may feed two cylinders. Similar advantage is taken in the exhaust manifold design where adjacent ports occur.

OTHER NEW ENGINE FEATURES

Several significant engineering improvements also are incorporated into the carry-over V-8 engine line-up. The 283 cubic inch engine is revised with a new combustion chamber design, higher compression ratio, and higher lift camshaft. Also, it is now equipped with positive crankcase ventilation and a new oil-wetted, polyurethane, replaceable, element-type air cleaner.

The other engines all boast positive-closed ventilation systems; new manifold heat stoves on the 327, 348, and 409 engines; a new 12-inch, double-disk clutch; a more durable crankshaft; improved harmonic balancer; and an SAE Number 2 bell housing on the 409 cubic inch engines. Also, radiator design is improved on some Series 60 and 80 models.

Except for slightly different hose routings and points of attachment, crankcase ventilation systems for the V-8 engines are basically the same as those of the new L-4 and L-6 engines. On the 283 cubic inch engine, the rear hose is connected to a fitting tapped into the carburetor mounting disk and to a pipe located just behind the tappet deck, in the block. This exhaust hose is routed and attached in a similar manner on the 327, 348, and 409 engines. However, because of the positive-closed system employed on these engines, an intake hose is attached to a pipe located on the forward underside of the air cleaner, and to a similar pipe extending from the rear of the oil filler neck. The 145 cubic inch engine of the R10 Series also is equipped with a positive-closed crankcase ventilation system.

The optional 283 V-8 engine, released for Series 10 through 30 models, is now equipped with the same cylinder heads and camshaft used with the passenger car 327 cubic inch V-8 engine. These changes result in a slightly smaller combustion chamber, a higher 9.0-to-1 compression ratio, revised valve timing, and a higher valve lift. Benefits derived include increased horsepower and torque ratings with the use of regular fuel. The optional 283 engine, as used on Series CL50 models, remains unchanged from 1962.

New sheet metal heat stoves are featured on the 327, 348, and 409 engines as base equipment. The system is designed to provide almost immediate warm air to the air cleaner for more efficient cold weather operation. A rectangular, sheet metal housing extends over the exhaust manifold and the air is piped directly upward to the air cleaner.

A new 12-inch, coil, 2-plate clutch is released as base equipment with all 409 engines. The double plate design improves pressure plate and flywheel contact with the driven plates for a more efficient transfer of engine torque to the drive train. This clutch has a rated torque capacity of 450 foot pounds and a total clutch spring pressure rating of 1980 pounds. The unit is specifically designed for heavy-duty service, yet requires no more maintenance than a single-plate clutch. The correct release bearing clearance is obtained by a simple linkage adjustment. For maximum release bearing life, a lubrication interval of 1500 miles is recommended.

Crankshaft durability is improved on 348 and 409 engines with the use of a harmonic balancer having a longer hub and two, 3/4-inch long woodruff keys mounted in tandem. Formerly, a single 1-1/2 inch long key situated in a deeper groove was used. With the new arrangements, less metal is machined out of the crankshaft nose, providing greater strength in this area. The new keys are positioned approximately 1/2 inch apart. While the forward key registers with a mating slot in the timing gear, the rear key is indexed with the harmonic balancer. With the former arrangement, high stresses were localized in the bottom of the key groove and the harmonic balancer attaching bolt hole. Harmonic balancer hub-to-crankshaft press length is also increased by removing the counter bore lead from the hub end and repositioning the front key. This key pilots the balancer when pressed onto the crankshaft end.

Regular production radiator design for Series DT60 and CLMU80 models is revised to reduce thermal expansion and increase cooling efficiency. A 3-tube design replaces the former 2-tube design on T60 and CLMU 80 models, while a 4-tube design replaces a 3-tube arrangement on base D60 models and Series CLMU80 models equipped with a 409 engine. These revisions increase

resistance to cell pressure build-up, and the possibility of distortion or failure is greatly minimized.

The 145 and 283 cubic inch engines are equipped with a new distributor design featuring a positively lubricated cam. As on the L-4 and L-6 engines, the revisions are incorporated to reduce ignition system maintenance requirements.

Engine mounts are also revised for all engines to provide maximum longitudinal stability and to minimize transfer of vibrations. Series 50 through 80 models use 60 durometer rubber mounts.

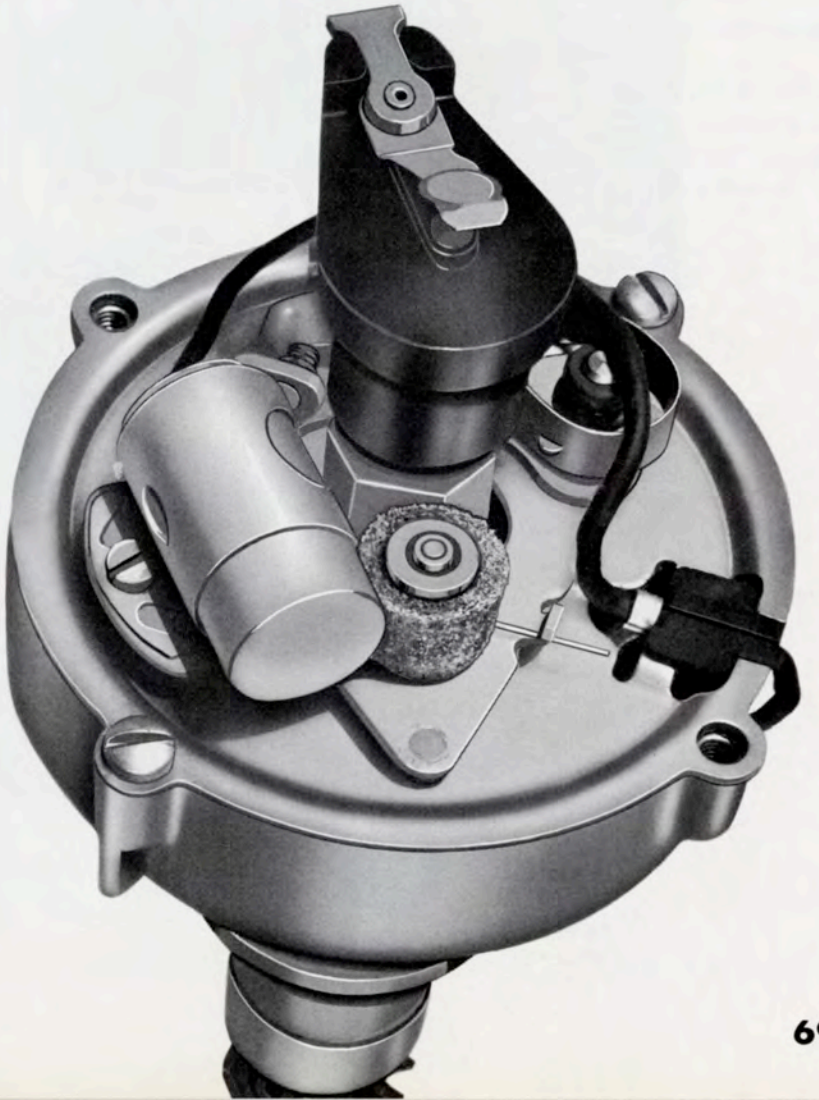
Front engine mounting disks are protected against manifold heat by special metal shields on models equipped with either the 348 or 409 engines. These shields are formed to cover the entire mount and are slotted to provide clearance for the engine mounting disk attaching holes. Since the mounts are always in a state of compression, the shields are held securely in position, between the block and the mounts, without the use of attaching bolts and nuts.

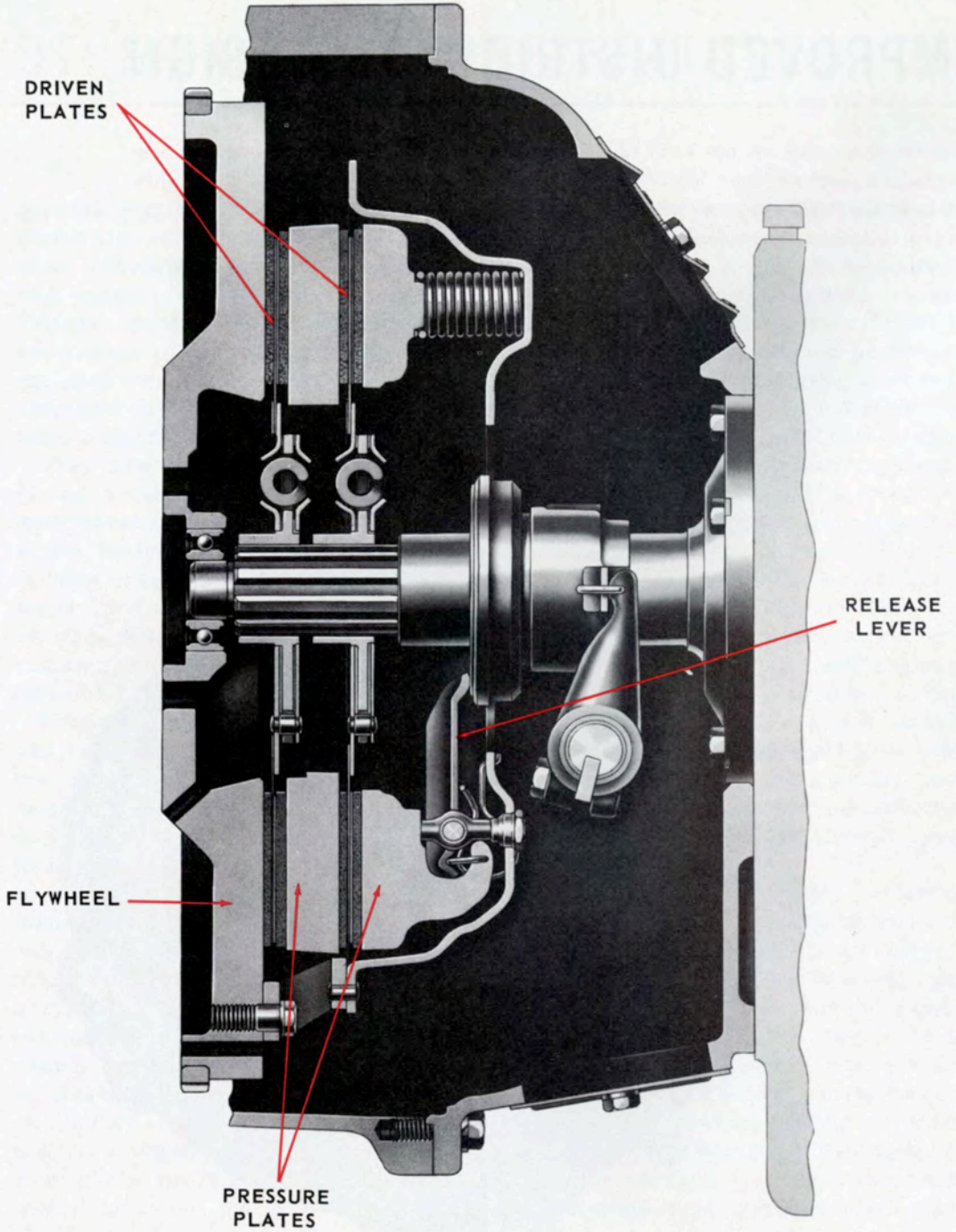
For 1963, all engines are equipped with 37-ampere capacity Delcotron generators as regular equipment.

IMPROVED DISTRIBUTOR DESIGN

Distributors used on the 145, 153, 230, 292, and 283 cubic inch engines now include a urethane cam lubricator, impregnated with a special lubricant. This feature results in greater breaker point cam follower life and, therefore, reduced maintenance requirements.

Further, the new distributors include a larger shaft drive gear roll pin and a rubber dust shield over the vacuum advance opening.





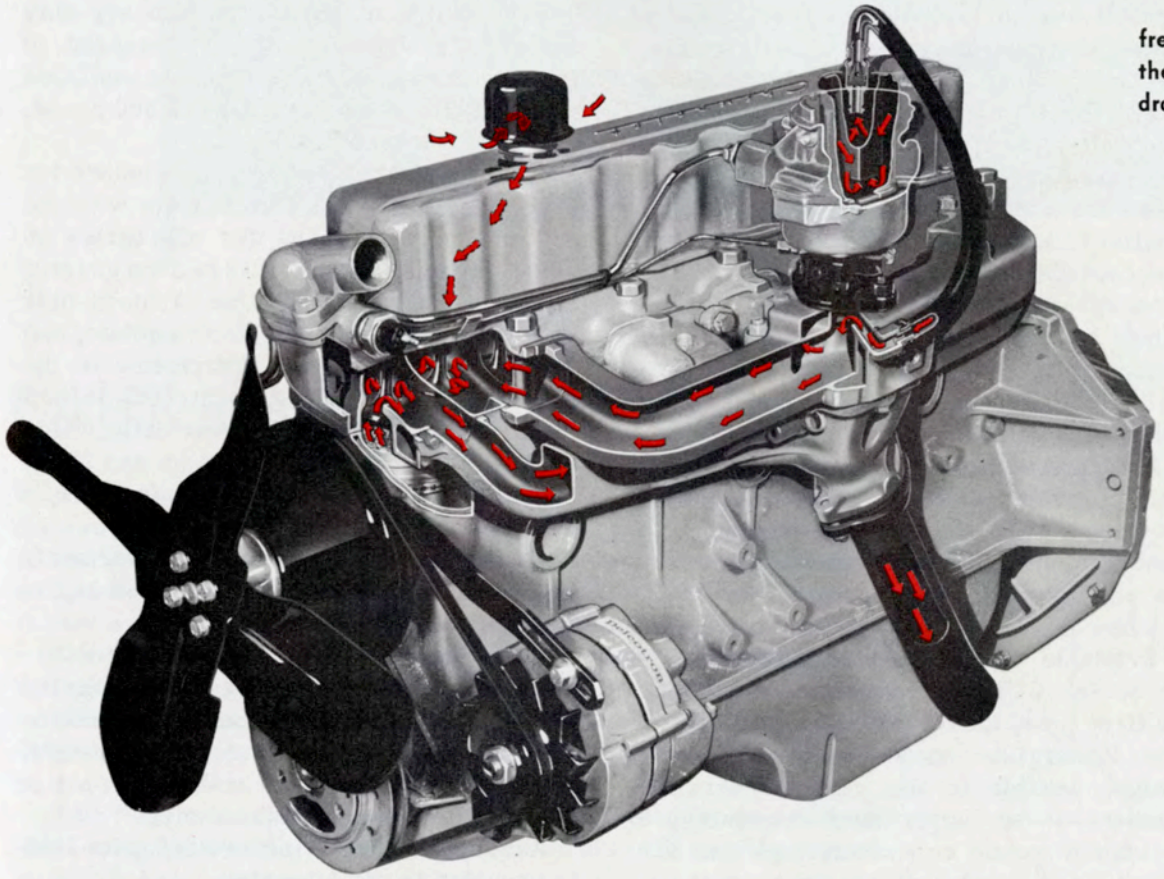
2-PLATE CLUTCH

The new 2-plate clutch differs from a single-plate unit only in that it incorporates a second driven and pressure plate. With the clutch engaged, the rear pressure plate is being forced away from the clutch cover by the clutch springs. Thus, the driven plates, splined to the transmission input shaft, are held between the two pressure plates and the flywheel.

Clutch release is accomplished identically to that of a single-plate component. When the pedal is depressed, the release bearing moves toward the flywheel and contacts the inner ends of the four release levers. These, pivoted on bolts attached to the clutch cover, pull the rear pressure plate away from the rear driven disk, toward the cover. Pressure is thereby taken off the front pressure plate and front driven disk as well.

The cover plate and two pressure plates are interconnected by straps which maintain radial relationship and yet permit lateral movement necessary for clutch release.

POSITIVE CRANKCASE VENTILATION



All 1963 engines are equipped with a positive system for removing and neutralizing crankcase fumes. Two methods are employed – the positive and the positive closed. Both are basically similar in function. The road draft tube is replaced by a hose which directs the unburned fumes from the crankcase into the fuel induction system. These are thereby mixed with fuel, burned in the combustion chamber, and expelled through the exhaust system.

The systems differ in the method employed to induct fresh air into the crankcase. The positive system uses the oil filler breather cap. The positive-closed system draws clean air through the carburetor air cleaner.

mid-season 1962 changes

TILT-CAB INSIDE DOOR HANDLES are repositioned further downward to prevent interference with driver or passenger clothing. The new position is 45 degrees below the horizontal centerline with the end of the handle pointing forward; previously, the handle was positioned 45 degrees forward of the vertical centerline.

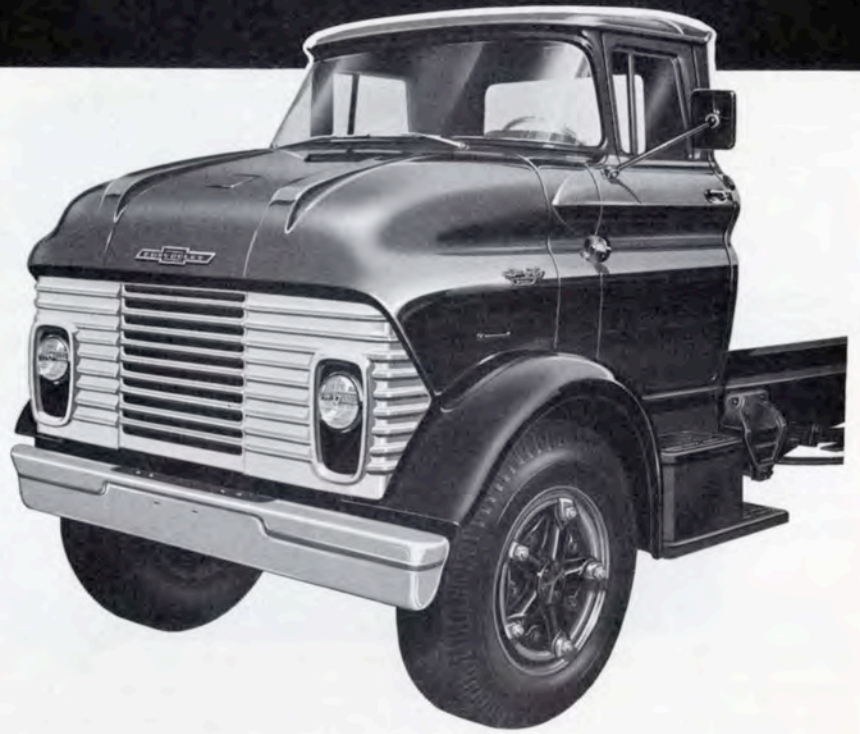
SERIES E80 APPEARANCE CHANGES. The direction signal lights, formerly located on the hood side panels, are relocated to the cowl side panels. Series designation plates are relocated, too - from the cowl side panels to the hood side panels.

PURE WHITE PAINT TREATMENT. On models painted Pure White, the radiator grille, headlamp bezels, bumpers, and hub caps (where applicable) also are painted Pure White instead of Cameo White. Cameo White is retained for the above items when used with all other exterior body colors.

IMPROVED HEATER CONTROLS. Single-wound steel wire heater control cable conduits replace the double-wound conduits previously used, resulting in increased control cable flexibility. As before, the conduits are cadmium-plated for corrosion resistance.

Control cables are improved further by cadmium-plating the steel stress wires which actuate the heater components. The cadmium plating serves two purposes: It provides a smooth, low-friction surface on the stress wires, easing movement through the coil conduit, and it provides additional corrosion resistance to the stress wires.

LONGER HEATER LIFE results from a hermetically-sealed blower electrical system for the conventional line Deluxe heater and Corvair 95 line Direct Air heater. Hermetic sealing is accomplished by encasing the motor housing and lead-in wire terminal with a rubber material to form a water-tight seal.



SERIES E80 APPEARANCE CHANGES

MODEL P1345 REAR DOOR EQUIPMENT. The 66-inch wide rear door option for Step-Van 7 models is discontinued and replaced with 69-inch wide rear doors, which are more compatible with the Step-Van 7 body construction. The 54-inch wide rear door option is continued unchanged.

DIRECTION SIGNAL SWITCHES are released as regular production equipment for all Step-Van models. Direction signal lamps, however, remain as optional equipment.

ENGINE ACCESS DOOR SUPPORTS. A rubber-coated chain replaces each of the folding links which support the Corvair 95 engine access door in the open position. This change improves

door operation by eliminating the binding which previously could occur.

NEW SERIES P30 REAR AXLE RATIO. A new rear axle ratio of 5.83-to-1 is released for Series P30 models, resulting in improved vehicle performance. The new rear axle, similar in design to the base rear axle, is available only with the heavy-duty 3-speed transmission and single rear wheels.

NEW SERIES K10 UNIVERSAL JOINT. The rear axle universal joint for Series K10 models is changed from a Spicer series 1310 (1500 pound capacity) to a Spicer series 1350 (2080 pound capacity).

NEW SERIES S62-64 BASE REAR AXLE. The 15,000 pound capacity Chevrolet-built single-speed rear axle with a 7.20-to-1 gear ratio is released as regular production equipment for Series S62-64 models. This rear axle, which formerly was available as an option for Series S62-64 models, replaces the 13,500 pound capacity 6.60-to-1 ratio rear axle formerly released as regular production equipment. The increased capacity of the rear axle is achieved through a larger and heavier gearset and greater diameter axle shafts. In addition, the greater numerical gear ratio results in improved vehicle acceleration.

LARGER FRONT AND REAR DRIVE PINION BEARINGS for increased durability are released on the 13,000 pound capacity rear axles for Series 50 models. The hypoid drive pinion gear is revised to accommodate the larger bearings.

SERIES 60 REAR AXLES. Rear axle availability is increased for C-L-T60 models. The Chevrolet 17,000 pound single-speed axle with a ratio of 7.20-to-1 and the Eaton 17,000 pound 2-speed axle with ratios of 7.17/9.97-to-1 now may be obtained for use with the cast wheel 5000 pound front suspension. These 17,000 pound axles were formerly available for Series 60H models only.

IMPROVED 2-SPEED AXLE CONTROL. A new anti-rattle spring replaces the rubber grommet formerly used under the driver's knob of the 15,000 and 17,000 pound capacity Chevrolet 2-speed rear axle control cable assemblies. The substitution of the spring for the grommet results in quieter axle shift operation over a longer period of time.

IMPROVED TILT-CAB TRANSMISSION CONTROLS. New rod-type transmission controls replace the cable-type for all transmission applications in the tilt-cab line-up. The rod-type shifter and selector controls not only increase durability, but also improve shifting characteristics. Since this linkage is more rigid, it is possible to exert greater force on the shift levers at the transmission. Heavier components, such as the shift lever, pivot bolt, and bracket, also are employed to simplify rod adjustments and make them more positive.

CORVAIR 95 TRANSAXLE FILLER PLUG. The filler plug hole is relocated higher on the transaxle to raise the operating level of the lubricant by 5/8-inch. This change increases transaxle lubricant capacity, prolonging pinion bearing life.

UPPER AND LOWER KING PIN BUSHING MATERIAL for the optional 9000 and 11,000 pound capacity I-beam front suspension options is changed from steel-backed bronze to Delrin, a highly durable plastic.

IMPROVED OIL FEED LINES. For D60 models only, steel tubing replaces flexible hose for the vacuum pump oil feed line on base models and for the air brake compressor oil feed line on models with optional air-hydraulic brakes.

CORVAIR 95 WHITEWALL TIRES. Narrow-band (1-inch) optional whitewall tires replace the wide-band type for all Series R10 models. Corvair 95 tire availability, size, or capacity is not affected.

ENGINE/CLUTCH LINE-UP

ENGINE	SERIES APPLICATION	COMP RATIO	GROSS HORSE-POWER	GROSS TORQUE	NET HORSE-POWER	NET TORQUE	CLUTCH SIZE (In.) & TYPE
145 HO-6	Std: R10 Opt: None	8.0	80 @ 4400	128 @ 2300	65 @ 3600	118 @ 2200	9-1/8 D
153 L-4	Std: P10 Opt: None	8.5	90 @ 4000	152 @ 2400	75 @ 4000	144 @ 2000	10 D
230 L-6	Std: CK10,20,C30, CLS50,P20,30 Opt: P10	8.5	140 @ 4400	220 @ 1600	120 @ 3600	205 @ 1600	10 D (CK10,20) 11 D (Others)
230 L-6 (Econo Carb - Opt)	Std: None Opt: C10	8.5	125 @ 3400	210 @ 1600	100 @ 3200	200 @ 1200	10 D 11 D Opt.
292 L-6	Std: CLT60,60H, S62,64,67,67H Opt: CK10,20,C30, CLS50	8.0	165 @ 3800	280 @ 1600	147 @ 3600	262 @ 2000	12 C (Std. models) 11 D (Opt. models)
283 V-8	Std: None Opt: CK10,20,C30, CL50	9.0 (*)	175 @ 4400	275 @ 2400	145 @ 4200	245 @ 2000	11 D
327 V-8	Std: S69,69H Opt: CLT60,60H, S62,64,67,67H	8.0	185 @ 4400	305 @ 2000	158 @ 4000	280 @ 2000	13 C
348 V-8	Std: CLMT80 Opt: None	7.75	220 @ 4400	325 @ 2600	180 @ 4000	300 @ 2400	13 C
409 V-8	Std: None Opt: CLMT80	7.75	252 @ 4000	390 @ 2400	215 @ 4000	352 @ 2400	12 C (2 plate)
4-53 L-4 (Diesel)	Std: D60,60H Opt: None	17.0	130 @ 2800	271 @ 1500	118 @ 2800	263 @ 1500	13 C
6V-53 V-6 (Diesel)	Std: EU80 Opt: None	17.0	195 @ 2800	423 @ 1500	183 @ 2800	415 @ 1500	14 C

D - Diaphragm spring. C - Coil spring. * - 8.5 for Series 50 applications.

TRANSMISSION LINE-UP

TRANSMISSION	STANDARD APPLICABILITY	OPTIONAL APPLICABILITY
3-Speed	CKPR10; CKP20	None
3-Speed Heavy-Duty	None	CP10, 20, 30
4-Speed	CP30; CLS50; CLST60, 60H	CKPR10; CKP20
5-Speed New Process 540C	None	CLT60, 60H*; S60*; S67H*
5-Speed Clark 265V	None	CLST60, 60H$
5-Speed Clark 267V	D60H	CLST60, 60H$
5-Speed Clark 264VO	D60	None
5-Speed Spicer 3152	CLMT80%	None
5-Speed Spicer 3152A	None	D60H; CLT80%
5-Speed Spicer 3153	None	D60
5-Speed Spicer 5652B	None	CLMT80&
5-Speed Spicer 5756B	EU80	CLT80&
8-Speed Fuller R46	None	CLMT80&; EU80#
2-Speed Powerglide	None	CPR10; CP20
6-Speed Powermatic MT30	None	CS60, 60H; CMT80%
6-Speed Powermatic MT40	None	CMT80&; EU80
2-Speed Transfer Case T221	K10, 20	None
3-Speed Aux. Spicer 5831G	None	M80%
4-Speed Aux. Spicer 6041	None	M80

* - With 292 engine only.
$ - With 327 engine only.
& - With 409 engine only.
# - With 5.57 rear axle only.
% - With 348 engine only.

REAR AXLE LINE-UP

CAPACITY (Lbs.)	RATIO	TYPE	STD. USAGE	OPT. USAGE
3300	3.73	Hypoid	K10	None
3500	3.73	Hypoid	C10	P10
3500	4.11	Hypoid	P10	C10
3500	3.07	Hypoid	None	C10
5200	4.57	Hypoid	CK20	None
5200	5.14	Hypoid	P20	None
7200	5.14	Hypoid	CP30	None
7200	5.83	Hypoid	None	P30
11,000	6.17	Hypoid	CLS50	None
15,000	7.20	Hypoid	CLST60	CLS50
15,000	6.17	Hypoid	D60	None
15,000	5.83/7.95	Hypoid	None	D60
15,000	6.40/8.72	Hypoid	None	CLST50, 60
17,000	7.20	Hypoid	CLT60H	CLT60; S67, 69
17,000	6.40/8.72	Hypoid	None	CLT60, 60H; S67, 69
17,000	7.17/9.97	Spiral Bevel	None	CLT60, 60H
17,000	4.87/6.77	Spiral Bevel	D60H	None
18,500	7.17	Spiral Bevel	CLT80	None
18,500	6.50/8.87	Spiral Bevel	None	CLT80
18,500	7.17/9.77	Spiral Bevel	None	CLT80
18,500	5.57	Spiral Bevel	None	EU80
18,500	5.57/7.60	Spiral Bevel	EU80	None
30,000 bogie	7.17	Spiral Bevel	M80	None

A B

C

D E

F G

H

I J K

L M

P

R

S

T

U V W

MODELS ON 19 WHEELBASES • 8 MODELS ADDED, 32 MODELS DELETED • SERIES 40 DISCONTINUED • SERIES 50 DOWNGRADED

ROWER FENDERS, BUMPERS FOR MEDIUM AND HEAVY-DUTY MODELS • SHEAR-TYPE BODY AND SHEET METAL MOUNTS FOR MOST

ELS • IMPROVED HOOD LOCK • AMMETER AND OIL PRESSURE GAUGE FOR MEDIUM-DUTY MODELS • NEW RADIATOR GRILLE DE

FOR LIGHT-DUTY MODELS • NEW SERIES DESIGNATION PLATES • NEW SEAT TRIMS • LADDER-TYPE FRAMES WITH COIL SPRING

EPENDENT FRONT SUSPENSIONS FOR LIGHT-DUTY CONVENTIONAL MODELS • I-BEAM FRONT AXLES WITH VARIABLE-RATE FRONT

NGS FOR MEDIUM AND HEAVY-DUTY MODELS • VARIABLE-RATE COIL REAR SPRINGS AND OPTIONAL CANTILEVER LEAF-TYPE

R SPRINGS FOR CP 10 AND C 20 MODELS • NEW SALISBURY REAR AXLE FOR CKP 10 MODELS • SELF-ADJUSTING BRAKES FOR

VAIR 95 MODELS • OPTIONAL POWER BRAKES FOR SERIES 10–30 MODELS • SIMPLIFIED STEERING SYSTEM FOR MEDIUM AND

VY-DUTY MODELS • IMPROVED REAR SHOCK ABSORBER MOUNTING ON MOST LIGHT-DUTY MODELS • IMPROVED CHASSIS WIRING

HEAVY-DUTY MODELS • INCREASED TIRE AVAILABILITY FOR CORVAIR 95 MODELS • EXTENDED LUBRICATION INTERVALS FOR

VAIR 95 FRONT SUSPENSION AND STEERING • NEW TRAILER AIR BRAKE OPTION • NEW 153 CUBIC INCH 4-CYLINDER ENGINE FOR

MODELS • NEW 230 AND 292 CUBIC INCH 6-CYLINDER ENGINES • POSITIVE CRANKCASE VENTILATION AND INCREASED EXHAUST

TEM DURABILITY FOR ALL MODELS • NEW TWIN-PLATE, 12-INCH CLUTCH • MECHANICAL CLUTCH LINKAGE FOR MOST 6-CYLINDER

ELS • STANDARD EQUIPMENT DELCOTRON GENERATORS, EXCEPT CORVAIR 95'S • NEW 4-POINT ENGINE MOUNTING SYSTEM

8-SPEED FULLER ROADRANGER TRANSMISSION • NEW 5-SPEED SPICER TRANSMISSION • NEW-DESIGN POWERGLIDE TRANSMIS-

• IMPROVED CARRYOVER TRANSMISSIONS • HYDRAMATIC TRANSMISSION DISCONTINUED • 178 MODELS ON 19 WHEELBASES

DELS ADDED, 32 MODELS DELETED • SERIES 40 DISCONTINUED • SERIES 50 DOWNGRADED • NARROWER FENDERS, BUMPERS

MEDIUM AND HEAVY-DUTY MODELS • SHEAR-TYPE BODY AND SHEET METAL MOUNTS FOR MOST MODELS • IMPROVED HOOD LOCK

ETER AND OIL PRESSURE GAUGE FOR MEDIUM-DUTY MODELS • NEW RADIATOR GRILLE DESIGN FOR LIGHT-DUTY MODELS • NEW

ES DESIGNATION PLATES • NEW SEAT TRIMS • LADDER-TYPE FRAMES WITH COIL SPRING INDEPENDENT FRONT SUSPENSIONS FOR

T-DUTY CONVENTIONAL MODELS • I-BEAM FRONT AXLES WITH VARIABLE-RATE FRONT SPRINGS FOR MEDIUM AND HEAVY-DUTY

ELS • VARIABLE-RATE COIL REAR SPRINGS AND OPTIONAL CANTILEVER LEAF-TYPE REAR SPRINGS FOR CP 10 AND C 20 MODELS