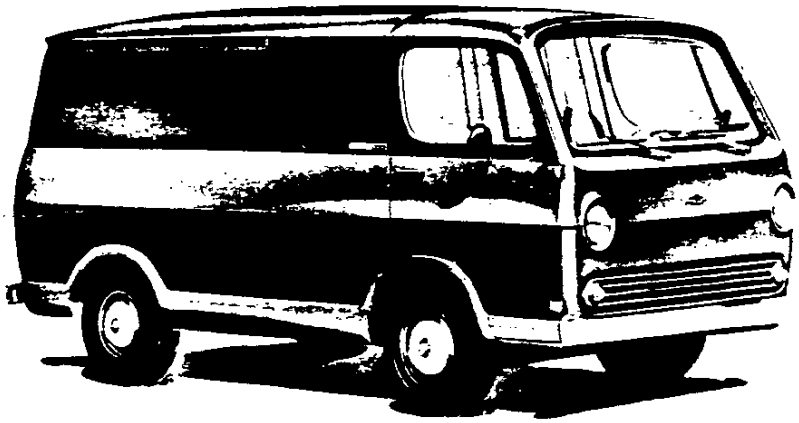
65 Van

PANELS, CARRYALLS & CHEVY-VAN: SELECTOR

SERIES 10-30

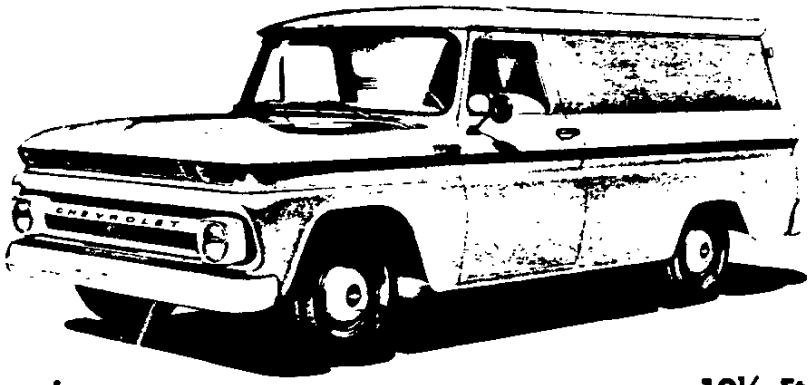


Chevy-Van

Inside Width..... 67¾"
Inside Height..... 54¼"
Capacity.....211 cu ft

Payload Range	Model	Pages
850–2250 lb	G1205	3–4

Model C1405



7½-Ft Panel

Inside Length at Floor..... 99½"
Inside Width..... 68"
Inside Height..... 47"
Capacity..... ...175 cu ft

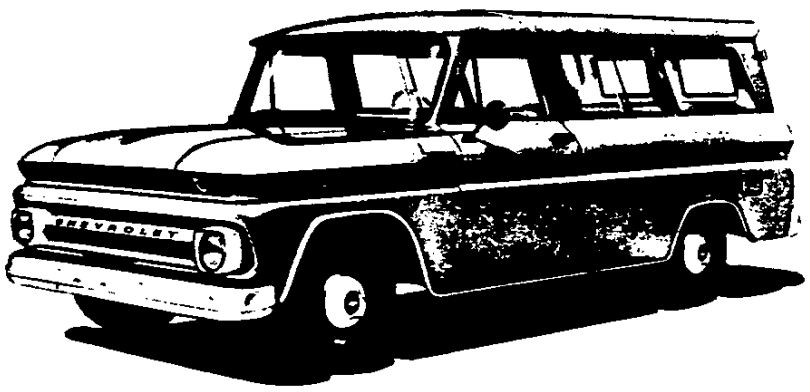
Payload Range	Model	Pages
500–1350 lb	C1405	5–8

10½-Ft Panel

Inside Length at Floor.....134"
Inside Width..... 68"
Inside Height..... 47"
Capacity.....230 cu ft

Payload Range	Model	Pages
2250–3350 lb	C3605	9–12

Model C1406



Carryalls

Model C1406 with panel-type rear doors
Model C1416 with tailgate & liftgate

Payload Range	Model	Pages
500–1050 lb	C1406	5–8
500–1050 lb	C1416	5–8

WEIGHTS ADDED BY OPTIONS

Optional Equipment	Weight Added (lb)		
	Series C10	Series 10	Series 30
Axle, Rear: 2900-lb capacity	12	—	—
Battery, Heavy-Duty	15	9	9
Clutch, Heavy-Duty	—	3	3
Engine: 194 Six	110	—	—
292 Six	—	88	94
283 V8	—	135	130
Generator: 62 amp	7	7	7
Heater: DeLuxe-Air	32	28	28
Thrift-Air	—	19	19
Radio	8	7	7
Radiator: Heavy-duty	—	6	5
Seat, Auxiliary	27	46	46
Side Loading Doors	60	—	—
Springs, Front	—	—	3
Springs, Rear	—	6	10
Stabilizer Bar, Front Suspension	16	13	13
Tires & Wheels:			
7.00–13/6PR (five)	27	—	—
7.00–13/8PR (five)	55	—	—
7.00–14/6PR (five) Pass type	19	—	—
7.00–14/6PR (five) Truck type	44	—	—
7.00–14/8PR (five)	86	—	—
7.50–14/6PR (five)	27	—	—
6.50–16/6PR (five)	—	60	—
7–17.5/6PR (five)	—	140	—
7.00–15/6PR (five)	—	155	—
8–19.5/6PR (two front)	—	—	36
(two rear)	—	—	36
8–19.5/8PR (two front)	—	—	37
(two rear)	—	—	39
7.00–17/6PR (two front)	—	—	31
7.50–17/8PR (two front)	—	—	51
(two rear)	—	—	52
Transmissions: (80–90% of weight on front)			
Warner T89B 3-Speed	—	19	59
Chevrolet 4-Speed	—	89	—
Powerglide	55	7	—

TYPICAL USERS

Dairies
Bakeries
Laundries
Dry Cleaners
Diaper Services
Interior Decorators
Painters
Surveyors
Bus Line Operators

MODEL G1205 PANEL (Chevy-Van

GVW Ratings up to 5000 lb

STANDARD EQUIPMENT

Wheelbase: 90

Air Cleaner: Oiled-paper element

Armrest: Left side only

Axle, Front: I-beam; *capacity 2200 lb*

Axle, Rear: Hypoid; ratio 3.36; *capacity 2400 lb*

Battery: 12-volt; 54-plate; capacity 44 amp-hr

Body: See *Cabs & Bodies* section

Brakes, Service: Hydraulic; self-adjusting
Sizes: front 9½" x 2½"; rear 9½" x 2"
Effective area: lining 169 sq in; drum 229 sq in

Brake, Parking: Cable to rear wheels

Bumper: Front and rear; painted

Carburetor: Single-barrel downdraft

➔**Clutch:** Diameter 10"; area 100 sq in

➔**Cooling:** Capacity 11 qt; 1¼" radiator core, 314-sq-in area; 13-lb pressure cap; 180° thermostat

Controls & Instruments: Light switch; headlight beam control; speedometer; odometer; fuel gauge. Lights for generator, fan oil pressure, engine temperature, direction signal and high beam indicator

Direction Signals: Front and rear

Dispatch Box Door

➔**Engine:** 194 Six; positive crankcase ventilation

Gross horsepower	120 @ 4400 rpm
Net horsepower	95 @ 4000 rpm
Gross torque, lb-ft	177 @ 2400 rpm
Net torque, lb-ft	155 @ 2000 rpm

Exhaust System: Single pipe & aluminized muffler

➔**Filter, Fuel:** Two; porous sintered bronze in carburetor; mesh plastic strainer in fuel tank

➔**Filter, Oil:** Full-flow; 1-quart; replaceable element

Frame: Integral body-frame construction

Generator: 32-amp Delcotron

GVW Plate: 4500 lb

Lights: Head, parking, tail, stop, license plate; dome (front & rear), instrument panel

Mirror: Outside; driver side and right side

Seat: Driver only

Shock Absorbers: Front & rear; piston diameter 1"

Springs, Front: Single-stage; capacity 1125 lb each at ground

Springs, Rear: Single-stage; capacity 1200 lb each at ground

Steering: Ball-gear, ratio 20:1; wheel diameter 17"

Tank, Fuel: Behind rear axle; capacity 16 gallons

Tires: Five tubeless 6.50–13/4PR front, single rear and spare

Tools: Mechanical jack; wheel wrench

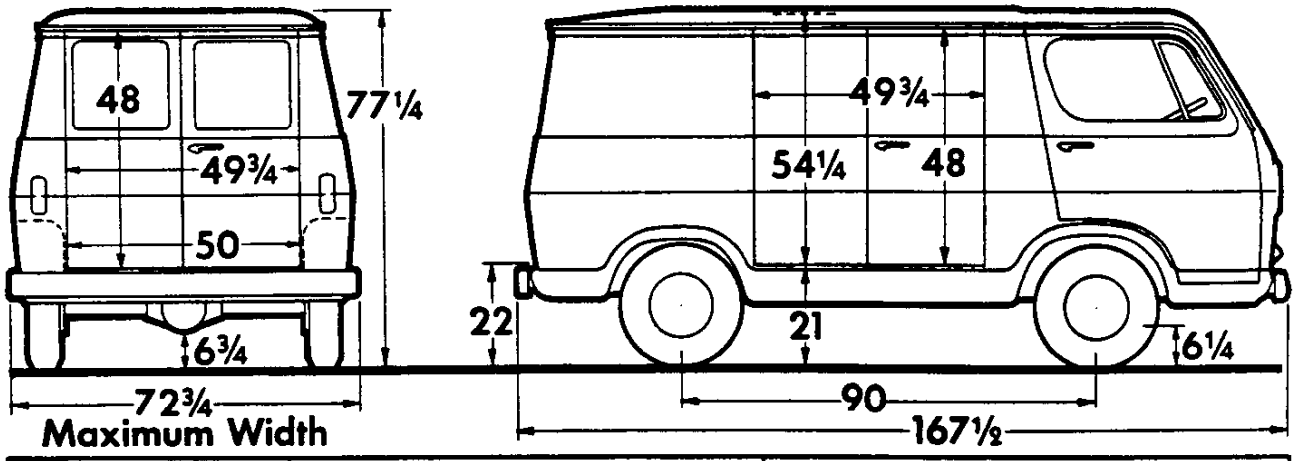
Transmission: 3-speed synchromesh; ratios 2.94, 1.68, 1.00, 2.94 (rev)

Wheels: Five 13" x 5½"; attachment, 5 studs on 4¾" circle; 4 painted hub caps

Windshield Wipers: Electric; single-speed

DIMENSIONS

(With std equipment and optional side loading doors, unloaded)



➔ Curb Weight with Standard Equipment (lb)			Body-Payload Weight Distribution	
Front	**Rear**	**Total**	**Front**	**Rear**
1590	1135	2725	20%	80%

➔ Indicates revised specifications.

ODEL G1205 PANEL (CHEVY-VAN)

GVW SELECTOR

GVW Rating	Chassis Equipment Required for GVW Rating
3600 lb	Standard
4500 lb	1450-lb rear springs
5000 lb	1225-lb front springs; 1450-lb rear springs; 2900-lb rear axle

Note: Be sure to recommend adequate springs and tires for total axle loads. See Optional Equipment and Tire & Wheel Combination listings.

OPTIONAL EQUIPMENT

For dealer-installed equipment, see *Custom Features* section

ır Cleaner: Oil-bath; capacity 2 pints..... K48

xle, Positraction Rear:
ıtio 3.36..... G80
ıtio 3.73; includes 2900-lb rear axle.....G80/H05
ıtio 4.11.....G80/H06
ıtio 4.11; includes 2900-lb rear axle.....G80/H04

xle, Rear:
ıtio 4.11..... H0C
ıtio 3.73; capacity 2900 lb; includes 9½" x ½" rear brakes..... H05
ıtio 4.11; capacity 2900 lb; includes 9½" x ½" rear brakes..... H04

attery, Heavy-Duty: 70 amp-hr..... T60

hrome Equipment: Includes hub caps and ɔnt and rear bumpers..... V37

ustom Equipment: Includes right sunshade; garette lighter; chrome hub caps; rear window ass; cargo area headlining; woven cloth seat ɔverings; steering wheel with chrome horn ng; left- and right-hand coat hooks; cowl side sulation..... Z60

irection Signal Equipment:
lass "A" type..... U42

oor Equipment, Right Body Side..... E85

ngine: 230-cu-in Six..... L26
ross Horsepower.....140 @ 4400 rpm
et Horsepower.....115 @ 3600 rpm
ross Torque, lb-ft.....220 @ 1600 rpm
et Torque, lb-ft.....200 @ 1600 rpm

enerator:
2-amp Delcotron..... K79
5-amp Delcotron..... K77
2-amp Delcotron..... K81

Glass, Laminated..... A09
Glass, Tinted: Windshield only..... A11
Glass, Rear Door Equipment: Included with custom equipment..... A12
Glass, Side Door Equipment: Body side door required..... A13
Glass, Body: 10 windows; includes rear & side door glass. Requires body side doors..... A07
Glass, RH Side Body: 4 windows; includes side door glass. Requires body side doors..... A08
GVW Plate: 5000 lb..... Z73
Hazard Flasher Switch..... V74
Heater: DeLuxe-Air..... C42
Mirror: West Coast Type Jr. (6" x 11") driver side..... D29
Driver & passenger side..... D29
Paint, Exterior: Solid and two-tone colors; see *Colors* section
Radio: Manual control..... U60
Seat: Auxiliary flip-swing; includes RH armrest. A57
Seat: Auxiliary stationary type; includes RH armrest..... A61
Special Equipment: See *Special Equipment* and *Prices* sections
Springs, Front: Cap 1225 lb each..... F60
Springs, Rear: Cap 1450 lb each..... G50
Stabilizer Bar, Front Suspension..... F59
Starter Motor, Heavy-Duty: Includes HD battery..... K67
Transmission: Powerglide..... M35
Ventilation, Closed Engine Positive..... K24
Windshield Wipers & Washer: Electric; 2-speed..... C14

→TIRE & WHEEL COMBINATIONS

TUBELESS TIRES	Tire Cap.	Type of Wheel	Rim Width	Opt. No.
PASSENGER CAR TYPE				
6.50–13/4PR—Regular Blackwall	840	Disc	5.50	Std
6.50–13/4PR—Regular Whitewall	840	Disc	5.50	P53
7.00–13/8PR—Regular Blackwall	1170	Disc	5.50	R15
7.00–13/8PR—Regular Whitewall	1170	Disc	5.50	R16
7.35–14/8PR—Regular Blackwall	1290	Disc	5.0	T12
7.35–14/8PR—Regular Whitewall	1290	Disc	5.0	T13
TRUCK TYPE				
7.00–13/8PR—Regular Blackwall	1315	Disc	5.50	R14
7.00–14/6PR—Regular Blackwall	1145	Disc	6.0	R24
7.00–14/8PR—Regular Blackwall	1365	Disc	6.0	R25

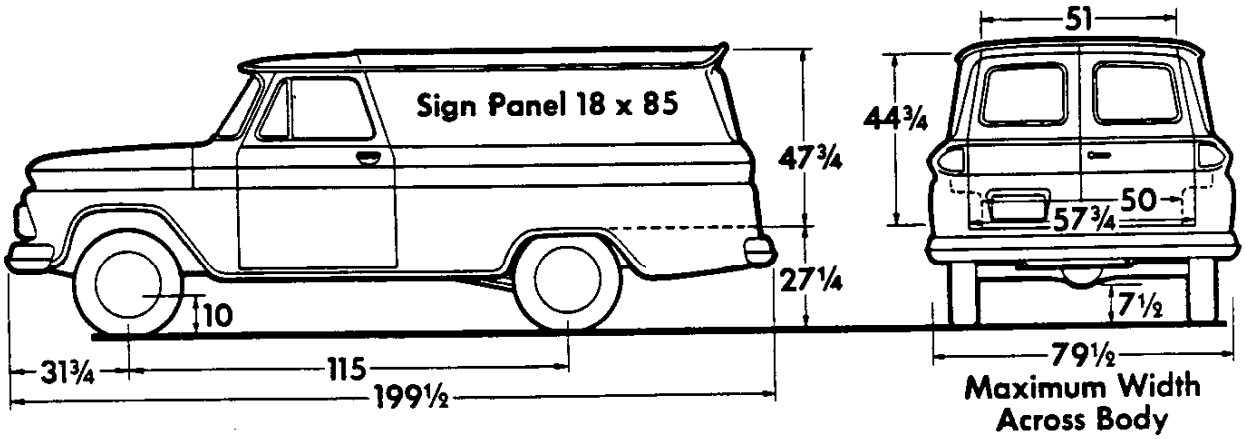
→ Indicates revised specifications.

SERIES C10 PANEL & CARRYALLS

GVW Ratings up to 5000 lbs.

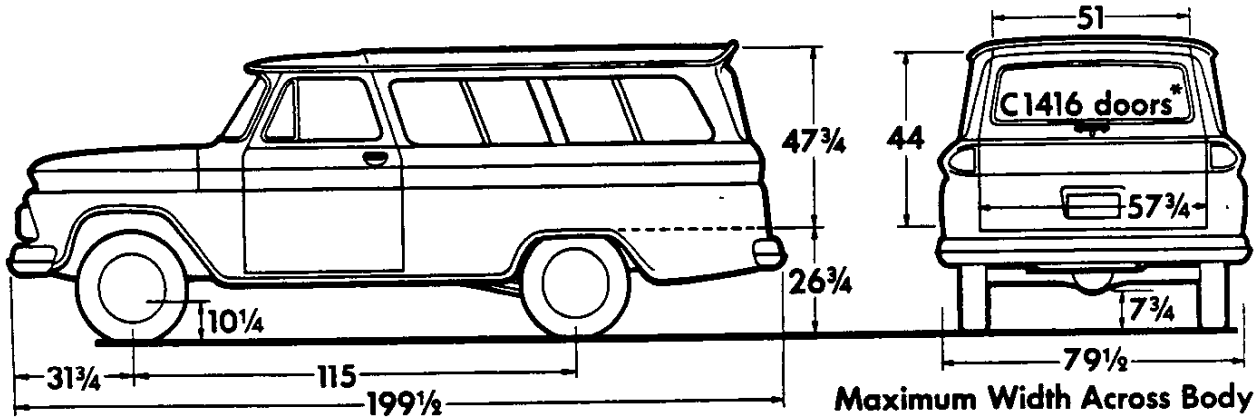
DIMENSIONS

(With std equipment, unloaded)



7½-FT PANEL

Model	Curb Weight			Body-Payload Wt. Dist.	
	Front	Rear	Total	Front	Rear
C1405	1705	1845	3550	5%	95%



*C1406 doors as shown on C1405

CARRYALLS

Model	Curb Weight			Body-Payload Wt. Dist.	
	Front	Rear	Total	Front	Rear
C1406	1740	2100	3840	26%	74%
C1416	1710	2140	3850	26	74

SERIES C10 PANEL & CARRYALLS

STANDARD EQUIPMENT

Air Cleaner: Oiled-paper element

Axle, Rear: Hypoid semi-floating type; ratio 3.73; capacity 3500 lb

Battery: 12-volt; 54-plate; capacity 53 amp-hr

Bodies: See *Cabs & Bodies*

Brakes, Service: Hydraulic; self-adjusting
Sizes: front 11" x 2"; rear 11" x 2"
Effective area: drum 276 sq in; lining 167 sq in

Brake, Parking: Rear wheels; area 83 sq in

Bumper: Front & rear, painted

Carburetor: Single-barrel downdraft

Clutch: Diameter 10"; area 100 sq in

Cooling: Capacity 11 qt; 1¼" radiator core, 314-sq-in area; 13-lb pressure cap; 180° thermostat

Controls & Instruments: Hand choke; light switch; headlight beam control; speedometer; odometer; fuel gauge. Lights for generator, oil pressure, engine temperature, direction signals and high beam indicator

Direction Signals: Front and rear

Doors, Rear: Model C1406—Panel type
Model C1416—Tailgate & liftgate

Engine: 230 Six; positive crankcase ventilation

Gross Horsepower	140 @ 4400 rpm
Net Horsepower	120 @ 3600 rpm
Gross Torque, lb-ft	220 @ 1600 rpm
Net Torque, lb-ft	205 @ 1600 rpm

Exhaust System: Single pipe & aluminized muffler

Filter, Fuel: Screen in fuel tank

Filter, Oil: Full-flow; 1-quart; throw-away type

Frame: Section modulus 2.98

Generator: 37-amp Delcotron

GVW Plate: 5000 lb

Lights: Head, parking, tail, stop; dome, instrument panel

Mirror, Exterior: Left side; 6¼" fixed arm

Seat Belts: C1406 & C1416 only; driver & passenger

Seat: C1405; driver only C1406-C1416; two, for six passengers

Shock Absorbers: Front & rear; piston diameter 1"

Springs, Front: Coil; capacity 1250 lb each at ground

Springs, Rear: Coil; capacity 1250 lb each at ground

Steering: Ball-gear, ratio 24:1; wheel dia 17"

Suspension, Front: Independent; capacity 2500 lb

Tank, Fuel: Inside frame at rear; capacity 20.5 gallons

Tires: C1405—Five tubeless 7.75–15/4PR front, single rear and spare
C1406 & C1416—Five tubeless 8.15–15/4PR front, single rear and spare

Tools: 3300-lb mechanical jack; wheel wrench

Transmission: 3-speed synchromesh; steering column gearshift; ratios 2.94, 1.68, 1.00, 3.14 (rev)

Wheels: Five 15" x 5.50"; attachment, 6 studs on 5½" circle; spare carrier under frame; 4 painted hub caps

Windshield Wipers: Electric; single-speed; 03 & 12 models only

GVW SELECTOR

GVW Rating	Chassis Equipment Required for GVW Rating
★ 4100 lb	Standard
4400 lb	Standard
4800 lb	2000-lb rear springs
5000 lb	2000-lb rear springs

★ Not available on C1406-16

Note: Be sure to recommend adequate springs and tires for total axle loads. See Optional Equipment and Tire & Wheel Combination pages.

OPTIONAL EQUIPMENT

For dealer-installed equipment, see *Custom Features* section.

Air Cleaner: Oil-bath; capacity 2 pints; not available with governor on 283 engine; included when power brakes are ordered with 292 engine. K48

Air Cleaner, Heavy-Duty: Includes closed positive ventilation and oil-bath pre-cleaner.... K46

Air Conditioner, All-Weather: Includes heater and defroster, HD radiator & 42-amp generator. C60

Axle, Positraction Rear: *Capacity 3500 lb;* ratio 3.73. Not available with maximum economy equipment or overdrive transmission..... G80

Ratio 4.11. Not available with maximum economy equipment..... G80

Axle, Rear: *Capacity 3500 lb*

Ratio 3.07; not available with Powerglide or overdrive transmission..... H01

Ratio 4.11; not available with maximum economy equipment; included with overdrive transmission H04

Battery: Heavy-duty; 70 amp-hr..... T60

Brakes, Vacuum Power..... J70

Closed Engine Positive Ventilation..... K24

Clutch: Dia 11"; for 230 engine..... M01

→**Cooling, Heavy-Duty:** Required for dealer-installed air conditioning..... V05

Custom Equipment: See *Cabs & Bodies* section for description

Appearance Option..... Z61
Chrome Option..... V37
Comfort Option..... Z62

Economy Equipment:

Includes special carburetor & 3.07 ratio rear axle; for use with std engine and transmission only..... Z54

Engine:

292 Six..... L25
283 V8..... L32

	292 Six	283 V8
Gross Horsepower	170 @ 4000 rpm	175 @ 4400 rpm
Net Horsepower	153 @ 3600 rpm	145 @ 4200 rpm
Gross Torque, lb-ft	275 @ 1600 rpm	275 @ 2400 rpm
Net Torque, lb-ft	255 @ 2400 rpm	245 @ 2000 rpm
Clutch	11"; 124 sq in	11"; 124 sq in
Battery	61 amp-hr	—

Fuel Filter Equipment..... K28

Gauges: Ammeter, engine temperature, oil pressure..... Z53

Generator:

42-amp Delcotron..... K79
55-amp Delcotron..... K77
62-amp Delcotron..... K81

Glass, Laminated: Side door windows only; includes metal frames..... A09

Glass, Soft Ray:

Windshield only..... A11
All windows..... A11

Governor: Not available with Powerglide

230 engine: 1800–3100 rpm..... K37
3000–4000 rpm..... K37
283 engine: 2400–3600 rpm..... K37
3000–3800 rpm..... K37
292 engine: 2200–3100 rpm..... K37
2800–3900 rpm..... K37

Hazard Flasher Switch..... V74

Heater & Defroster: Included with air conditioning

Thrift-Air..... C41
DeLuxe-Air..... C42

Hooks, Towing: Front..... V76

Lamps, Hazard & Marker: Five; includes hazard flasher switch..... V75

Lock: Right door..... A97

Mirror, Rearview: Exterior

Right; 6¼" fixed arm..... D32
West Coast type Jr. (6" x 11")..... D29
West Coast type Sr. (7" x 16")..... D30

Paint, Exterior: See *Colors* section

Radiator: Heavy-duty..... V01

Radio: Manual control..... U60

Seat Belts, Front: Driver & passenger; C1406 & C1416 only

Deletion..... A62

→**Seat Belts, Rear:** C1406–16 only..... A64

Seat, Folding Auxiliary: C1405 only..... A57

Seat, Third: C1406 & C1416 only; capacity two passengers; includes sliding rear side windows.. A59

Seat, Full-Depth Foam: C1405 only..... Z52

Serial Number Plate: (State of Pennsylvania). Z55

Shock Absorbers: Heavy-duty

Front and rear..... F51
Rear only..... F51

Springs, Auxiliary Rear:

Capacity 500 lb each..... G60

Springs, Rear:

Capacity 2000 lb each..... G50

Stabilizer Bar, Front Suspension..... F59

→**Starter Motor, Heavy-Duty:** Includes HD battery..... K67

Tachometer: Electric; includes optional gauges U16

Transmission:

Warner T89B 3-speed wide-ratio synchromesh.. M16
Chevrolet 4-speed synchromesh; includes 11" clutch..... M20
Overdrive; not available with governor equipment..... M10
Powerglide; includes heavy-duty radiator..... M35

Windshield Wipers & Washer:

Electric; 2-speed wipers..... C14

→ Indicates revised specifications.

TIRE & WHEEL COMBINATIONS

TUBELESS TIRES	Tire Cap.	Type of Wheel	Rim Width	Opt. No.
PASSENGER CAR TYPE				
★7.75–15/4PR—Regular	1100	Disc	5.50	Std**a**
—Nylon		Disc	5.50	P91
—On-Off Road Ny		Disc	5.50	R38
7.75–15/8PR—Regular	1390	Disc	5.50	T25**b**
●8.15–15/4PR—Regular	1180	Disc	5.50	Q04**c**
—Nylon		Disc	5.50	Q05
8.15–15/8PR—Regular	1500	Disc	5.50	T28
★6.00–16/6PR—Regular	1065	Disc	5.00	R58
6.50–16/6PR—Regular	1380	Disc	5.00	R59
TRUCK TYPE				
6.50–16/6PR—Regular	1420	Disc	5.00	R60
7–17.5/6PR —Regular	1520	Disc	5.25	R80
—Nylon		Disc	5.25	R82
—On-Off Road		Disc	5.25	R81

●—Standard on Carryall models.
★—Not available on Carryall models.
The following tubeless tires may be ordered with white sidewalls:
a—P92 (7.75–15/4PR) **b**—T26 (7.75–15/8PR) **c**—R51 (8.15–15/4PR)

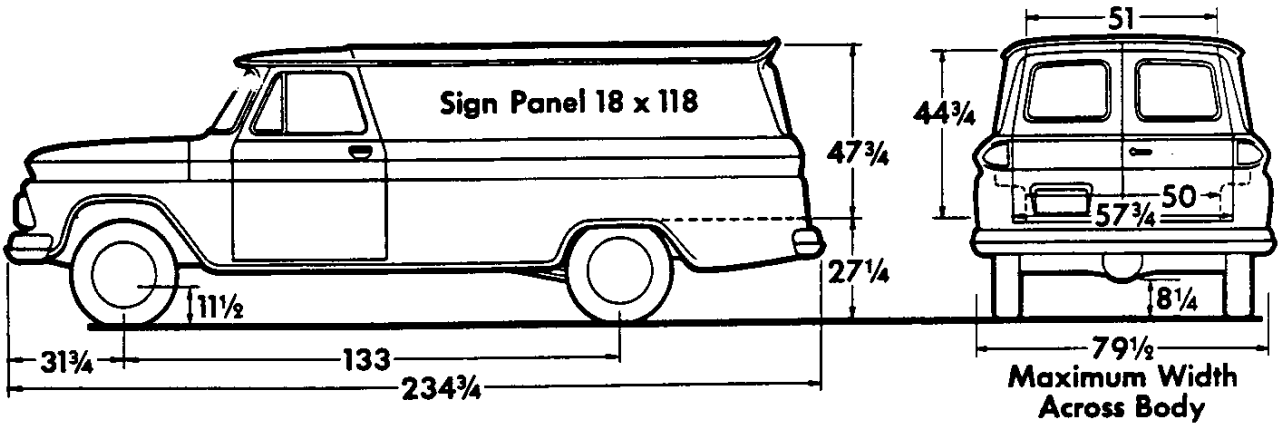
TUBE-TYPE TIRES	Tire Cap.	Type of Wheel	Rim Width	Opt. No.
PASSENGER CAR TYPE				
★7.75–15/4PR—Regular	1100	Disc	5.5	P93
—Nylon		Disc	5.5	P95
—On-Off Road Ny		Disc	5.5	P97
7.75–15/8PR—Regular	1390	Disc	5.5	T27
★8.15–15/4PR—Nylon	1180	Disc	5.5	R53
6.50–16/6PR—Regular	1380	Disc	5.0	R61
—On-Off Road Ny		Disc	5.0	R69
TRUCK TYPE				
7.00–15/6PR—Regular	1520	Disc	5.5	R42
—Nylon		Disc	5.5	R44
—On-Off Road		Disc	5.5	R43
6.50–16/6PR—Regular	1420	Disc	5.0	R63
—Nylon		Disc	5.0	R65
—On-Off Road		Disc	5.0	R64

★—Not available on Carryall models.

SERIES C30 PANEL

GVW Ratings up to 7800 lb
Wheelbase: 133"

DIMENSIONS
(With std equipment, unloaded)



10½' PANEL

Model	Curb Weight			Body-Payload Wt. Dist.	
	Front	Rear	Total	Front	Rear
C3605	2000	2425	4425	5%	95%

SERIES C30 PANEL

STANDARD EQUIPMENT

Air Cleaner: Oiled-paper element

Axle, Rear: Hypoid full-floating type; ratio 5.14; capacity 7200 lb

Battery: 12-volt; 54-plate; capacity 53 amp-hr

Body: See *Cabs & Bodies*

Brakes, Service: Hydraulic; self-adjusting

Sizes: Front 11" x 2¾"; rear 13" x 2½"
Effective area: drum 395 sq in; lining 252 sq in

Brake, Parking: 8" x 2½" drum & band

Bumper: Front only, painted or Black

Cab: Conventional; see *Cabs & Bodies*

Carburetor: Single-barrel downdraft

Clutch: Diameter 11"; area 124 sq in

Cooling: Capacity 11 qt; 1¼" radiator core, 314-sq-in area; 13-lb pressure cap; 180° thermostat

Controls & Instruments: Hand choke; light switch; headlight beam control; speedometer; odometer; fuel gauge. Lights for generator, oil pressure, engine temperature, direction signals and high beam indicator

Direction Signals: Front and rear

Engine: 230 Six; positive crankcase ventilation

Gross Horsepower	140 @ 4400 rpm
Net Horsepower	120 @ 3600 rpm
Gross Torque, lb-ft	220 @ 1600 rpm
Net Torque, lb-ft	205 @ 1600 rpm

Exhaust System: Single pipe & aluminized muffler

Filter, Fuel: Screen in fuel tank

Filter, Oil: Full-flow; 1-quart; throw-away type

Frame: Section modulus 5.05

Generator: 37-amp Delcotron

GVW Plate: 10,000 lb

Lights: Head, parking, tail, stop; dome, instrument panel

Mirror, Exterior: Left side; 6¼" fixed arm

Seat: Driver only

Shock Absorbers: Front; piston diameter 1"

Springs, Front: Coil; capacity 1500 lb each at ground

Springs, Rear: Leaf; capacity 2400 lb each at ground

Steering: Ball-gear, ratio 24:1; wheel dia 17"

Suspension, Front: Independent; capacity 3500 lb

Tank, Fuel: Outside frame on left; capacity 18 gallons

Tires: Tubeless; two 8–17.5/6PR front; two 8–17.5/8PR single rear

Tools: 3300-lb mechanical jack; wheel wrench

Transmission: 4-speed synchromesh; ratios 7.06, 3.58, 1.71, 1.00, 6.78 (rev); power take-off opening on left side

Wheels: Five 17.5" x 5.25"; attachment, 8 studs on 6½" circle; spare carrier under frame; 4 painted hub cabs

Windshield Wipers: Electric; single-speed

GVW SELECTOR

GVW Rating	Chassis Equipment Required for GVW Rating
6700 lb	Standard
★7800 lb	3100-lb rear springs

★Rating on RPO GVW plate.

Note: Be sure to recommend adequate springs and tires for total axle loads. See Optional Equipment and Tire & Wheel Combination pages.

OPTIONAL EQUIPMENT

For dealer-installed equipment, see *Custom Features* section.

Air Cleaner: Oil-bath; capacity 2 pints; not available with governor on 283 engine; included when power brakes are ordered with 292 engine K48

Air Cleaner, Heavy-Duty: Includes closed positive ventilation and oil-bath pre-cleaner.... K46

Air Conditioner, All-Weather: Includes heater & defroster, HD radiator & 42-amp generator.. C60

Axle, NoSPIN Rear: Ratio 5.14 ..... G86

Axle, Rear: Ratio 4.57..... H20

Battery: Heavy-duty; 70 amp-hr..... T60

Brakes, Vacuum Power..... J70

Closed Engine Positive Ventilation..... K24

➔**Cooling, Heavy-Duty:** Required for dealer-installed air conditioning..... V05

Custom Equipment: See *Cabs & Bodies* section for description
Appearance Option..... Z61
Chrome Option..... V37
Comfort Option..... Z62

➔**Engine:**
292 Six..... L25
283 V8..... L32
327 V8..... L30

	292 Six	283 V8
Gross Horsepower	170 @ 4000 rpm	175 @ 4400 rpm
Net Horsepower	153 @ 3600 rpm	145 @ 4200 rpm
Gross Torque, lb-ft	275 @ 1600 rpm	275 @ 2400 rpm
Net Torque, lb-ft	255 @ 2400 rpm	245 @ 2000 rpm
Battery	61 amp-hr	—

	327 V8
Gross Horsepower	220 @ 4400 rpm
Net Horsepower	177 @ 4000 rpm
Gross Torque, lb-ft	320 @ 2800 rpm
Net Torque, lb-ft	283 @ 2400 rpm

Fuel Filter Equipment..... K28

Gauges: Ammeter, engine temperature, oil pressure..... Z53

Generator:
42-amp Delcotron..... K79
55-amp Delcotron..... K77
62-amp Delcotron..... K81

Glass, Laminated: Door windows only; includes metal frames..... A09

Glass, Soft Ray:
Windshield only..... A11
All windows..... A11

Governor: Not available with Powerglide
230 engine: 1800–3100 rpm..... K37
3000–4000 rpm..... K37
283 engine: 2400–3600 rpm..... K37
3000–3800 rpm..... K37
292 engine: 2200–3100 rpm..... K37
2800–3900 rpm..... K37

GVW Plate: 7800 lb..... Z70

Hazard Flasher Switch..... V74

Heater & Defroster: Included with air conditioning
Thrift-Air..... C41
DeLuxe-Air..... C42

Hooks, Towing: Front..... V76

Lamps, Hazard & Marker: Five; includes hazard flasher switch..... V75

Lock: Right door..... A97

Mirror, Rearview: Exterior
Right; 6¼" fixed arm..... D32
West Coast type Jr. (6" x 11")..... D29
West Coast type Sr. (7" x 16")..... D30

Paint, Exterior: See *Colors* section

Radiator: Heavy-duty..... V01

Radio: Manual control..... U60

Seat, Folding Auxiliary..... A57

Serial Number Plate: State of Pennsylvania . Z55

Shock Absorbers: Heavy-duty
Front..... F51
Rear..... F51

Springs, Front:
Capacity 1750 lb each..... F60

Springs, Rear:
Capacity 3100 lb each..... G50
Main & auxiliary type; capacity 4150 lb each.. G60

Stabilizer Bar, Front Suspension..... F59

Tachometer: Electric; includes optional gauges U16

Transmission:
Warner T89B 3-spd wide-ratio synchromesh... M16

Windshield Wipers & Washer:
Electric; 2-speed wipers..... C14

➔ Indicates revised specifications.

TIRE & WHEEL COMBINATIONS

TUBELESS TIRES	Tire Cap.	Type of Wheel	Rim Width	Opt. No.
8–17.5/6PR —Regular	1735	Disc	5.25	Std*
8–17.5/8PR —Regular	2060	Disc	5.25	Std#
		Disc	5.25	R86a
—On-Off Road		Disc	5.25	R87
8–19.5/6PR —Regular	2090	Disc	5.25	R94
—Nylon		Disc	5.25	R95
8–19.5/8PR —Regular	2440	Disc	5.25	R96
—Nylon		Disc	5.25	R98
—On-Off Road		Disc	5.25	R97
8–19.5/10PR—Regular	2650	Disc	5.25	R99

* 8–17.5/6PR tires standard on front only.

8–17.5/8PR tires standard on rear only.

a R86 is used to order either front or spare tires.

TUBE-TYPE TIRES	Tire Cap.	Type of Wheel	Rim Width	Opt. No.
7.00–17/6PR—Regular	1740	Disc	5.0	R72
7.00–17/8PR—Regular	2060	Disc	5.0	R73
—On-Off Road		Disc	5.0	R74
7.50–17/8PR—Regular	2440	Disc	6.0	R75
—On-Off Road		Disc	6.0	R76
7.50–17/10PR—Regular	2650	Disc	6.0	R77

SPECIFICATIONS

Standard Coil Springs

Series	Rating at Ground (lb each)	Sprung Capacity (lb each)	Deflection Rate at Wheel (lb/inch)	Wire Diameter (inch)	Outside Diameter (inches)
133-13580	950	840	290	0.598	4.90
134-13680	950	840	290	0.619	4.90
C10 (Except Panels, Carryalls & Cowl models), P10, C20	1250	1018	173	0.731	5.14
C10 (Panels, Carryalls & Cowl models)	1250	1014	160	0.715	5.14
C30	1500	1152	239	0.777	5.37

Optional Coil Springs

Series	Rating at Ground (lb each)	Sprung Capacity (lb each)	Deflection Rate at Wheel (lb/inch)	Wire Diameter (inch)	Outside Diameter (inches)
133-13580	950	840	320	0.615	4.90
134-13680	950	840	320	0.637	4.90
133-134-135-13680	950	840	320	0.615	4.90
C20	1500	1152	239	0.777	5.37
C30	1750	1402	298	0.822	5.34

Standard Leaf Springs

Series	Rating at Ground (lb each)	Rating at Pad (lb each)	Clamped Deflection Rate (lb/inch)	Semi-Elliptic Leaves		
				Number	Length (inches)	Width (inches)
SINGLE-STAGE:						
G10	1125	1000	176	6	48	2
K10	1650	1350	500	5	44	2½
K20	1750	1350	500	5	44	2½
P20, P30	2000	1700	490	8	44	2
TWO-STAGE, VARIABLE-RATE:						
CDLPQS50	2000	1750	400 to 540	5	59	2½
NT50, ACDLQST60	3000	2700	450 to 700	6	59	2½
N60, S69, ACELNQTUV80	3500	3150	540 to 850	6	59½	3
MVXY60	4000	3650	580 to 840	7	59	2½
M80, W80	4500	4100	700 to 1000	7	59½	3

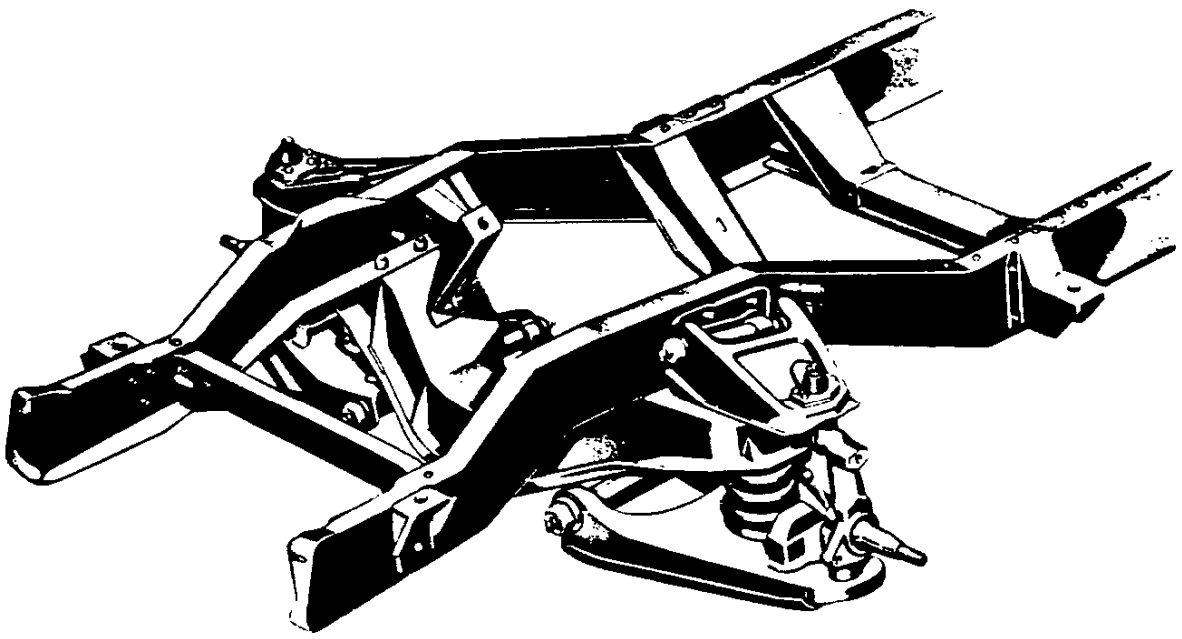
Optional Leaf Springs

Series	Rating at Ground (lb each)	Rating at Pad (lb each)	Clamped Deflection Rate (lb/inch)	Semi-Elliptic Leaves		
				Number	Length (inches)	Width (inches)
SINGLE-STAGE:						
G10	1225	1100	208	6	48	2
P30	2500	2200	726	10	44	2
TWO-STAGE, VARIABLE-RATE:						
CDLPQS50	3000	2700	450 to 700	6	59	2½
ACDLNQSTY60	3500★	3150	540 to 850	6	59½	3
T50, CDLT60, S62, S64, S67	4000▲	3650	580 to 840	7	59	2½
ACDLMNQSTVXY60, ACELNQTUV80	4500 ●	4100	700 to 1000	7	59½	3
ANQCELMTUVW80	5500+♦	5050	850 to 1315	11	59½	3
CELMTUW80	7000■	6500	990 to 1550	11	59½	3

★ Included with 7000-lb I-beam front axle
▲ For use with 5000-lb I-beam front axle
♦ Rated at 5250 lb on ANQ80 Series
+ For use with 9000-lb I-beam front axle
● For use with 7000-lb and 9000-lb I-beam front axle
■ For use with 11,000-lb I-beam front axle

FRONT SUSPENSION

INDEPENDENT FRONT SUSPENSION



SERIES C10, P10, C20, C30

All Series 10 through 30, except four-wheel drive and forward control models P20 and P30, are equipped with coil spring front suspension. Coil springs provide an extremely rugged and compact independent suspension assembly. Maintenance is reduced through the use of neoprene rubber boot seals for spherical joints and pivot shaft bushings. Lubrication interval is 6000 miles. Spring adjustments are not required.

Vertical walls of the suspension crossmember have a double thickness in critical areas to withstand loads and forces from the lower control arms and pivot shafts. Stamped-steel single-unit lower control arms contribute to a simplified design.

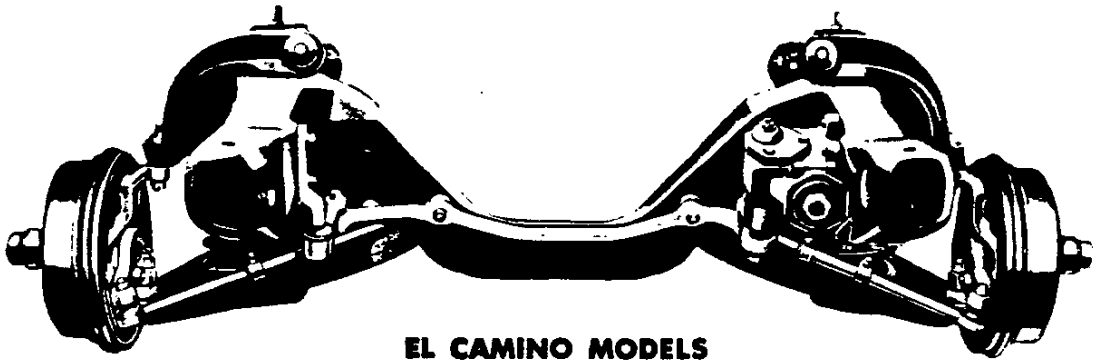
Upper and lower control arm pivot shafts are forged steel on Series 20 and 30 (steel bar stock on Series 10) to resist fore, aft and lateral movements. An outstanding feature of the upper control arm pivot shaft attachment is the ease and endurance of caster-camber adjustments.

Shock absorbers are stud-mounted to the frame at the top and clevis-mounted at the lower control arm.

A front stabilizer bar is optional, at extra cost, on series C10–30. It is designed for use with camper bodies or high center of gravity load applications.

SUSPENSION CAPACITIES

Series:	
C10, P10	2500 lbs
C20	3000 lbs
C30	3500 lbs



EL CAMINO MODELS

The independent front suspension system of the El Camino utilizes stamped control arms, coil springs and special sealed pivot points.

The control arms are channel section heavy-gauge metal stampings and attach to the steering knuckles with non-metallic lined spherical joints. The lower arm features a tension-type spherical joint and the upper arm a compression joint unit. The four spherical joints require lubrication only every 6000 miles under normal driving conditions.

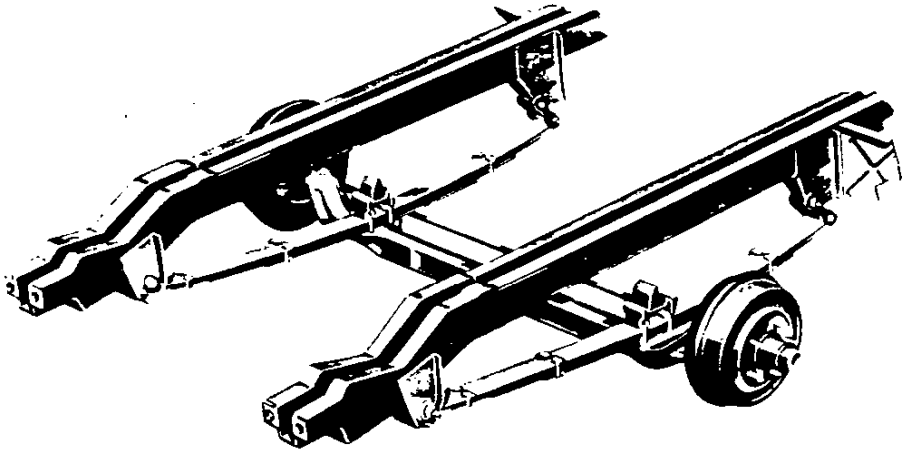
Coil springs are mounted between the lower arms and the towers formed in the front crossmember. Shock absorbers are mounted vertically within the springs.

A conventional link-type stabilizer bar is standard equipment on all El Camino models.

SUSPENSION CAPACITY

Series:	
133-134-135-13680	1900 lbs

I-BEAM AXLE WITH SINGLE-STAGE LEAF SPRINGS



SERIES G10, P20, P30

The Chevy-Van and P20, P30 Step-Van models use the modified Reverse-Elliot I-beam front axle in combination with single-stage front springs. This type of suspension provides a very durable suspension system.

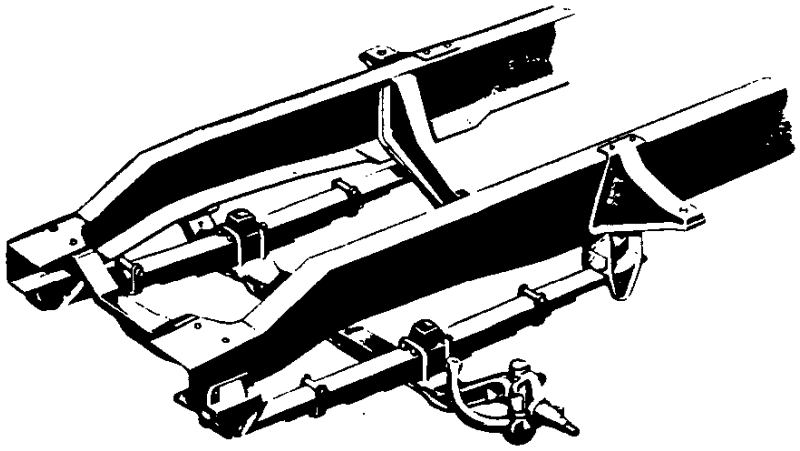
The I-beam front axles are constructed of heat-treated drop-forged steel. Constant diameter kingpins are protected by diamond-shaped seals at each end. Upper and lower kingpin bushings are steel-backed bronze with distribution grooves to ensure uniform lubrication.

Berlin-eye type attachment is utilized for both the front and rear mounting positions of the front springs. Rubber bumpers are mounted at the I-beam attachment point.

I-BEAM AXLE CAPACITIES

Series:	
G10	2200 lbs
P20, P30	4000 lbs

I-BEAM AXLE WITH VARIABLE-RATE LEAF SPRINGS



SERIES 50, 60, 80

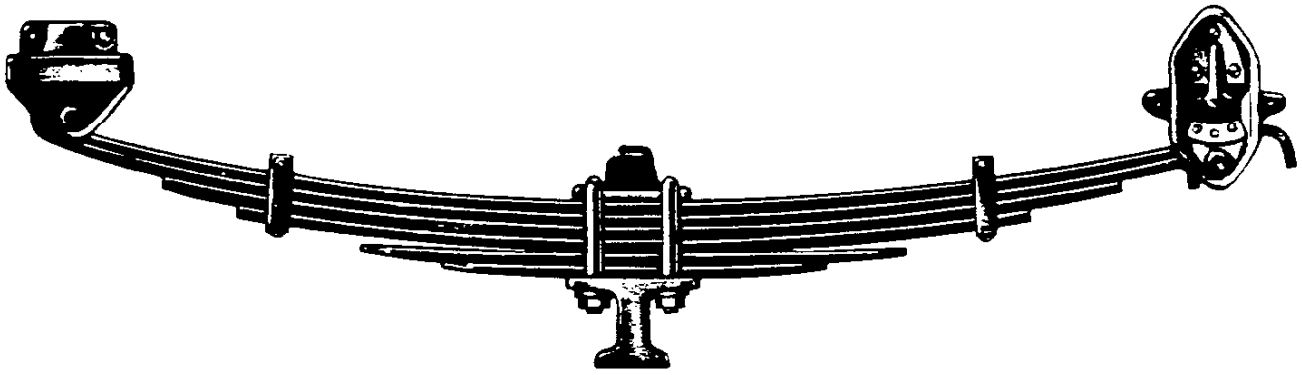
Reverse-Elliot I-beam axles and variable-rate 2-stage leaf springs combine to provide all 50 through 80 Series models with a front suspension featuring exceptional durability and outstanding ride and handling characteristics.

I-beams are constructed of heat-treated drop-forged steel. Constant diameter kingpins are protected by diamond-shaped seals at each end. Upper and lower kingpin bushings are steel-backed bronze with distribution grooves to ensure uniform lubrication. Tapered wheel bearings are used on all units.

➔ I-BEAM AXLE CAPACITIES

Series:	Standard	Optional
CDLPQ50	4000 lbs	5000 lbs
S50	4500 lbs	5500 lbs
NT50	5000 lbs	—
ACDLMQSTVXY60	5000 lbs	7000 lbs
S60 (except S69)	5500 lbs	7000 lbs
N60, S69	7000 lbs	—
ACELMNQTUVW80	7000 lbs	9000 lbs
		11,000 lbs

➔ Indicates revised specifications.



Variable-Rate Front Springs

The two top leaves of the variable-rate front spring, unlike the variable-rate rear spring, are fastened at the front hanger. At the rear, the unshackled squared-off top leaf rides against a full-floating specially hardened cam surface.

In operation, top spring leaf contacts the cam surface near its outer edge under light load. As the load increases, the line of contact moves inward until, at full load, it reaches the inner edge of the cam. Thus, there is soft spring action with light loads and progressively stiffer spring action as the load is increased. Additionally, the springs are of a two-stage design, assuring excellent load-carrying ability.

The full-floating action of the rubber-insulated spring hanger on 50 and 60 Series increases cam durability and is easily removed for replacement or maintenance. It can also be reversed to extend the wear life of the spring ends to cam contact area.

FOUR-WHEEL-DRIVE MODELS

SERIES K10, K20

Front-wheel drive on series K10 and K20 models utilizes a single reduction hypoid pinion and ring gear combination with a full-floating axle shaft.

Specifications

	→ Series K10	Series K20
Axle:		
Make	Spicer	
Model	445F	
Minimum shaft diameter	1.125"	
Capacity	3300 lb	3500 lb
Pinion & Ring Gear:	hypoid	hypoid
Ratio	3.73	4.55
Pinion, teeth	11	11
Ring gear, teeth	41	50
Pinion Mounting:	overhung	
Bearings	tapered roller	
Differential:	2-pinion	
Bearings	tapered roller	
Lubricant Capacity	4½ pt	6½ pt

→ Indicates revised specifications.

Optional Heavy-Duty Front Axle

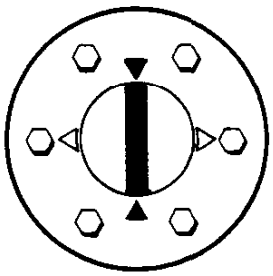
An optional heavy-duty front axle is available for K20 models. Although the rated capacity is the same as the standard front axle, it features heavier components which permit an increase in maximum GVW from 7200 to 7600 pounds.

Heavy-duty bronze bushings and tapered roller kingpin thrust bearings are used in the upper and lower positions. The optional front axle also includes 7-inch-diameter steering knuckle ball joints and axle shaft universal joints which are approximately 45 per cent stronger than those used with the standard K20 driveline.

FOUR-WHEEL-DRIVE MODELS

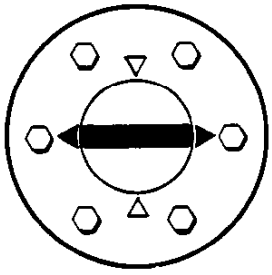
OPTIONAL FREE-WHEELING FRONT HUBS

Free-wheeling front hubs or HUB/LOK is available on series K10 and K20 as an option at extra cost. HUB/LOK makes it possible to disengage the front wheels from the front drive line when front wheel drive is not required. This leaves the front wheels free to rotate without "back drag" from the front axle and propeller shaft, eliminates unnecessary wear and improves fuel economy.



Engaged

HUB/LOK is engaged for 4-wheel-drive operation when the grooved Activator knob is aligned with the inward pointing arrowheads. (If clutch teeth do not immediately engage when the knob is turned to this position, the first slight turn of the front wheel in either direction will complete the locking.) NO ROCKING IS REQUIRED!



Disengaged

To disengage HUB/LOK, simply turn the Activator knob so that it aligns with the outward-pointing arrowheads. Now the multiple teeth of the inner and outer clutch rings are separated and the wheels will turn free of the driving axle. The truck is now ready for conventional rear-axle driving.

SHOCK ABSORBERS

Standard Front Shock Absorbers

Series	Type	Piston Diameter (in)	Piston Travel (in)
133-134-135-13680	Hydraulic direct double acting	1	5.90
C10		1	9.75
CP10, C20-30		1	5.00
P20-30		1	7.75
K10-20		1	7.25
S50-60		1.38	9.75

Optional Front Shock Absorbers

Series	Type	Piston Diameter (in)	Piston Travel (in)
CP10, C20-30	Hydraulic direct double acting	1.38	4.75
All 50-60 (Except School Bus Models)		1.38	9.75

NOTES

INDEX

REAR SHOCK ABSORBERS

Standard Rear Shock Absorbers

El Camino Models 133-134-135-13680

Series	Type	Piston Diameter (in)	Inflation Pressure Vehicle Unloaded (lbs)	Inflation Pressure Vehicle Loaded (If inflated **prior** to loading) (lbs)	Inflation Pressure Vehicle Loaded (If inflated **after** loading) (lbs)
133-134-135-13680	Hydraulic direct double acting air booster type	1	10	65	90

Standard Rear Shock Absorbers

Series	Type	Piston Diameter (in)	Piston Travel (in)
G10	Hydraulic direct double acting	1	7.25
CP10		1	7.75
C20, P20-30		1	8.00
K10-20		1	10.25

Optional Rear Shock Absorbers

Series	Type	Piston Diameter (in)	Piston Travel (in)
CP10-30	Hydraulic direct double acting	1.38	7.75
K10-20		1.38	10.00
All 50-60 (Except Tandems)		1.38	9.25

:AR SPRINGS

SPECIFICATIONS

Coil Springs

Series	Rating at Ground (lb each)	Sprung Capacity (lb each)	Spring Type	Deflection Rate (lb/inch)	Wire Diameter (inch)	Outside Diameter (inches)
33-134-135-13680	1100	950	1-Stage	130	0.575	6.78
10, P10 except panels	1250	1074	2-Stage	253 to 392	0.698	6.896
10 panels	1250	1080	1-Stage	286	0.658	6.477
20	2000	1713	2-Stage	344 to 602	0.798	7.096

Optional Coil Springs

Series	Rating at Ground (lb each)	Sprung Capacity (lb each)	Spring Type	Deflection Rate (lb/inch)	Wire Diameter (inch)	Outside Diameter (inches)
33-134-135-13680	1350	1200	1-Stage	160	0.623	6.78
10, P10	2000	1824	2-Stage	332 to 482	0.767	7.034
10 panels	2000	1650	1-Stage	376	0.729	6.619
20	3000	2713	2-Stage	578 to 751	0.893	7.286

Standard Leaf Springs

→Series	Rating at Ground (lb ea)	Rating at Pad (lb ea)	Spring Type	Average Clamped Rate of Deflection (lb per inch)	Semi-Elliptic Leaves			
					Number	Max Length (in)	Width (in)	Total Thickness (in)
10	1200	1000	1-Stage	258	6	48	2	1.69
10	1900	1640	1-Stage	322	6	52	2½	1.81
20	1900	1535	1-Stage	322	6	52	2½	1.81
30	2400	1920	1-Stage	—	8	52	2½	2.55
20, P30	2400	2050	1-Stage	497	8	52	2½	2.55
LPQST50	5500	4950	2-Stage	528 to 1636	8	54	2½	4.30
D50, CLNQST60	7500	6750	2-Stage	633 to 2053	10	54	2½	5.11
Y60,ACLNQT80	9200	8400	2-Stage	625 to 2500	9	55	3	5.16
U80	10,400	9600	2-Stage	950 to 2900	10	55	3	5.56
60, V80	15,000	13,500	1-Stage	9690	11	45⅜	4	4.50
X60, MW80	17,250	15,440	1-Stage	8490	12	46¼	4	5.36

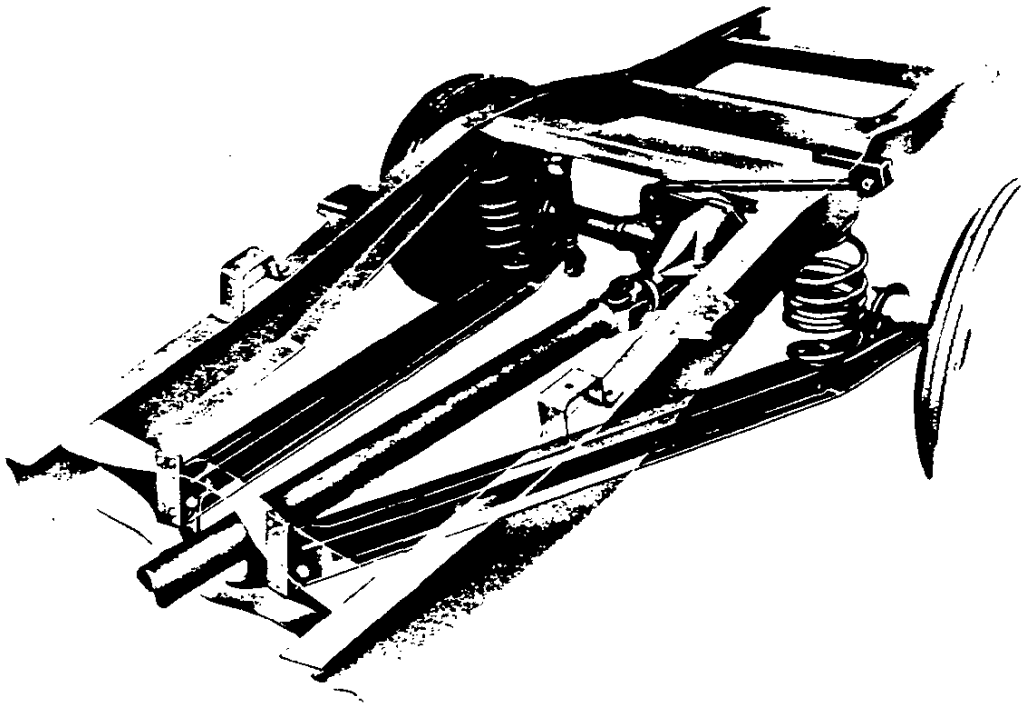
Optional Leaf Springs

→ Series	Rating at Ground (lb ea)	Rating at Pad (lb ea)	Spring Type	Average Clamped Rate of Deflection (lb per inch)	Semi-Elliptic Leaves			
					Number	Max Length (in)	Width (in)	Total Thickness (in)
0	1450	1225	1-Stage	315	7	48	2	1.95
20	3150	2785	1-Stage	497	8	52	2½	2.55
0	3100	2750	2-Stage	....	8	52	2½	2.70
0	4150	3670	Main & Auxiliary	....	8	52	2½	2.70
				....	5	...	...	1.55
0	3400	3000	Main & Auxiliary	497	8	52	2½	2.55
				1290♦	5	...	...	1.46
0	4350	3750	2-Stage	780 to 1030	12	52	2½	4.48
PQST50	7500	6750	2-Stage	633 to 2053	10	54	2½	5.11
LNPQST50, LPNQST60	8750	7950	2-Stage	740 to 2235	11	54	2½	5.47
LNQT60, 7, S69	9200	8400	2-Stage	625 to 2500	9	55	3	5.16
DLNQSTY60, LNQT80	10,400	9600	2-Stage	950 to 2900	10	55	3	5.56
DLNQSTY60, ELNQTU80	11,500 ●	10,750	2-Stage	1075 to 3250	11	55	3	5.96
50	17,250	15,440	1-Stage	8490	12	46¼	4	5.36
50, W80	19,500	17,540	1-Stage	15,624	12	45⅞	4	5.71

♦ Total, main and auxiliary ● Rated at 11,000 lb on ANQ60-80

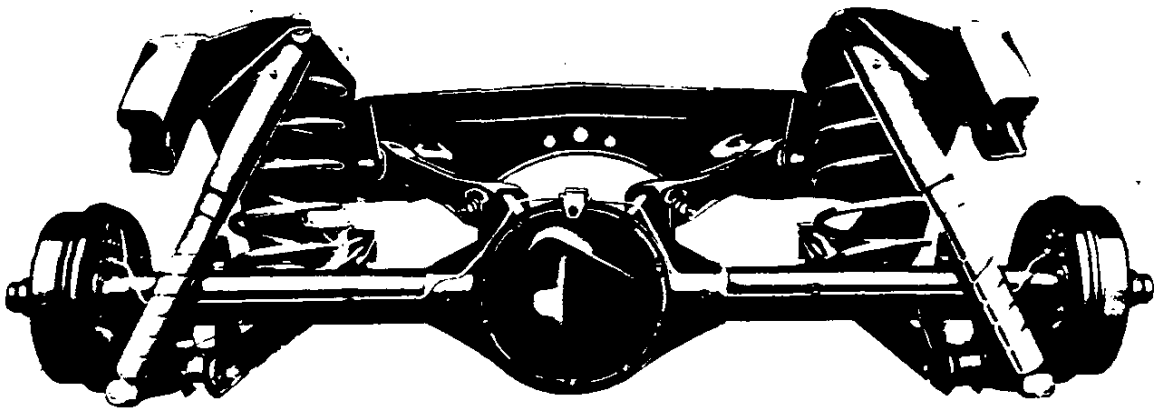
→ Indicates revised specifications.

:r Axle & Suspension—Page 2



SERIES C10, P10 and C20

Fore-and-aft motion of the rear axle is controlled by two channel-section control arms pivoted at a forward frame crossmember. Lateral motion of the rear axle is restricted by a control arm which runs approximately parallel to the axle housing. One end of this arm is pivoted at the frame siderail, and the other end at the axle attachment. The control arms permit axle motion, but maintain proper axle position. Spring action is performed by two-stage coil springs, except C1405 which uses a single-stage coil spring, providing an excellent ride when the vehicle is empty or lightly loaded—increasing in capacity as the load becomes greater.



EL CAMINO MODELS

The 4-link rear suspension design of the El Camino models provides excellent ride and load-carrying characteristics. Two stamped channel-section lower control arms extend from brackets at each end of the axle housing to brackets at the start of the frame rail kick-up. Each control arm end pivots in compressed rubber bushings. Shorter stamped channel-section upper control arms mount on brackets attached to the differential housing and extend diagonally outward to brackets on the intermediate Z-shaped frame crossmember to restrict lateral axle movement relative to the frame. Coil springs are positioned directly over the axle housing. Hydraulic direct double-acting air-booster type shock absorbers are mounted diagonally behind the coil springs.

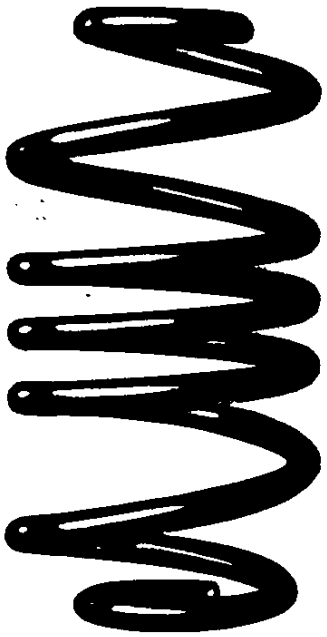
SERIES C10, P10 and C20

Two-Stage Coil Springs

he two-stage coil spring rear suspension, standard on all Series :10 except C1405, P10 and C20 models, provides a low-rate rst stage for smooth ride and a higher rate second stage to insure reater load-carrying capacity.

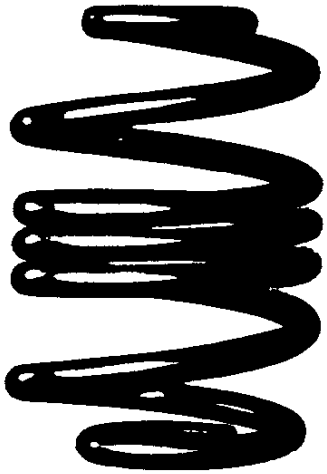
The two-stage principle is achieved through a closer spacing f the three center coils. Thus, in an unloaded condition, riding qualities are enhanced through the use of the entire spring, within the limits of travel of the three center coils.

Severe jouncing of the vehicle or heavier loads compress the three coils to a point where they touch and become inactive. This reduces the number of active coils, giving the spring a higher rate and greater carrying capacity.



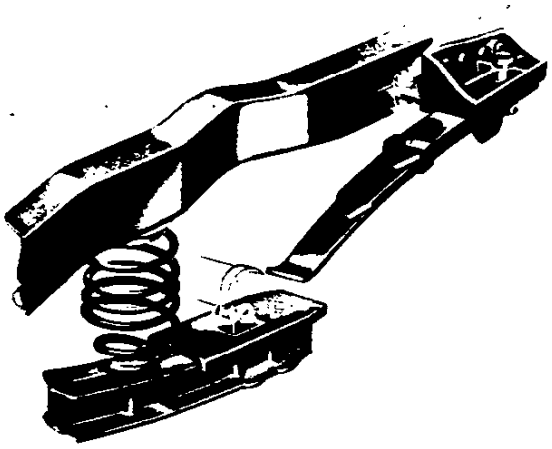
First Stage

Low rate for ride



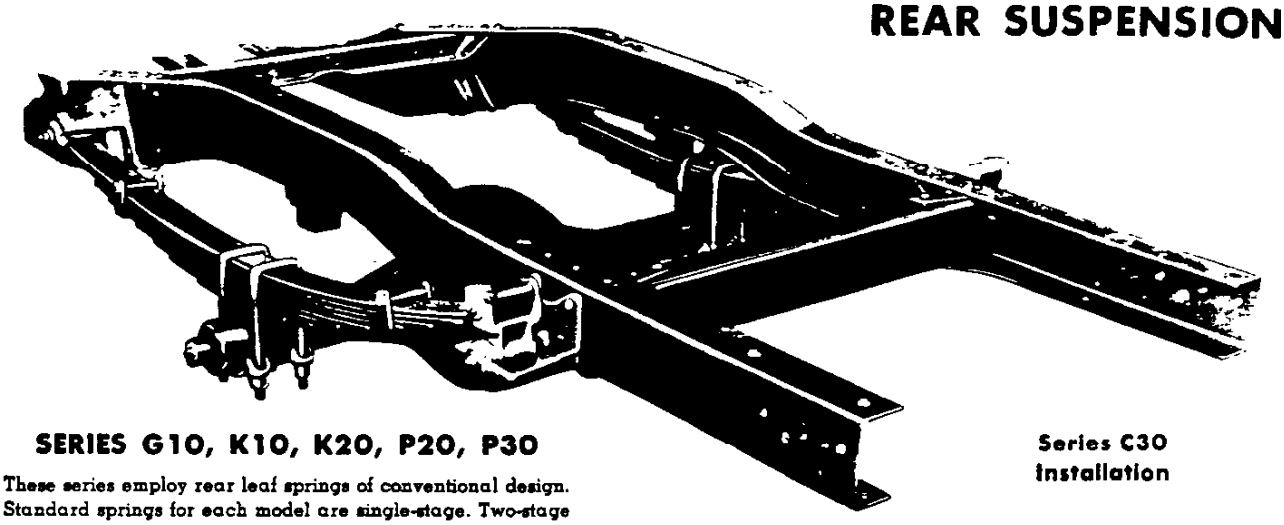
Second Stage

High rate for greater carrying capacity



Cantilever Mounted Auxiliary Springs

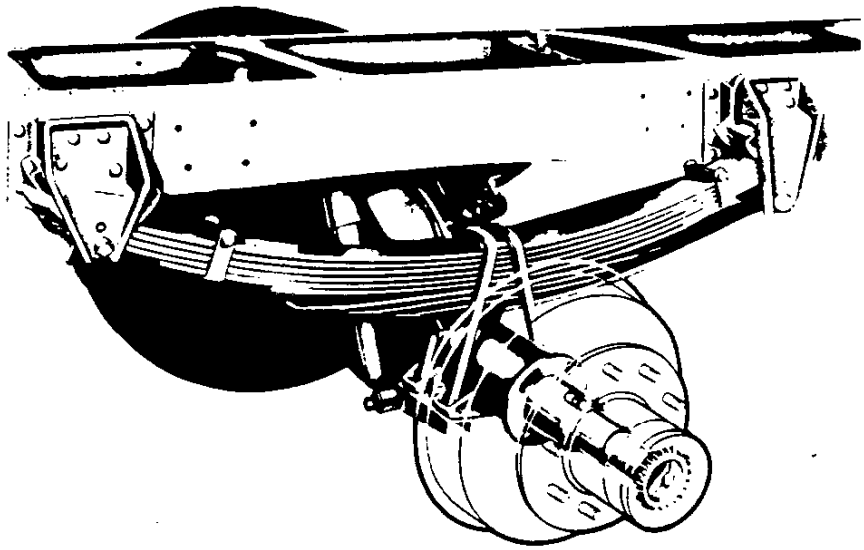
Three-leaf auxiliary rear springs are available as optional equipment on Series C10 and C20 models. The springs are attached to the outside of the frame side rail web at the rear. The lower leaf extends forward into the vicinity of the rear axle mounting pads on the suspension control arms. The auxiliary rear springs make contact with the axle mounting pads only after the base springs are compressed to design load condition. Auxiliary rear springs have a capacity of 500 pounds each.

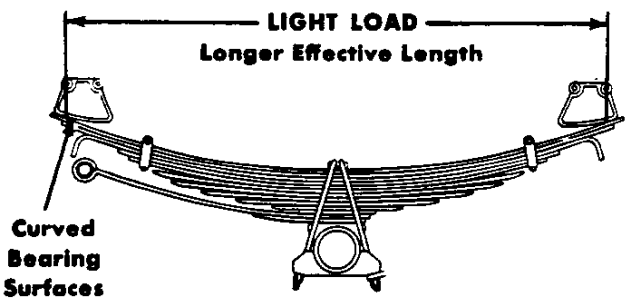


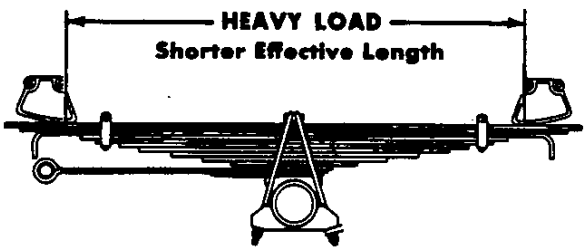
Series C30 Installation

SERIES G10, K10, K20, P20, P30

These series employ rear leaf springs of conventional design. Standard springs for each model are single-stage. Two-stage springs are optional for C30 Series.







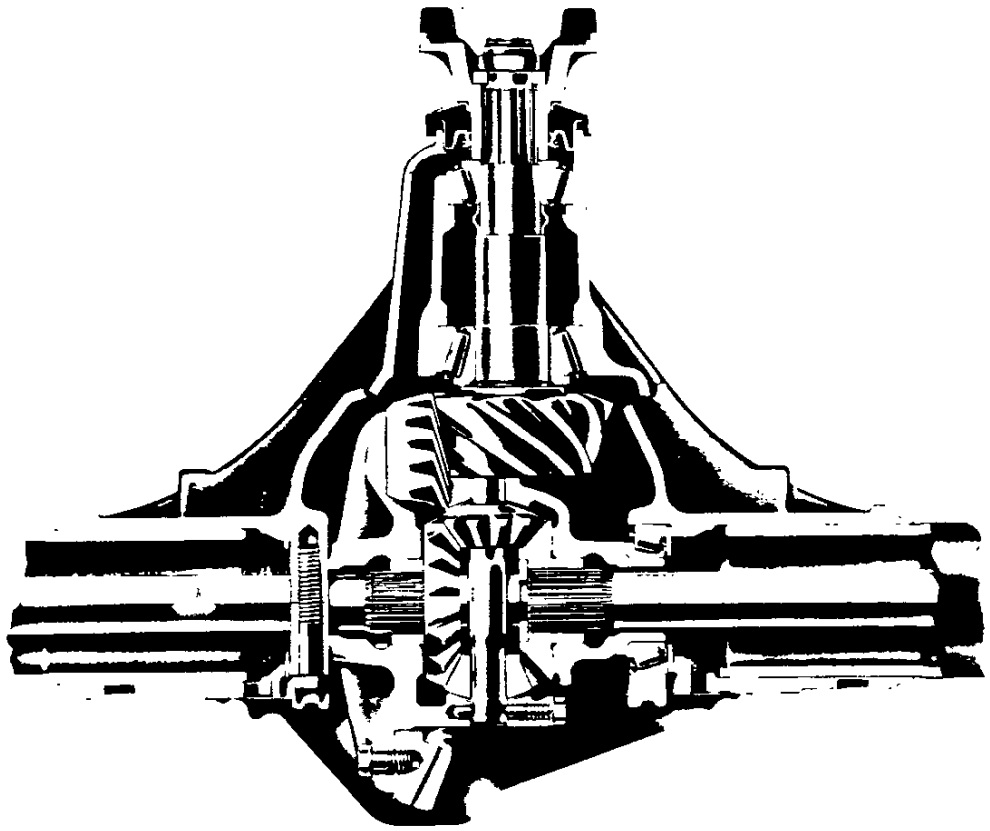
SERIES 50, 60, 80 (Except MVX60, MVW80)

The ends of the variable-deflection-rate springs bear against, but are not attached to, curved surfaces. As spring load increases, the curved bearing surface shortens the *effective* length of the spring, thereby increasing the deflection rate. Thus, there is soft spring action with light loads, and progressively stiffer spring action as the load is increased.

Driving and braking forces are transmitted by the control arm, leaving the spring leaves to perform only a cushioning function.

Canted U-bolts permit full action of the spring leaves.

EAR AXLE



EL CAMINO REAR AXLE

El Camino models utilize a Salisbury-type rear axle with ratios of 3.36:1 standard on six-cylinder models and 3.08:1 on eight-cylinder models. Other axle ratios are available to meet individual requirements. Hypoid gearing is used for quiet, durable differential operations.

Positraction is also available as an option at extra cost.

→Specifications

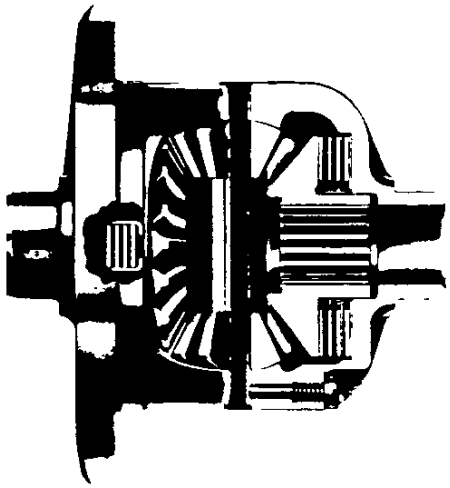
Series:						
Standard	133–13580	134–13680	133–134–135–13680 With Overdrive Transmission	134–13680 With opt V8 engines	134–13680 With opt V8 engines	134–13680 With opt V8 engines
Optional	134–13680					
Capacity	2700 lbs					
Make	Chevrolet					
Pinion & Ring Gears:						
Type	Hypoid					
Ratios	3.36*	3.08*	3.70*	3.07*	3.31*	3.73*
Pinion, teeth	11	12	10	14	13	11
Ring gear, teeth	37	37	37	43	43	41
Differential:						
Type	Two-Pinion					
Axle Shaft:						
Type	Integral Shaft and Drive Flange					
Minimum diameter	1.06					
Housing:						
Section diameter and thickness (in)	3.0 x .22					

*Also available with Positraction limited-slip differential

→ Indicates revised specifications.

CHEVROLET SINGLE-SPEED REAR AXLE
2400-lb to 3500-lb Capacity

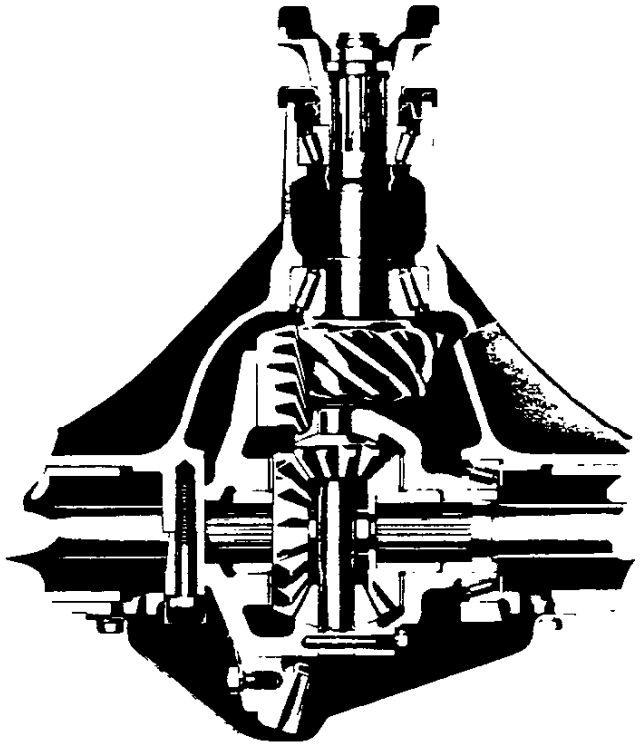
Rugged hypoid ring and pinion gears have large tooth contact area for long, dependable service and quiet operation. Widely spaced tapered roller pinion bearings insure high pinion rigidity and long life of drive gears. The one-piece axle housing has a removable inspection plate to facilitate gear adjustment.



Positraction Differential

Driving forces are transmitted from differential case to axle shafts through the clutch discs and side gears. Engagement of the clutch discs results from a slight lateral movement of the side gears which is created by the force of the differential pinions. If one wheel of the vehicle is on a slippery surface, the axle shaft offers little resistance to turning. As a result, the axle shaft has little torque applied to it. Instead, most of the available torque is diverted to the other axle shaft which offers resistance to being driven.

3500-lb Axle Illustrated



Specifications

Capacity	2400 lbs		2900 lbs		3300 lbs	3500 lbs		
Make	Chevrolet Semi-Floating							
Series:								
Standard	G10		G10		K10	C10, P10		
Optional								
Pinion & Ring Gear:								
Type	Hypoid							
➔Ratios	3.36*	4.11*	3.73*	4.11*	3.73	3.07**	3.73*	4.11*+
Pinion, teeth	11	9	11	9	11	14	11	9
Ring gear, teeth	37	37	41	37	41	43	41	37
Differential:								
Type	2-Pinion							
Bearings, type	Tapered Roller							
Axle Shafts:								
Type	Integral shaft and drive flange							
Minimum diameter	1.08		1.08		1.16	1.16		
Housing:								
Section diameter and thickness (in.)	3.0 x .22							
Wheel Bearings:								
Type	Barrel Roller							

* Also available with Positraction
** C10 models only

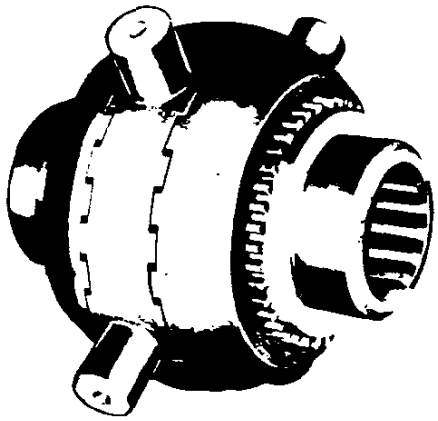
\+ Standard on P10

➔ Indicates revised specifications.

REAR AXLE

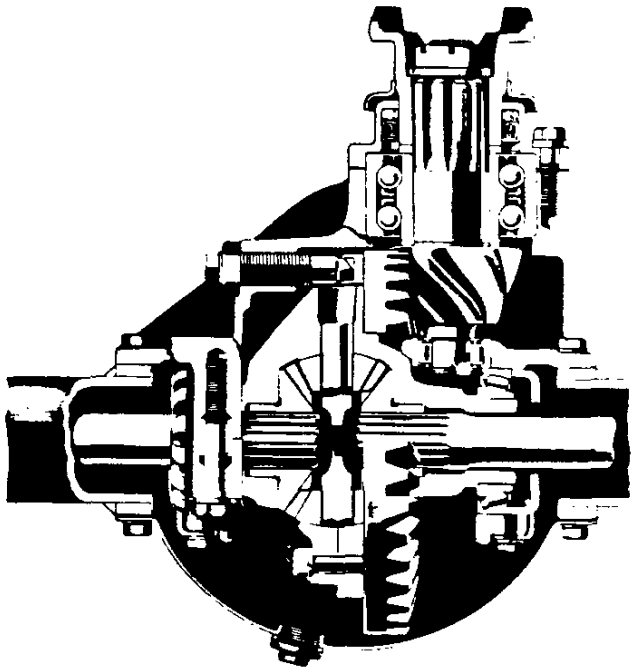
CHEVROLET SINGLE-SPEED REAR AXLE
5200-lb to 7200-lb Capacity

With full-floating design, the axle housing carries the weight of chassis and cargo. Axle shafts are only required to transmit driving torque to the rear wheels. An adjustable ring-gear thrust pad and a straddle-mounted pinion maintain proper gear alignment even under severe conditions. Differential is of either two-or four-pinion type, and the one-piece axle housing has a removable inspection plate. Axle shafts are induction hardened to provide resistance to fatigue stresses.



NoSPIN Differential

Axles for Series C-P20 and C-P30 are optionally available with a NoSPIN differential. In addition to performing usual differential functions, it prevents wheel spin when one driving wheel loses traction. Driving torque is distributed to the driving wheels in proportion to the traction at each wheel, thus easing the negotiation of slippery roads or soft terrain.



7200-lb Axle Illustrated

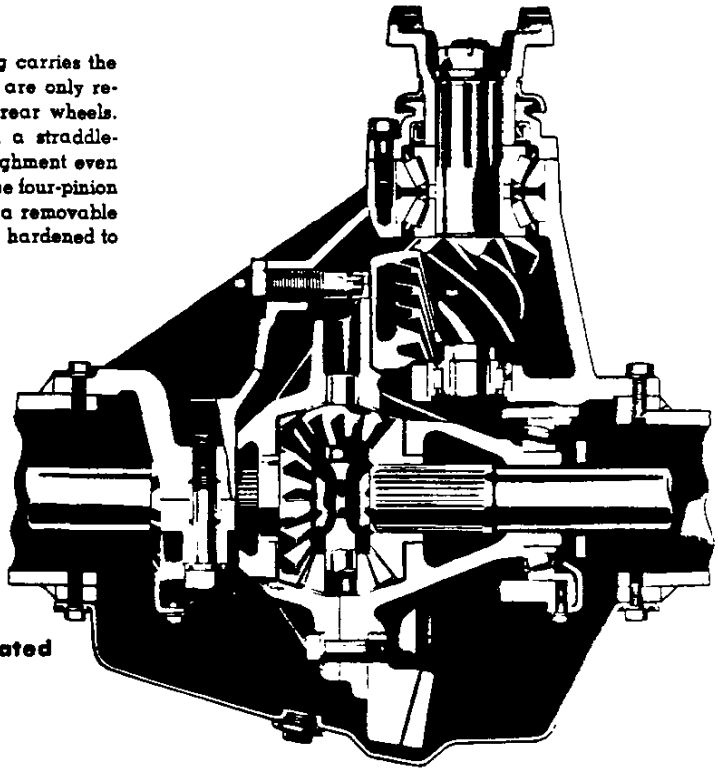
→ Specifications

Capacity	5200 lb		7200 lb	
Make	Chevrolet Full-Floating			
Series	CKP20		CP30	
Pinion & Ring Gear:				
Type	Hypoid			
Ratios	4.11a	4.57*	5.14*	4.57 b
Pinion, teeth	9	7	7	7
Ring gear, teeth	37	32	36	32
Pinion Mounting:				
Mounting type	Straddle			
Front bearing	Ball			
Rear bearing	Straight Roller			
Differential:				
Type	2-Pinion+		4-Pinion	2-Pinion
Bearings, type	Barrel Roller			
Axle Shafts:				
Type	Integral shaft and drive flange			
Minimum diameter	1.34			
Housing:				
Section diameter and thickness (in)	3.25 x .28			
Wheel Bearings:				
Type	Barrel Roller			

*—Also available with NoSPIN differential on C-P20-30 models only
+—4-Pinion on K20 models
a—Optional on Series C20 only
b—Optional on Series C30 only
→ Indicates revised specifications.

CHEVROLET SINGLE-SPEED REAR AXLE
11,000-lb to 17,000-lb Capacity

With full-floating design, the axle housing carries the weight of chassis and cargo. Axle shafts are only required to transmit driving torque to the rear wheels. An adjustable ring-gear thrust pad and a straddle-mounted pinion maintain proper gear alignment even under severe conditions. Differential is of the four-pinion type, and the one-piece axle housing has a removable inspection plate. Axle shafts are induction hardened to provide resistance to fatigue stresses.

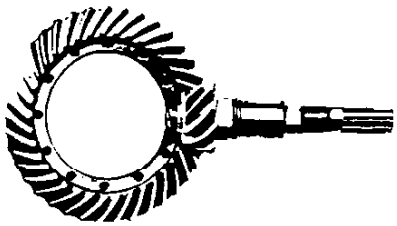


15,000-lb Axle Illustrated

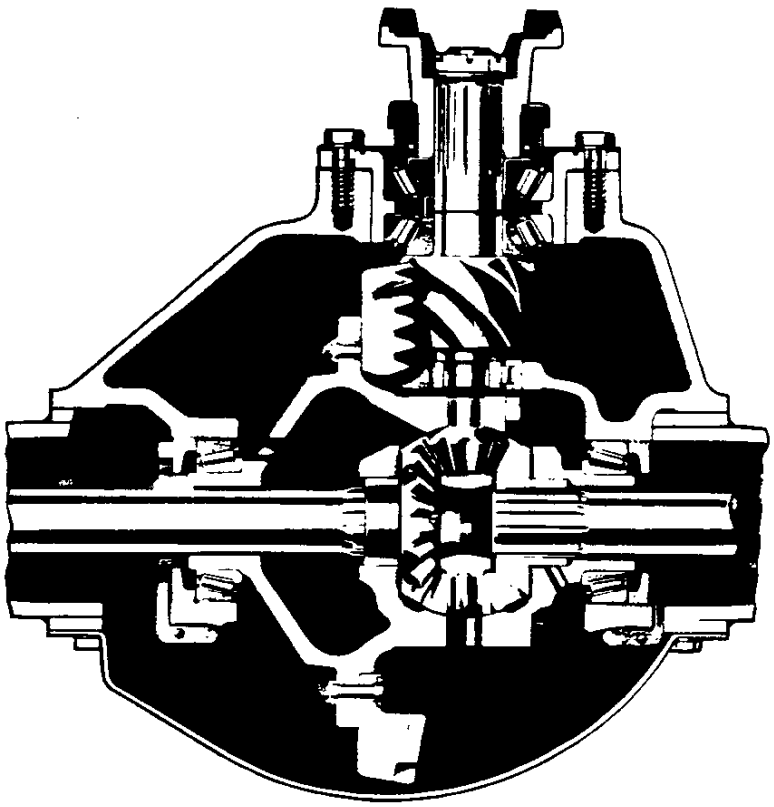
Specifications

Capacity	11,000 lb		13,500 lb		15,000 lb			17,000 lb
Make	Chevrolet Full-Floating							
➤ **Series:**								
Standard	CLPST50	DNQ50	DNQ50	CLPST50	CLMST60 ANQ60 CLPST50	DY60 ANQ60 NQ50	ANQ60 D50	CLST60
Optional								
Optional								
Pinion & Ring Gear:								
Type	Hypoid							
Ratios	6.17	5.43	5.29	6.40	7.20	6.17	5.83	7.20
Pinion, teeth	6	7	7	5	5	6	6	5
Ring gear, teeth	37	38	37	32	36	37	35	36
Pinion Mounting:								
Mounting type	Straddle							
Front bearing	Ball				Tapered Roller			
Rear bearing	Straight Roller				Straight Roller			
Differential:								
Type	4-Pinion							
Bearings, type	Barrel Roller							
Axle Shafts:								
Type	Integral shaft and drive flange							
Minimum diameter (in)	1.44		1.69		1.69			1.69
Housing:								
Section diameter and thickness (in)	4.0 x .375		4.50 x .44		4.50 x .44 (.50 on M60)			4.75 x .50
Wheel Bearings:								
Type	Barrel Roller				Tapered Roller			

➤ Indicates revised specifications.



EATON SINGLE-SPEED REAR AXLES
17,000-lb, 18,500-lb & 23,000-lb Capacity



Eaton Spiral-Bevel Gears

he Eaton single-speed rear axles have a piral-bevel pinion and ring gear with arge tooth face area and thick cross sec- on for high strength and long-wearing uality. Ring and pinion alignment is aintained by a thrust pad. The pinion equires extra rigidity through straddle ounting between dual opposed tapered- oller bearings at front and a straight- oller outboard bearing at extreme rear nd. Gears are accurately machined of lloy steel, carburized and hardened for urability.

Housing and Axle Shafts

/ith full-floating axle shafts, the xle housing supports the chassis nd payload and absorbs road ocks. Housing is high-strength anjo design, made of drop- orged medium-carbon steel. emovable inspection plate mplifies maintenance and djustment.

Axle shafts, being of full- oating design, function only to ansmit driving torque to the heels. Shafts are drop-forged alloy steel, heat-treated for ughness and shot-peened for gh resistance to fatigue failure.

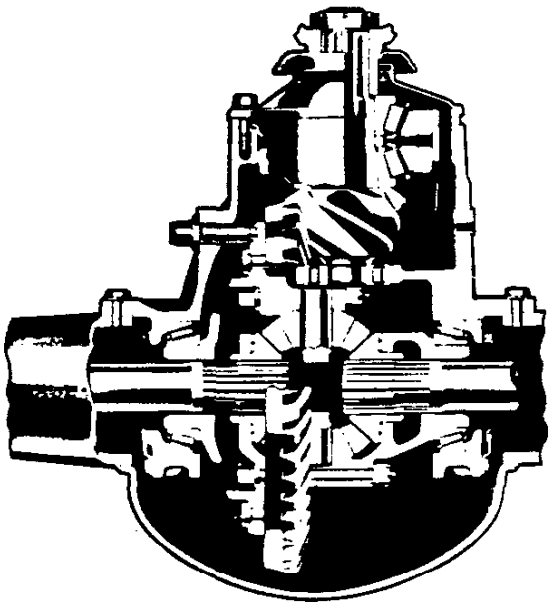
Specifications

Capacity	17,000 lb			18,500 lb				23,000 lb			
Make	Eaton 1618 Full-Floating			Eaton 1790A Full-Floating				Eaton 1910 Full-Floating			
Series:											
Standard	ANQ60	ANQ60	ANQ60	X60 EU80	V60,ANQ80	ANQ80	CLT80 ANQ80	ANQ80	CLT80	EU80
Optional										
Pinion & Ring Gear:											
Type	Spiral Bevel										
Ratios	5.57	6.14	7.17	4.87	5.57	6.50	7.17	7.60	6.67	4.87
Pinion, teeth	7	7	6	8	7	6	6	5	6	8
Ring gear, teeth	39	43	43	39	39	39	43	38	40	39
Pinion Mounting:											
Mounting type	Straddle										
Front bearing	Tapered Roller										
Rear bearing	Straight Roller										
Differential:											
Type	4-Pinion										
Bearings, type	Tapered Roller										
Axle Shafts:											
Type	Integral shaft and drive flange										
Minimum diameter (in)	1.69			1.81				2.00			
Housing:											
Section diameter and thickness (in)	4.50 x 0.49			5.12 x 0.44				5.50 x 0.50			
Wheel Bearings:											
Type	Tapered Roller										

→ Indicates revised specifications.

ROCKWELL SINGLE-SPEED REAR AXLE

16,000-lb Capacity



Rockwell rear axles feature a hypoid bevel pinion and ring gear. The axle housing is one-piece banjo type of heat-treated medium-carbon steel that provides high strength with relatively light weight. The differential cover plate is heavy-gauge steel that is securely welded in place for added housing strength.

All gears are precision machined of alloy steel, carburized and hardened for high strength and long life. The drive pinion is straddle mounted for accurate alignment with the ring gear. Two large opposed tapered roller bearings support the pinion at the outer or forward end while a straight roller bearing supports the pinion at the extreme inner end. A thrust block and adjusting screw further assure true pinion-ring gear alignment by limiting ring gear deflection under conditions of severe stress.

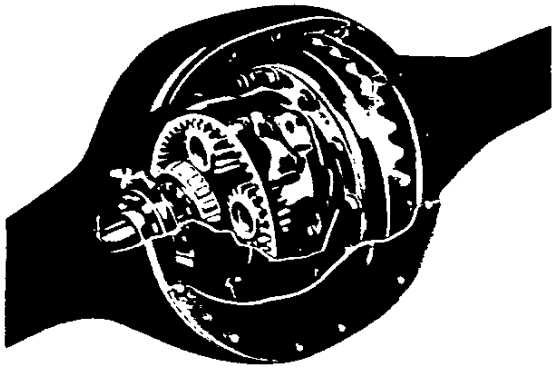
Axle shafts are the full-floating type and made of medium-carbon steel. The entire shaft is heat treated for extra strength.

Specifications

Capacity	16,000 lb		
Make	Rockwell G-161 Full-Floating		
Series:			
Standard	ANQ60	ANQ60	ANQ60
Optional			
Pinion & Ring Gear:			
Type	Hypoid		
Ratios	5.29	6.17	7.20
Pinion, teeth	7	6	5
Ring gear, teeth	37	37	36
Pinion Mounting:			
Mounting type	Straddle		
Front bearing	Tapered Roller		
Rear bearing	Straight Roller		
Differential:			
Type	4-Pinion		
Bearings, type	Barrel Roller		
Axle Shafts:			
Type	Integral shaft and drive flange		
Minimum diameter (in)	1.91		
Housing:			
Section diameter and thickness (in)	4.25 x 0.38		
Wheel Bearings:			
Type	Barrel Roller		

CHEVROLET TWO-SPEED REAR AXLE
15,000-lb & 17,000-lb Capacity

hevrolet Two-Speed
lanetary-Gear
ear Axle



he Chevrolet two-speed rear axle features a durable hypoid pinion nd ring gear set supplemented by efficient planetary gears to rovide the choice of high or low range. In high range the planetary ear system is locked, and torque flows through the hypoid gears irectly to the axle shafts, as in a single-speed axle. In low range ie planetary gear system operates as a second reduction after the ypoid gears. Torque at the axle shafts is increased by 36 per cent r greater pulling ability.

Ring gear and pinion alignment is maintained by straddle mount-ig of the pinion between dual tapered roller bearings at front and a straight roller outboard bearing at rear. An adjustable thrust pad minimizes ring gear deflection during severe torque applications, such as pulling hard in low transmission gear. Drive gears, planetary gears and differential gears are carburized alloy steel, accurately machined and hardened.

With full-floating axle shafts, the axle housing supports the chassis, payload and absorbs road shocks. Housing is of high-strength banjo design, made of drop-forged medium-carbon steel. Removable inspection plate simplifies maintenance and adjustment.

Shafts are drop-forged from alloy steel, induction-hardened and shot-peened for resistance to fatigue failure.

Specifications

Capacity	15,000 lb			17,000 lb
Make	Chevrolet Full-Floating			
Series Application	DQ50, ANQ60	NQ50, ADNQY60	CLPNQST50, ACLMNQST60	CLST60
Pinion & Ring Gear:				
Type			Hypoid	
Ratios: Hi	5.29	5.83	6.40	6.40
Lo	7.20	7.95	8.72	8.72
Pinion, teeth	7	6	5	5
Ring gear, teeth	37	35	32	32
Pinion Mounting:	Straddle			
Mounting type	Tapered Roller			
Front bearing	Straight Roller			
Rear bearing				
Differential:	4-Pinion			
Type	Barrel Roller			
Bearings, type				
Axle Shafts:	Integral shaft and drive flange			
Type	1.69			
Minimum diameter (in)				
Housing:				
Section diameter and thickness (in)	4.50 x 0.44			4.75 x 0.50
Wheel Bearings:				
Type	Barrel Roller			Straight Roller

Shifting the Chevrolet two-speed rear axle is smooth, safe and convenient. By operating the convenient push-button control, the driver may select the most favorable combined transmission and rear axle ratio. A decal on the instrument panel explains shifting methods and combinations of transmission and axle ratios.

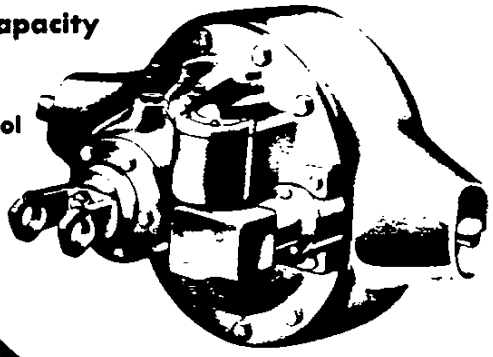
D60 models employ an electric shift control, operated by a convenient button on the transmission shift lever. This control is similar in function to that described on page 14 for the Eaton 2-speed rear axle.

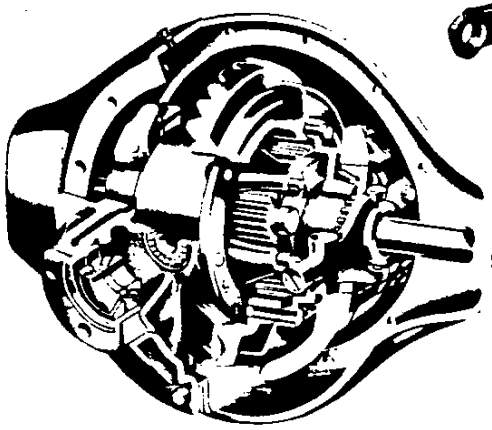
Electric Shift Switch

Shifting the Eaton two-speed rear axle is smooth, safe and convenient. The electric shift control is positive in action and permits easy clash-free shifting. By operating the convenient switch control, the driver may select the most favorable combined transmission and rear axle ratio. A decal on the instrument panel explains shifting methods and axle ratios.

EATON TWO-SPEED REAR AXLE
17,000-lb & 18,500-lb Capacity

Electric Shift Control





Eaton Two-Speed Planetary-Gear Rear Axle

Eaton two-speed rear axles feature a durable pinion and ring gear set supplemented by efficient planetary gears to provide the choice of high or low range. In high range the planetary gear system is locked, and torque flows through the ring gear directly to the axle shafts, as in a single-speed axle. In low range the planetary gear system operates as a second reduction. Reduction and torque at the axle shafts are increased 39 per cent in the 17,000-lb axle, 36 per cent in the 18,500-lb axle.

Eaton two-speed rear axles are noted for long life and low maintenance cost. Drive gears, planetary gears and differential gears are carburized alloy steel, accurately machined and hardened. Straddle-mounted pinion, low operating stresses in the planetary system and forced-flow lubrication result in dependable performance in heavy-duty truck or tractor operations.

With full-floating axle shafts, the axle housing supports the chassis payload and absorbs road shocks. Housing is of high-strength banjo design, made of drop-forged medium-carbon steel. Removable inspection plate simplifies maintenance and adjustment.

Axle shafts, being of full-floating design, function only to transmit driving torque to the wheels. Shafts are drop-forged from alloy steel, heat-treated for toughness and shot-peened for high resistance to fatigue failure.

Specifications

Capacity	17,000 lb					18,500 lb				
Make	Eaton 16800 Full-Floating					Eaton 17800 Full-Floating				
➤**Series Application**	ADNQY60	ANQ60	ANQ60	ACLNQT60	ACLNQT60	AENQU80	VX60 ANQEU80 ANQ80	ANQ80	ACLNQT80	ACLNQT80
Pinion & Ring Gear: Type	Spiral Bevel									
Ratios: Hi	4.87	5.57	6.14	6.50	7.17	4.87	5.57	6.14	6.50	7.17
Lo	6.77	7.75	8.54	9.04	9.97	6.65	7.60	8.38	8.87	9.97
Pinion, teeth	8	7	7	6	6	8	7	7	6	6
Ring gear, teeth	39	39	43	39	43	39	39	43	39	43
Pinion Mounting: Mounting type	Straddle									
Front bearing	Tapered Roller									
Rear bearing	Tapered Roller									
Differential: Type	4-Pinion									
Bearings, type	Tapered Roller									
Axle Shafts: Type	Integral shaft and drive flange									
Minimum diameter (in)	1.69					1.81				
Housing: Section diameter and thickness (in)	4.75 x 0.50					5.12 x 0.44				
Wheel Bearings: Type	Tapered Roller									

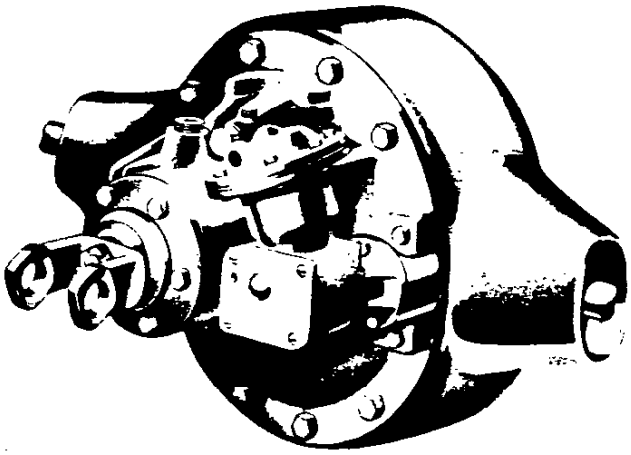
➤ Indicates revised specifications.

EATON TWO-SPEED REAR AXLE—23,000-lb Capacity

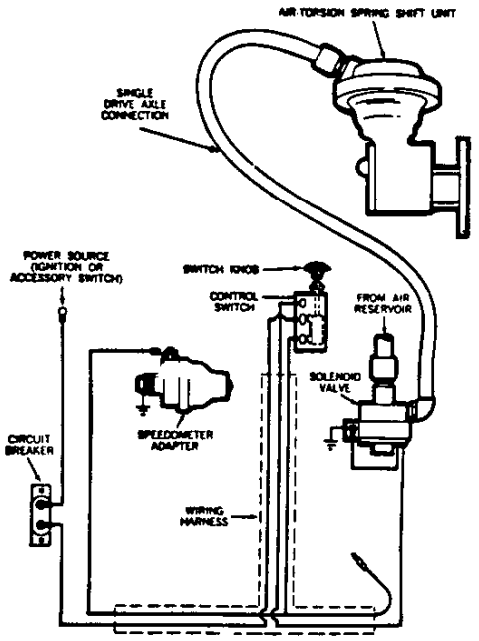
; overall design of the Eaton 23,000-lb axle is similar to the Eaton ɔ,500-lb axle. However many of the components are of increased ize in order to obtain the larger capacity rating. The differences ıre as follows:

. Larger axle housing section
2. Greater axle shaft diameter
3. Larger drive gear pitch and face diameter
4. Increased drive pinion shaft diameter
5. Increased capacity on:
   a. Outer pinion bearings
   b. Pilot bearings
   c. Differential bearings
   d. Wheel bearings

Axle shifting between high and low range is accomplished by an air-torsion spring shift system shown below.



Air-Torsion Spring Shift Control



Air-Torsion Spring Shift System

Specifications

Capacity	23,000 lb	
Series Applications	C-L-T80	E-U80
Eaton Axle Series	F19502	
Pinion & Ring Gear:		
Type	Spiral Bevel	
Ratios available: High	6.71	4.87
Low	9.14	6.63
Pinion, teeth	7	7
Ring gear, teeth	47	38
Pinion Mounting:		
Mounting type	Straddle	
Front bearing	Tapered Roller	
Rear bearing	Tapered Roller	
Outboard bearing	Straight Roller	
Differential:		
Type	4-Pinion	
Bearings, type	Tapered Roller	
Axle Shafts:		
Type	Full-Floating	
Minimum diameter	2.00"	
Diameter over splines	2.25"	
Number of splines	16	
Attachment to hub	Bolted	
Housing:		
Section diameter x thickness (in)	5.50 x .50	
Wheel Bearings:		
Type	Tapered Roller	
Make	Timken or Bower	
Bearing, Inside Diameter:		
At inner bearing	3¾"	
At outer bearing	3"	

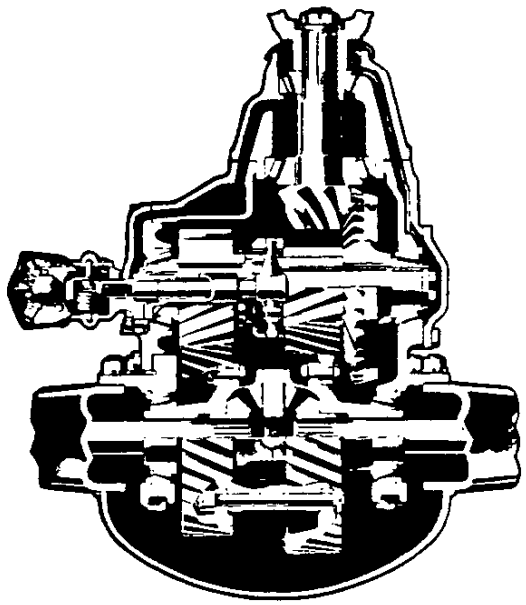
The air-torsion spring shift system differs from the electric-type shift system used on the Eaton 18,500-lb 2-speed rear axle in the method of accomplishing the shift. The electric system uses an electric motor to wind the spring that provides the force required to move the shift fork and change the axle range. An air-activated pushrod provides the force to move the shift fork and change the axle range in the air-torsion shift system.

The system consists of an air chamber and a torsion spring drive assembly. The movement of the selector knob electrically activates the solenoid valve which opens or closes an air passage and permits air pressure to be applied or released from the air-shift unit diaphragm.

When the axle is shifted into high, movement of the diaphragm operates the pushrod which moves the spring winding lever and increases the load placed on the torsion spring which is mechanically connected to the axle shift fork. This prepares the axle for the shift. When the load on the gears is relieved, by the opening or closing of the throttle or by declutching, the spring is released and the axle will shift into high. To accomplish an axle shift into low, the control switch knob is pushed down to actuate the solenoid which in turn cuts off the air supply to the air-torsion spring unit. The resulting air bleed-back through the solenoid releases the pressure on the diaphragm, thus moving the pushrod back. The subsequent spring winding lever movement unloads or unwinds the torsion spring. This pre-loads it in the opposite direction of shifting to high range. When the load on the gears is relieved, by opening or closing of the throttle or by declutching, the spring load is again released and the axle shift to low range is accomplished.

ROCKWELL TWO-SPEED REAR AXLE

16,000-lb Capacity



Rockwell rear axles feature a double reduction drive through a hypoid bevel pinion and ring gear followed by two sets of helical pinions and gears. One combination provides "lo" range and the other "hi" range. A clutch collar operated by a vacuum shift motor locks either of the pinions to the splined drive gear shaft thereby providing the desired ratio.

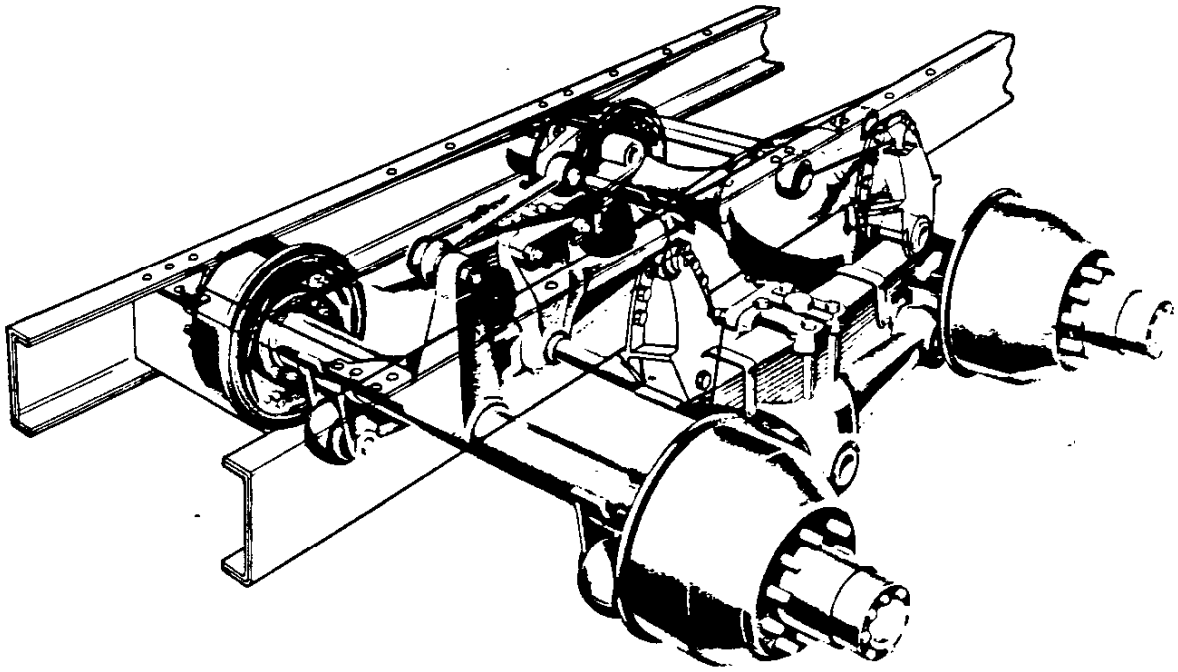
The axle housing is of one-piece banjo-type design made of medium-carbon steel.

All drive pinions, driven gears, differential pinions and side gears are precision machined of alloy steel, carburized and hardened for high strength and long life. Bevel pinion mounting is the overhung type.

Axle shafts are full-floating type made of medium-carbon steel by a hot forging process to gain uniform stress throughout the shaft body and flange. The entire shaft is shot peened and heat treated to increase strength.

Specifications

Capacity	16,000 lb		
Make	Rockwell G-361 Full-Floating		
Series:			
Standard			
Optional	ANQ60	ANQ60	ANQ60
Pinion & Ring Gear:			
Type		Hypoid	
Ratios: Hi	5.41	6.16	6.61
Lo	7.44	8.48	9.09
Pinion, teeth	11	10	9
Ring gear, teeth	28	29	28
Pinion Mounting:			
Mounting type	Overhung		
Front bearing	Tapered Roller		
Rear bearing	Tapered Roller		
Differential:			
Type	4-Pinion		
Bearings, type	Tapered Roller		
Axle Shafts:			
Type	Integral shaft and drive flange		
Minimum diameter (in)	1.75		
Housing:			
Section diameter and thickness (in)	4.25 x 0.38		
Wheel Bearings:			
Type	Barrel Roller		



SERIES MVX60

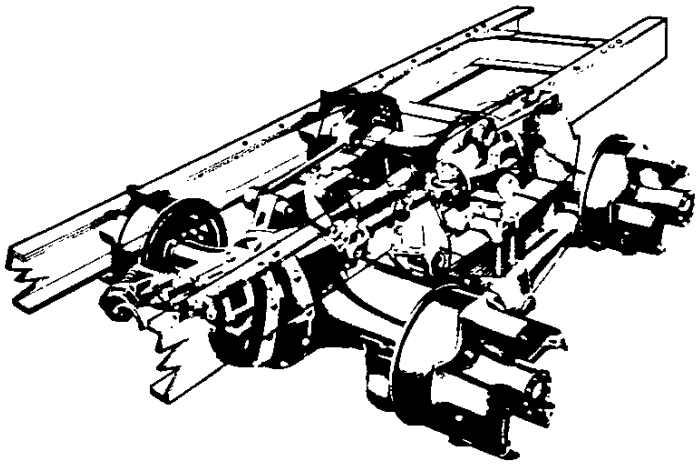
Series M60 tandems use the Hendrickson rear suspension with a Chevrolet forward driving axle in combination with a tubular trailing axle.

Series VX60 tandems use the Hendrickson rear suspension with an Eaton forward driving axle in combination with a tubular trailing axle.

The design of the suspension system, using equalizing beams, provides excellent operating flexibility. The action of these beams allows the vehicle to "walk" over surface irregularities, resulting in a smoother and more level ride. A cross tube connecting the equalizing beams assures correct alignment and prevents damaging load transfer.

Axle torque is controlled by the use of torque rods, thereby reducing the tendency of the axles to turn backward or forward due to starting or stopping inertia. Short, relatively lightweight rear springs serve to cushion and support the load.

TANDEM SUSPENSION



SERIES M80, V80, W80

Tandem models are equipped with a standard 30,000-lb Hendrickson bogie and two Eaton Series 30 axles. An optional, at extra cost, 34,000-lb-capacity Hendrickson bogie with two Eaton Series 34 axles, tandem suspension is also available. The parallelogram design of the bogie, utilizing center-pivoted equalizing beams, gives maximum operating flexibility. The action of these beams allows the wheels to "walk" over surface irregularities, reducing frame motion and providing a relatively smooth and level ride. Axle torque is controlled by rugged ball-and-socket-mounted torque arms, leaving the springs to perform only a cushioning function. Rubber bushings are used at all points of wear, thereby eliminating the need for periodic lubrication.

The power divider with built-in inter-axle differential divides driving power between the two axles. The differential feature permits freedom of action of the two axles, and eliminates wheel fight due to road irregularities or small differences in tire sizes. By means of a toggle switch on the instrument panel, the inter-axle differential may be locked out to give equal power to both axles regardless of terrain. A red warning light is illuminated when the differential is locked out.

Short, relatively lightweight springs serve to support and cushion the load. The fixed front eye is double-wrapped to give added strength for transmitting driving and braking forces. Spring seats are machined to ensure permanent alignment.

Axle Specifications

Bogie Model	Hendrickson RT 320								
Capacity	30,000 lbs				34,000 lbs				
Series Application	M80	V80		W80	M80	V80		W80	
→ **Eaton Axle Series**	30D	30D		30D	34D	34M		34D	
Pinion & Ring Gear:									
Type	Spiral Bevel								
Ratio	7.17	5.57	7.60	7.17	4.87	7.17	6.69	7.80	8.60	5.57
Pinion, teeth	6	7	5	6	8	6	7	6	6	6
Ring gear, teeth	43	39	38	43	39	43	39	39	43	39
Pinion Mounting:									
Type	Straddle								
Front bearing	Tapered Roller								
Rear bearing	Tapered Roller								
Outboard bearing	Straight Roller								
Differential:									
Type	4-Pinion								
Bearings	Tapered Roller								
Axle Shafts:									
Type	Full-Floating								
Minimum diameter	1.68				1.81				
Diameter over splines	1.86				1.98				
Number of splines	16								
Number of attachments to hub	8								
Wheel Bearings:									
Type	Tapered Roller								
Make	Timken or Bower								

→ Indicates revised specifications.

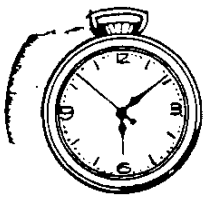
Specify Option G-67

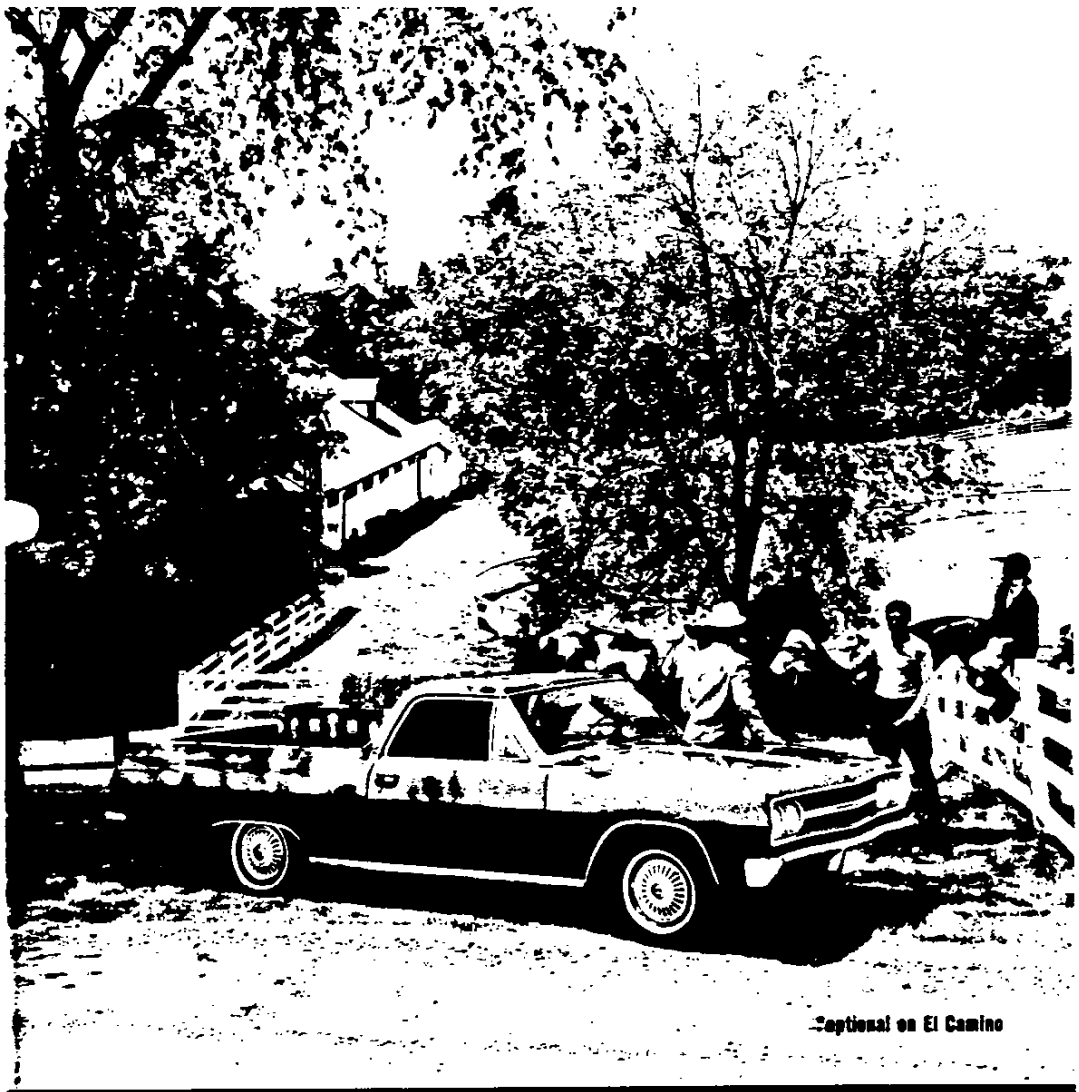
CHEVROLET

AUTOMATIC LEVEL CONTROL*

MAINTAINS CORRECT VEHICLE HEIGHT AT ALL TIMES

REGARDLESS OF **WHEN**

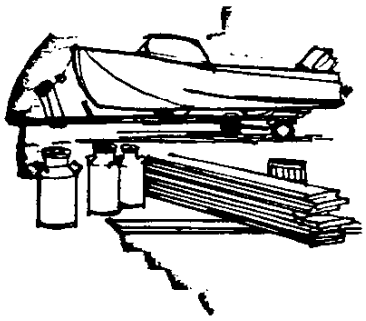




*Optional on El Camino

WHERE

WHAT



AUTOMATIC REAR LEVELING ANSWERS A REAL NEED FOR THE EL CAMINO OWNER INTERESTED IN

RANCHING • CONSTRUCTION • FARMING • HUNTING
FISHING • BOATING • OR JUST PLAIN HAULING

THE LOADING PATTERN MAY BE!

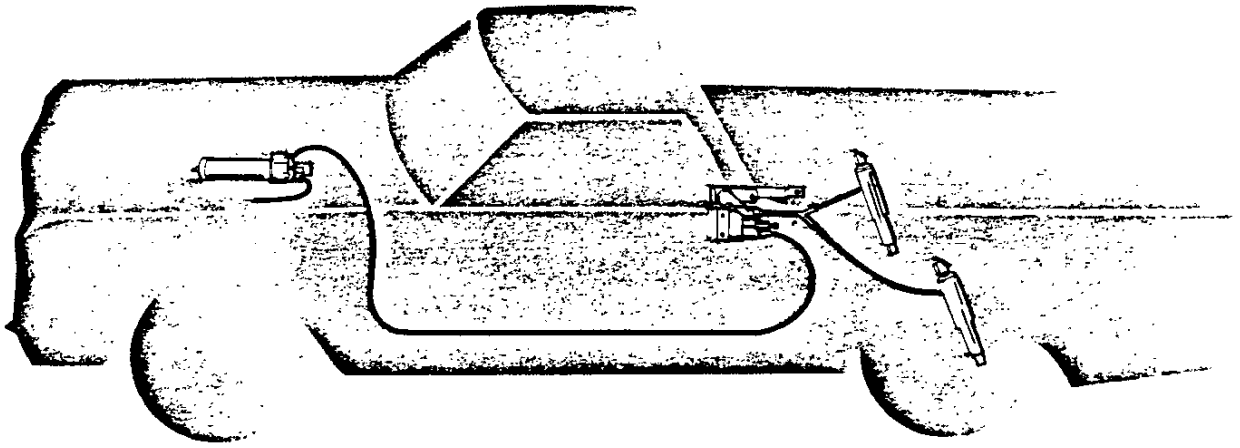
Specify Option G-67

AUTOMATIC LEVEL CONTROL

THE CHEVROLET EL CAMINO FOR 1965

Is standard equipped with Superlift Air Adjustable Shock Absorbers. These exclusive shock absorbers offer an adjustment feature not available in any other similar vehicle. Loads of up to approximately 560# can be readily compensated for by the addition of 125 PSI.

NOW AN ADDITIONAL CONVENIENCE FACTOR HAS BEEN ADDED TO THE EL CAMINO—FOR THE REGULAR LOAD CARRIER—THE AUTOMATIC LEVEL CONTROL SYSTEM PROVIDES THE ULTIMATE IN VEHICLE HEIGHT COMPENSATION.



VACUUM COMPRESSOR

The system is powered by a two stage vacuum compressor. The compressor operates without lubrication and generates pressure in the integral storage tank of up to approximately 250 PSI. A self contained regulator is pre-set to maintain pressure to the height control valves not to exceed 125 PSI.

HEIGHT CONTROL VALVE

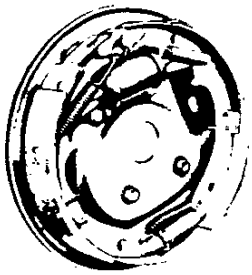
The rear vehicle height is automatically maintained by the control valve. When sufficient load is added to cause the vehicle to deflect ½"—the valve opens and admits air to the Superlift Shock Absorbers. As load is removed, the valve exhausts air which maintains correct vehicle height. A built-in time delay mechanism assures that the valve responds to any load changes and not to road variations. This same height control valve performs a million miles of service daily on G.M. bus & truck applications.

SUPERLIFT SHOCK ABSORBERS

Superlift Shocks are essentially a conventional shock with an inflatable air chamber to allow for height compensation. The unit provides passenger car ride with load carrying capacity. This suspension additive provides a fail-safe condition in that the conventional vehicle suspension is maintained.

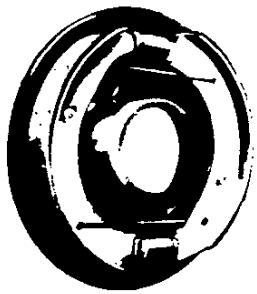
WITH GREATER SAFETY . . . CONVENIENCE . . . AND BETTER APPEARANCE . . .
THE AUTOMATIC LEVEL CONTROL SYSTEM
PROVIDES ADDED EL CAMINO VALUE!

J-7700-35M-7/64



Torque-Action Brake

Torque-Action brakes are standard on the front and rear wheels of Series 10–30, and are standard on the front wheels only of the 50 and 60 Series. K10 and 20 models use the Duo-servo type brake on the front and rear wheels. Linings are bonded to brake shoes on Series 10 models. All other models have riveted linings.



Twin-Action Front Brake

Twin-action front brakes are standard on the front wheels o Series ACLMNQT80. Brake lining material of molded asbesto composition is riveted to the brake shoes.

Twin-Action Rear Brake
Two-Anchor Type

Twin-action brakes of the two-anchor type are standard equipment on the rear wheels of Series 50 and 60 models. Brake lining material of molded asbestos composition is riveted to the brake shoes.

Twin-Action Rear Brake
Four-Anchor Type

Twin-action brakes of the four-anchor type are standard equip ment on Series 80 models (except EUW80 models). Brake lining material of molded asbestos composition is riveted to the brak shoes.

HYDRAULIC BRAKE SPECIFICATIONS

Series G10, C–K–P10–30 have self-adjusting type brakes.

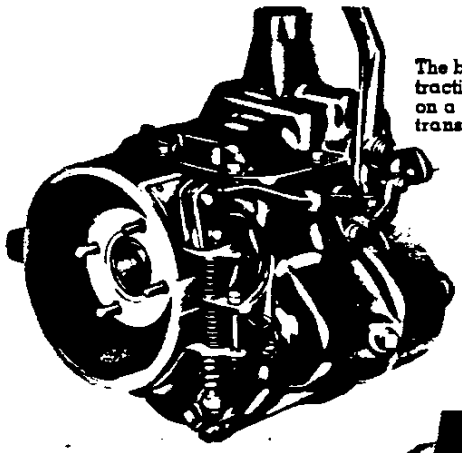
Series	Brake Size (inches)		Lining Area (sq in)		Drum Area (sq in)	
	Front	Rear	Front	Rear	Front	Rear
133-134-135-13680	9½ x 2	9½ x 2½	96	77	127	102
133-134-135-13680						
With optional metallic brake linings	9½ x 2	9½ x 2½	66	52	127	102
G10	9½ x 2½	9½ x 2	96	77	127	102
G10						
With optional 2900-lb rear axle	9½ x 2½	9½ x 2½	96	96	127	127
C10, P10	11 x 2	11 x 2	83½	83½	138	138
K10	11 x 2	11 x 2	88½	83½	137½	138
C20	11 x 2¾	11 x 2¾	119	119	192	193
K20	12 x 2	12 x 2	98	93	152	150
P20	12 x 2	12 x 2	93	93	150	150
C30	11 x 2¾	13 x 2½	119	133	192	204
P30	12 x 2	13 x 2½	93	133	150	204
50	14 x 2½	15 x 4	136	245	219	376
60						
With 5000-lb front axle & 15,000-lb rear axle	14 x 2½	15 x 4	136	249	219	376
With 5000-lb front axle & 16,000-lb rear axle	14 x 2½	15 x 5	136	314	219	472
With 7000-lb front axle & 15,000-lb rear axle	15 x 3	15 x 4	199	249	283	376
With 7000-lb front axle & 16,000-lb rear axle	15 x 3	15 x 5	199	314	283	472
With 7000-lb front axle & 17,000-lb rear axle	15 x 3	15 x 6	199	380	283	565
With 5000-lb front axle & 17,000-lb rear axle	14 x 2½	15 x 6	136	380	219	565
M60						
With 5000-lb front axle	14 x 2½	15 x 4	136	497	219	752
With 7000-lb front axle	15 x 3	15 x 4	199	497	283	752
VX60						
With 5000-lb front axle	14 x 2½	15 x 7	136	886	219	1318
With 7000-lb front axle	15 x 3	15 x 7	199	886	283	1318
M80	15 x 3	15 x 6	199	759	283	1130
80 (Except E–M–U–W80)	15 x 3	15 x 7	199	443	283	659

HYDRAULIC BRAKE CYLINDER SPECIFICATIONS

Series	Main Cylinder Diameter (in)	Wheel Cylinder Dia (in)		Braking Effort (%)	
		Front	Rear	Front	Rear
133-134-135-13680	1.00	1.125	.94	60	40
133-134-135-13680					
With optional metallic brake linings	.875	1.125	.94	60	40
G10	1.00	1.06	.875	60	40
C10	1.000	1.125	1.000	56	44
P10	1.125	1.125	1.000	56	44
K10	1.000	1.125	1.000	50	50
C20	1.000	1.125	1.125	49	51
K20	1.000	1.125	1.125	50	50
P20	1.125	1.125	1.125	50	50
C30	1.125	1.125	1.250	41	59
P30	1.125	1.125	1.250	48	52
50	1.125	0.875	1.500	30	70
60					
With 5000-lb front axle & 15,000-lb rear axle	1.125	0.875	1.500	30	70
With 5000-lb front axle & 16,000-lb rear axle	1.125	0.875	1.500	30	70
With 7000-lb front axle & 15,000-lb rear axle	1.125	1.125	1.500	36	64
With 7000-lb front axle & 16,000-lb rear axle	1.125	1.125	1.500	36	64
With 7000-lb front axle & 17,000-lb rear axle	1.250	1.125	1.625	32	68
With 5000-lb front axle & 17,000-lb rear axle	1.125	0.875	1.625	30	70
M60					
With 5000-lb front axle	1.125	0.875	1.500	20	80
With 7000-lb front axle	1.125	1.125	1.500	20	80
VX60					
With 5000-lb front axle	1.125	0.875	1.750	20	80
With 7000-lb front axle	1.125	1.125	1.750	20	80
M80	1.250	1.125	1.625	19	81
80 (Except E-M-U-W80)	1.250	1.125	1.750	29	71

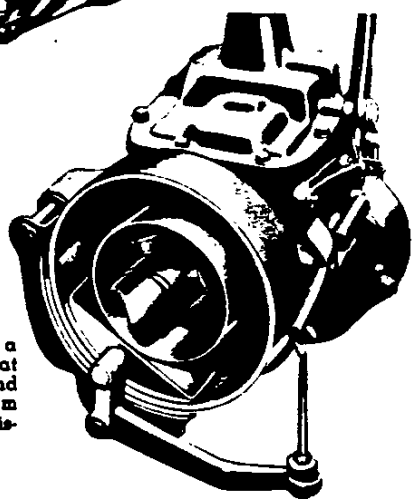
PARKING BRAKES

Propeller Shaft Brakes



Band Brake

The band brake has a contracting band which closes on a drum attached to the transmission output shaft.



Dual-Shoe Brake

ne dual-shoe brake has a air of brake shoes that ct on both the inside and ıe outside of a drum ttached to the transmis- on output shaft.

Rear Wheel Brakes

A cable linkage operating the rear wheel brakes is used on all Series 10 and K20 models. Series C20 and P20 models also use this type of parking brake except with the optional 3-speed transmission.

An Orscheln-type brake lever is standard on P10, CP30, AN60, ANQ80, tilt cabs and all vehicles equipped with 409 V8 engines.

Parking Brake Specifications

Series	Transmission	Brake Type	Diameter (in)	Lining Area (sq in)
CKP10	All	Wheel	—	84
CKP20	Std 3-Spd Powerglide 4-Spd Warner T89B	Wheel	—	119
CP30	All	Band	8	63
NCDLPQST50, ACLMNQSTVY60	4-Spd	Dual-Shoe	10	36
ACDLMNQST-VXY60	N.P. 5-Spd Clark 5-Spd Powermatic Spicer 3152 Spicer 3152A	Band Band Band Band	9½ 9½ 9½ 9½	67½ 85 89 85
CELTU80	Spicer 3152A Spicer 3152	Band	9½	85
	Spicer 5652B Spicer 5756B	Band	10½	99½
	Powermatic	Band	10½	99½
	Fuller R46	Internal Expanding	13	83½

* Not available on K10, K20

VACUUM BRAKES

Vacuum brakes on gasoline models are powered by engine intake manifold vacuum, whereas diesel models use a vacuum pump. A large diaphragm and pressure plate are used to actuate a hydraulic slave cylinder. The 8.3" power brake unit employs a power piston instead of a diaphragm. Braking effort with these units is substantially reduced, helping to cut driver fatigue. A full natural brake feel is retained even though a substantial part of the braking effort is provided.

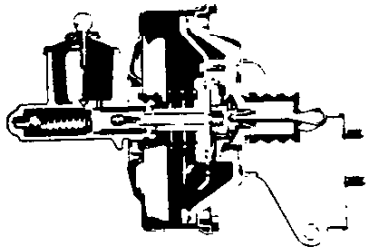
An easily accessible air cleaner is located on the cab floor behind the driver's seat. The air cleaner is self-contained in the piston unit.

If the vacuum power brakes fail, regular braking pressure is available after a few strokes of the brake pedal.

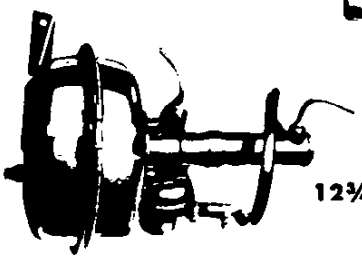
Series Usage

Power Unit	Standard Equipment	Optional Equipment
7" Single Diaphragm	None	P20–30
8.3" Piston	None	C10–30
11" Single Diaphragm	60*	50
12¾" Single Diaphragm	S69	60*
12¾" Double Diaphragm	MVX60, 80	—

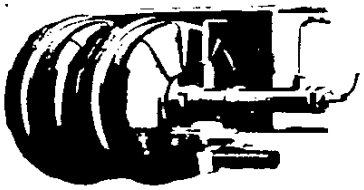
* Except MVX60 and S69 models



8.3" Unit



11" Unit and 12¾" (Single Diaphragm)



12¾" Unit (double Diaphragm)

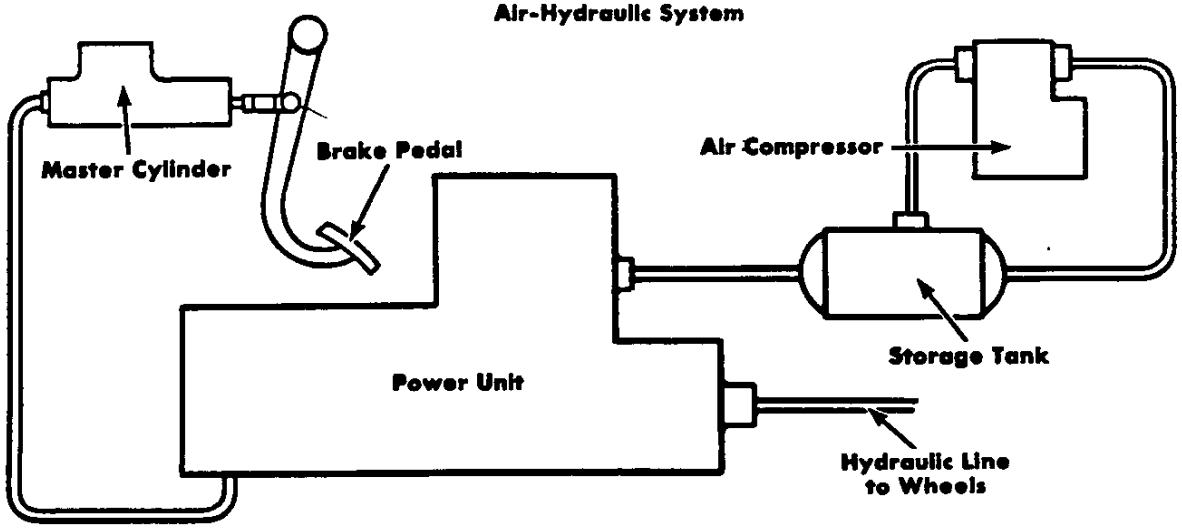
AIR-HYDRAULIC BRAKE SYSTEM

Air-hydraulic brakes are standard equipment on ANQ60, ANQV80 models with the number 23 instead of 03 in the model number and available as an option, at extra cost, on CDLM60 and CLM80 models. The system includes an engine-lubricated air compressor driven by the fan pulley, an air pressure storage tank and a power unit. The air compressor is a Bendix-Westinghouse Model TU-FLO 400 that has a capacity of 7¼ cu ft per minute @ 1250 rpm. The compressor is air cooled on Series CLM60 and CLM80 models and water cooled on ADNQ60 and ANQV80 models. A pressure of 105 to 125 pounds per square inch is maintained in the storage tank.

When the brake pedal is depressed, under the air-hydraulic system, compressed air actuates the cylinder in the power unit which multiplies the hydraulic pressure to the wheel cylinders.

An air pressure gauge is located on the instrument panel and a low pressure warning buzzer is incorporated into the system.

Schematic Diagram of Air-Hydraulic System



FULL-AIR BRAKES

FULL-AIR BRAKE SYSTEM

Full-air brakes are standard on Series E-U-V-W80 and available as a regular production option on Series AC*LNQTY60, D6103, D6203, D6303, S67, S69 and ACLMNQT models. Air-actuated Rockwell-Standard 15 x 7-inch Stopmaster brakes are included with the optional 23,000-lb rear axle on Series C-E-L-T-U80.

The air compressor is a Bendix-Westinghouse Model TU-FLO-400 with a capacity of 7¼ cubic feet per minute, which supplies pressure of 105 to 125 lb per square inch. Compressor is water cooled on diesel models; air cooled on other models. An optional TU-FLO-500 compressor, with a capacity of 12 cubic feet per minute, is available for all diesel and Series 80 models. Two tanks—the wet tank and the dry tank, each having a capacity of 1188 cubic inches—serve as compressed air reservoirs and provide a place where oil and water vapors can condense—ensuring a dry air supply. Series MVW trucks have an additional dry tank of 830-cu-in capacity.

Brakes are controlled by a low short-stroke pedal which connects to a brake valve. Air is metered by the valve to the wheel brake chambers in proportion to the pedal travel, and holds any selected amount of line pressure to maintain precise braking control.

*Chassis-cab models only.

Quick release valves at both front and rear air lines facilitate the quick discharge of air pressure so that brake shoes return immediately when the brake pedal is released.

When transmitted to a brake chamber, the air pressure acts on a diaphragm. Movement of the diaphragm is transmitted through a lever arm (slack adjuster) to a cam which forces the brake shoes against the drum. Braking distribution is governed by using diaphragms, slack adjusters and brake drums of different sizes front and rear. Front diaphragm areas are 12 square inches and are linked to 4½-inch slack adjusters; rear diaphragms are 30 square inches and are linked to 6-inch slack adjusters.

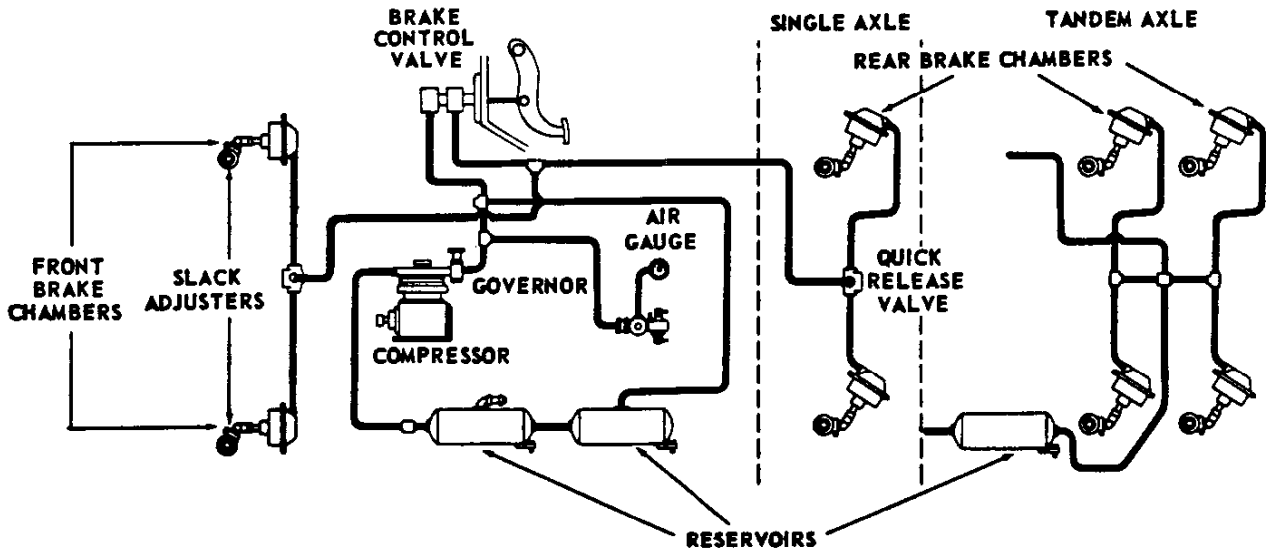
Safety features of the full-air system include a relief valve on the wet tank to release pressures over 150 psi; a check valve ahead of the wet tank to retain air pressure in the event of compressor failure; a warning buzzer that sounds when air pressure falls below a safe level.

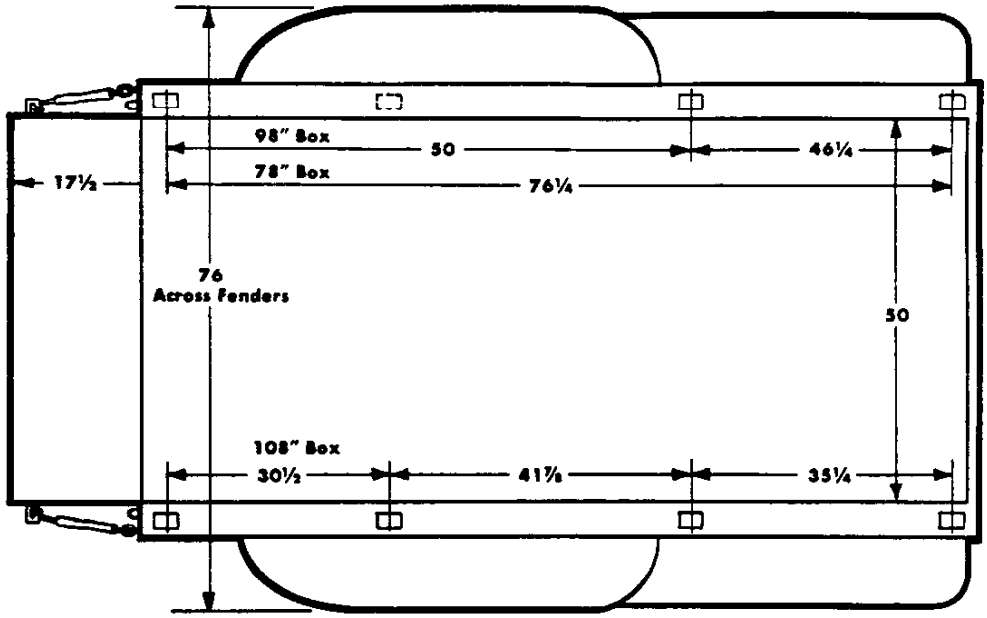
Trailer air-brake equipment is available as optional equipment with all air-brake tractor models. The equipment, which includes hand controls, tractor breakaway valve, hoses and brake connections, complies with Interstate Commerce Commission requirements.

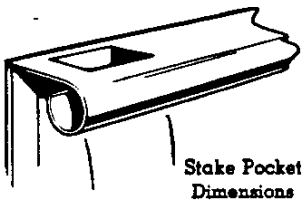
Specifications

Series	Brake Size (inches)		Lining Area (sq in)		Drum Area (sq in)		Braking Effort (%)	
	Front	Rear	Front	Rear	Front	Rear	Front	Rear
60	15 x 3	15 x 6	190	379	283	565	27	73
MVW80:								
With 7000-lb front axle	15 x 3	15 x 6	190	759	283	1129	19	81
With 9000-lb or 11,000-lb front axle	15 x 3½	15 x 6	222	759	330	1129	16	84
80 (Except M80, W80):								
With 7000-lb front axle	15 x 3	15 x 7	190	443	283	659	29	71
With 9000-lb or 11,000-lb front axle	15 x 3½	15 x 7	222	443	330	659	23	77

Schematic Diagram of Full-Air Brake System







Stake Pocket Dimensions
2" x 1⅜"

The smooth interior walls of the Stepside pickups are a full 50 inches apart, allowing 4-ft-width materials to be carried easily. In fact, with the 98" and 108" bodies, 4' x 8' sheets can be carried without lowering the tailgate.

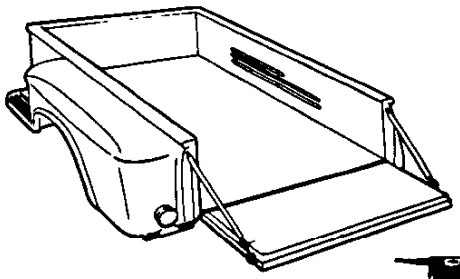
Floors are constructed of well-seasoned wood with flush steel skid strips over the expansion joints. A tight-fitting full-width tailgate minimizes loss of bulk loads such as grain or sand. With the tailgate closed, the wedge-type anti-rattle latches give extra support to the side panels. When open, the tailgate is supported by two strong rubber-covered chains.

On each side of the body, Stepside pickups have a running board just forward of the fender. This step is a great convenience in jobs requiring frequent working of the load from the side.

Reinforced pockets for the addition of stake racks are provided to increase the bulk carrying capacity of the box. On 78" bodies there are 2 pockets on each side; on 98" bodies there are 3 pockets and on 108" bodies there are 4 pockets on each side.

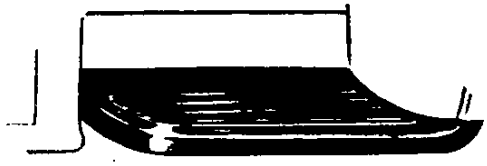
Body Sizes

Model	Body Length	Volume
C1404 K1404	78⅛"	39⅝ cu ft
C1504 C2504 K1504 K2504	98"	49¾ cu ft
C3604	108¼"	55 cu ft



Steel Skid Strips

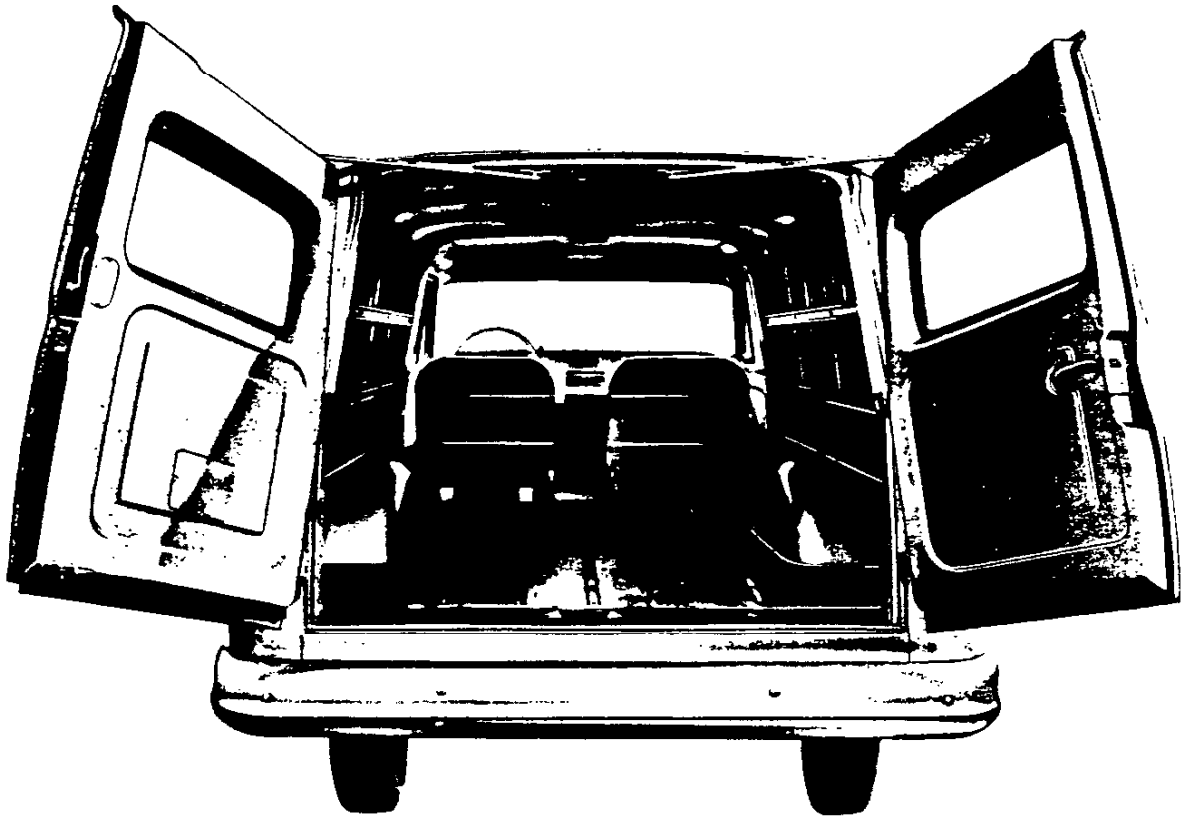
Flush steel skid strips hold floor planks securely, yet allow expansion with changes in temperature and humidity. Recessed bolt heads prevent cargo damage in loading and unloading.



Convenient Side Step

A convenient step on each side of the body facilitates working of cargo from the side.

PANELS



Access to the load compartment is gained either from the front or from the large double rear doors. Door checks hold the rear doors open at either a 90° or 180° angle. Rigid pillar posts help to maintain door alignment, and all-around rubber weather-stripping seals the door opening from rain and dust.

Deep-drawn styling configurations in the roof and the side panels contribute to the rigidity of the body structure. Flanged channel cross bows and deep roof jointer rails give bridge-like strength to the roof. Door pillars, roof rails and supports are welded to the lower panel.

The floor of the body is of select wood construction ¾" thick. Steel skid stripe on the floor simplify sliding cargo in and out, and protect the floor from gouging.

Built-in dual taillights are standard on all panel models. Direction signals are incorporated in the taillight housings.

Custom Comfort Option

The custom comfort option consists of the following equipment:

1. **Left armrest**
2. **Right sunshade**
3. **Right door lock**
4. **Chromed cigar lighter**
5. **Special insulation**

The left armrest is covered with medium fawn on the top half, and is made of white plastic on the bottom. The right sunshade matches the standard medium fawn left sunshade. Both can be pivoted for use at the side windows. The right door lock is key-operated, and uses the same key as the standard left door lock. The chromed cigar lighter is of the pop-out type.

Custom Appearance Option

The custom appearance option consists of the following equipment:

1. **Bright metal (silver anodized aluminum) radiator grille**
2. **Bright metal (chromed stainless steel) windshield molding**
3. **Steering wheel with chromed half-circle horn ring**
4. **Chrome-trimmed instrument panel knobs**
5. **Two-tone interior door panels**
6. **Bright metal (silver anodized aluminum) body side molding (models C1405 and K1405 only)**
7. **Trim plate for dispatch box door.**

The items contained in this option are similar to those described in the custom appearance option for cab models.

Custom Chrome Option

The custom chrome option consists of chrome-plated front and rear bumpers and chrome-plated hub caps. K10 models do not include hub caps.

Driver Compartment

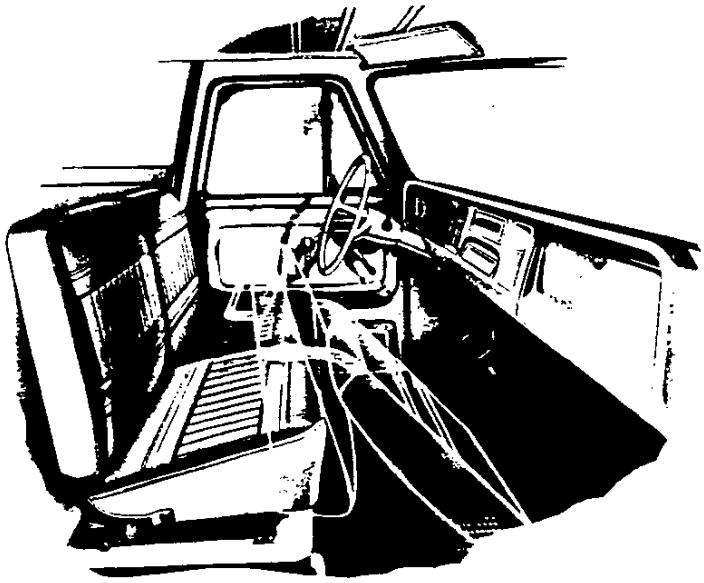
A seat for the driver only is standard on panel models. This seat has a deep cushion and a comfortable form-fitting backrest. The backrest is steel-sheathed at the rear for driver protection from shifting cargo. Medium and light fawn vinyls are used as upholstery materials.

Interiors are finished in beige and white. Non-glare paint is used on the crown of the instrument panel.

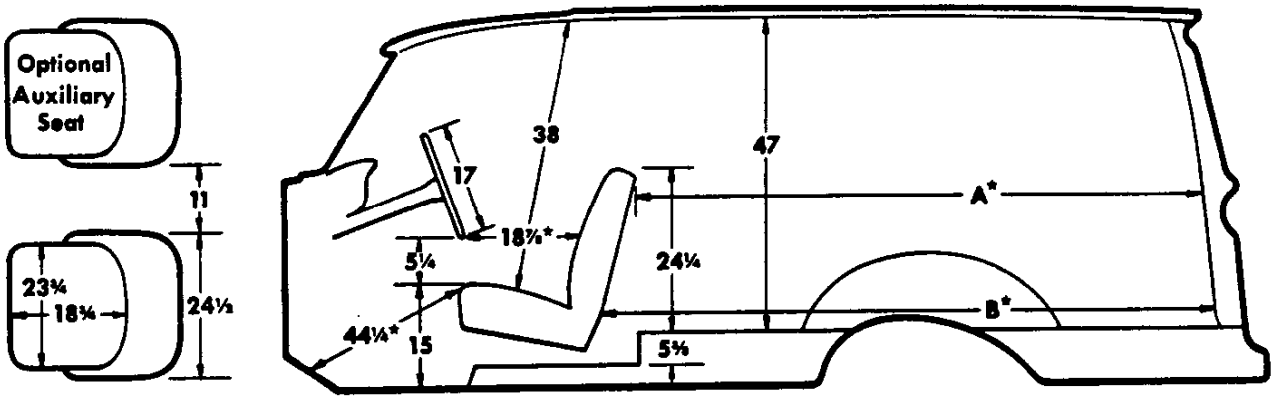
Except for the seat, standard equipment is the same as that in cab models.

Auxiliary Seat

An auxiliary seat, which can be folded forward and out of the way, is available as a regular production option. Construction and upholstery materials are like those of the standard driver's seat.



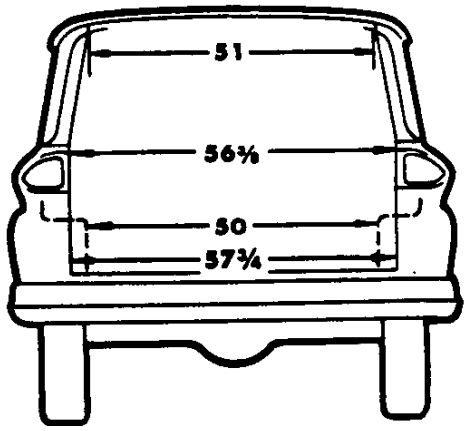
Dimensions



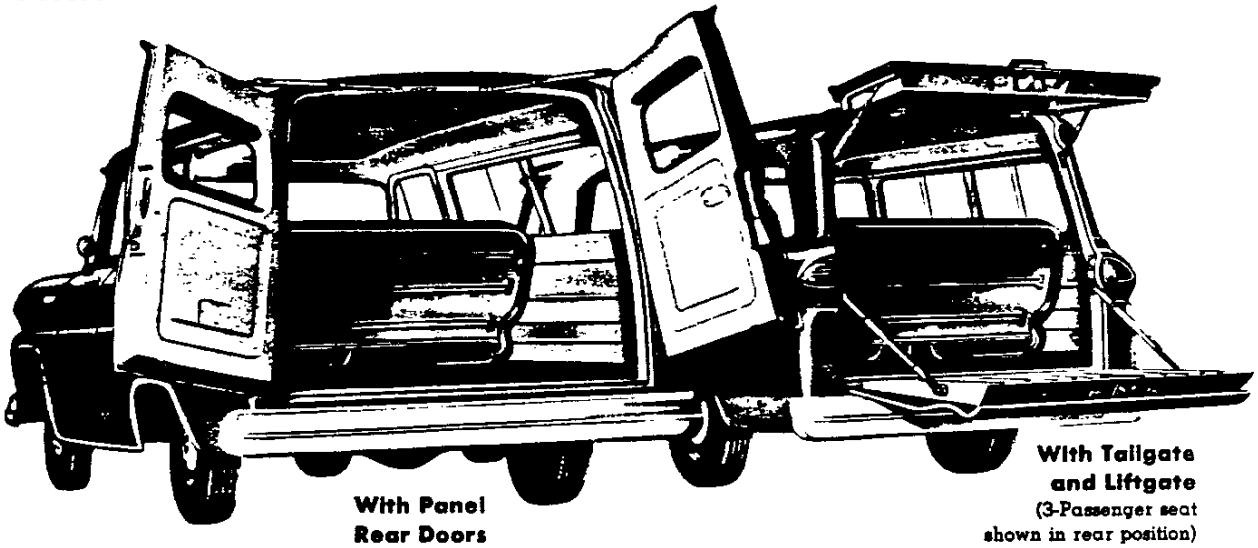
*Seat in forward position—seat adjustment 3¾"

Body Sizes

Model	Dim A	Dim B	Volume
C1405 K1405	88⅜"	99⅝"	175¼ cu ft
C3605	122"	134¼"	230¾ cu ft



CARRYALLS



With Panel Rear Doors

With Tailgate and Liftgate
(3-Passenger seat shown in rear position)

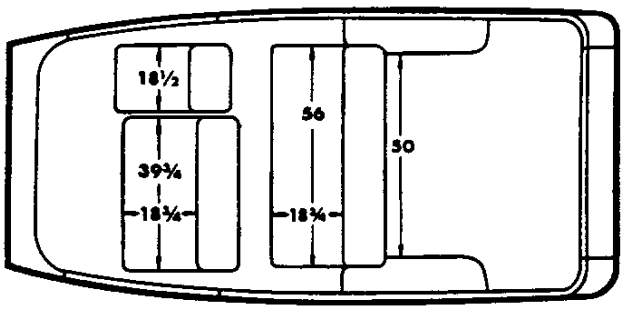
Standard Carryalls have two seats—the front split seat and a second full-width seat. Rearmost side windows are fixed, but other side windows are moveable. An additional 2-passenger seat is available as an option at extra cost. With this option the rearmost side windows are moveable, the forward half of the glass sliding to the rear.

Models C1416 and K1416 are fitted with a tailgate and liftgate. The liftgate laps over the tailgate, allowing the liftgate to be raised independently. A handle with push-button latch control is located on the liftgate. Telescoping struts support the liftgate when open. The liftgate is fitted with a full-width rear window.

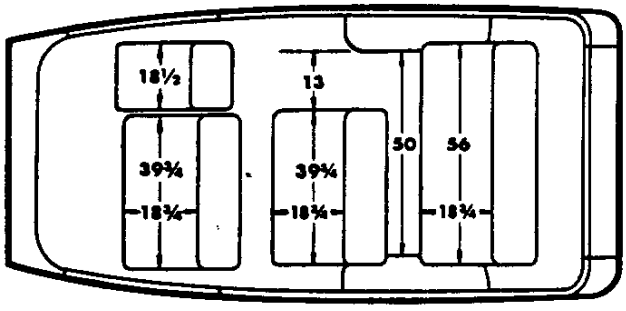
Models C1406 and K1406 are fitted with panel rear doors. A horizontal handle with push-button latch control is located on the right-hand door. Doors are held open by door checks in the telescoping struts attached to the tops of the doors. Door checks maintain either a 90° or a 180° open position of the doors.

Side windows are pre-assembled to ensure best sealing after installation. Windows are opened by sliding the forward half of the glass toward the rear. Pull handles have a built-in latch mechanism.

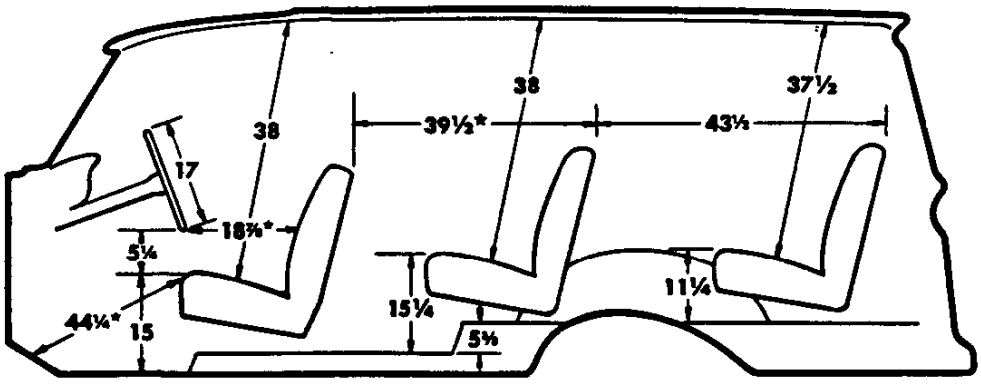
DIMENSIONS



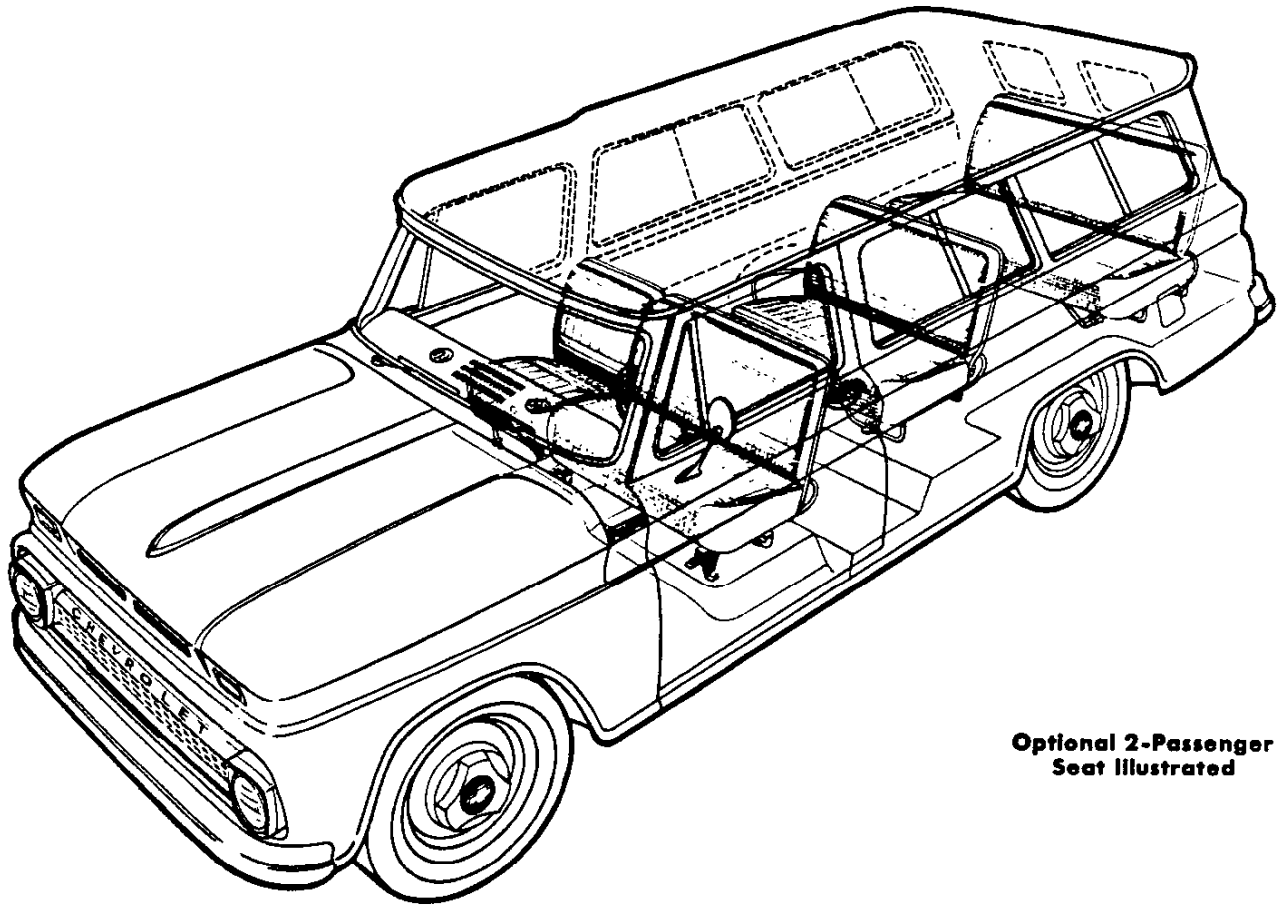
Standard Seating



Seating with Optional 2-Passenger Seat



***Seat in forward position—seat adjustment 3¼"**



Optional 2-Passenger Seat Illustrated

Interior

Standard Carryalls have seating for 6 persons—a driver and 5 passengers. With the optional 2-passenger seat, there is seating for 8 persons. Seats are upholstered in fawn vinyls, and have the same basic construction as the seats in cab models. The front seat is split so that the right one-third can be folded forward, thus allowing access to the roomy rear area. When extra load space is desired, both rear compartment seats can easily be removed by unfastening a few wing nuts. With these seats removed, a very large area is available for cargo.

Interiors are tastefully finished in medium fawn and white. The front floor area is covered with a durable black rubber mat, while the floor behind the front seat is covered with charcoal linoleum.

Custom Comfort Option

The custom comfort option includes:

1. **Left armrest**
2. **Right sunshade**
3. **Right door lock**
4. **Chromed cigar lighter**
5. **Nylon & vinyl upholstery**
6. **Special insulation**

The left armrest is covered with red or medium fawn vinyl on the top half, and is made of white plastic on the bottom. The right sunshade matches the standard left sunshade. Both can be pivoted for use at the side windows. The right door lock is key-operated, and uses the same key as the standard left door lock. The chromed cigar lighter is of the pop-out type. Nylon upholstery is similar to that used in cab models. A cotton pad is used over the molded polyurethane foam and burlap for all seats. The special insulation includes a woven cotton fiber pad on the underside of the cowl.

Custom Appearance Option

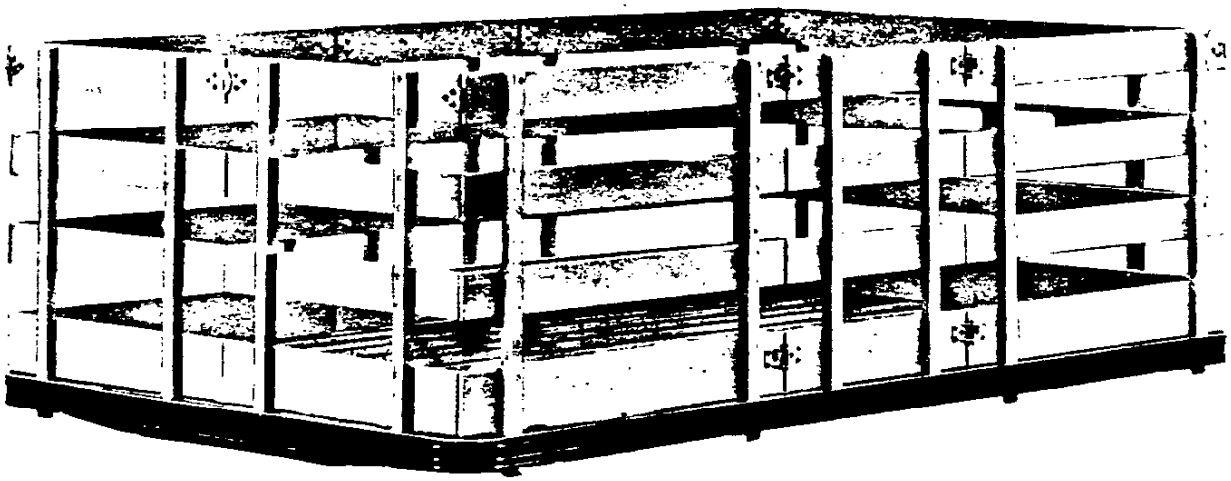
The custom appearance option includes:

1. **Bright metal (silver anodized aluminum) radiator grille**
2. **Bright metal (chromed stainless steel) windshield molding**
3. **Steering wheel with chromed half-circle horn ring**
4. **Chrome-trimmed instrument panel knobs**
5. **Two-tone interior front door and wall panels.**
6. **Bright metal (silver anodized aluminum) body side molding**
7. **Trim plate for dispatch box door**

The items contained in this option are similar to those described for the custom appearance option for cab models. See page 6.

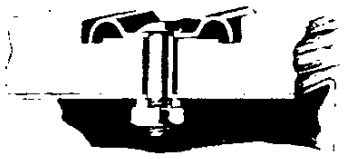
Custom Chrome Option

The custom chrome option consists of chrome-plated front and rear bumpers and chrome-plated hub caps. K10 models do not include hub caps.



Stake Body

Platforms are constructed of select wood planks joined by steel skid strips. A round-cornered steel rubrail forms a protective frame for the floor. Stake sections are made of seasoned hardwood, assembled with bolts and recessed nuts. They fit snugly into steel pockets, and are easily installed or removed. One of the front slats has a rearview opening with a steel protective frame (except on Model C3609) which affords better vision between slats. Twelve-foot stake bodies have swinging gates on both sides for easy side loading.

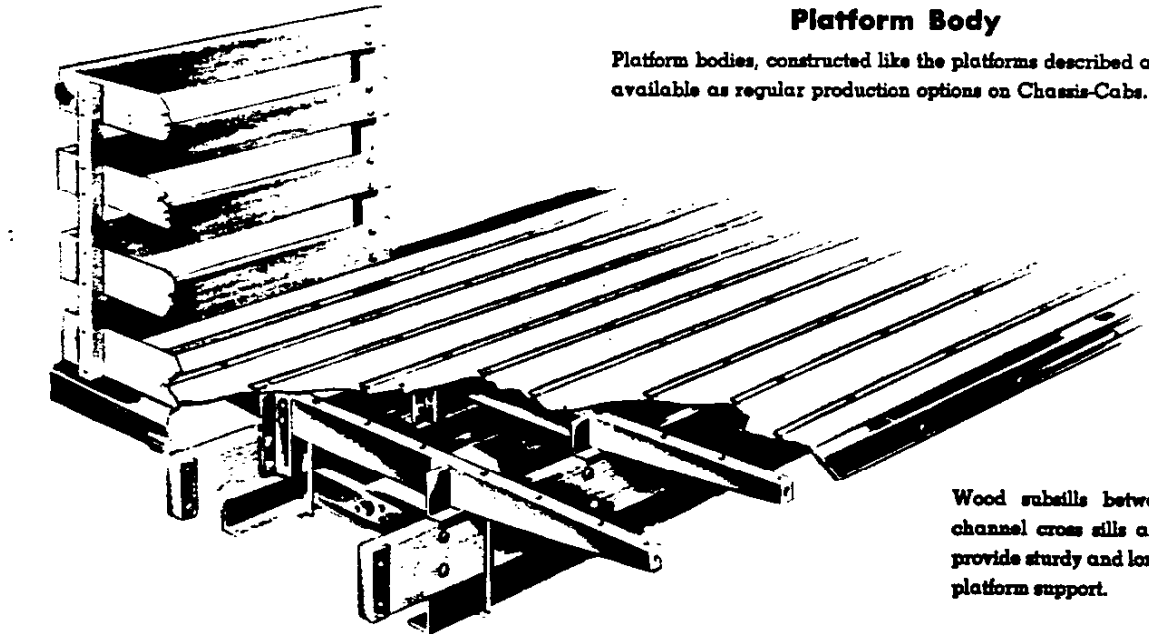


Steel Skid Strips

Flush steel skid strips hold floor planks securely, yet allow for floor expansion. They are bolted to steel cross sills, making a tight joint. Recessed bolt heads protect cargo from damage in loading or unloading.

Platform Body

Platform bodies, constructed like the platforms described above, are available as regular production options on Chassis-Cabs.



Wood subsills between steel channel cross sills and frame provide sturdy and long-lasting platform support.

EXTERIOR COLORS

INDEX

PAINT DESCRIPTION

Chevrolet trucks are finished with high-luster enamel for easy maintenance and high durability. After being thoroughly cleaned, all bodies and sheet metal are given a prime coat followed by two finish coats of baked-on high-luster enamel.

One of the most outstanding characteristics of the Chevrolet enamel is its exceptional color and gloss retention, even after prolonged weathering. Ordinary enamels are soon affected by the weathering action of sunlight, heat, dew, and airborne dust and chemicals. Such action results in chalking and dulling of the finish, and most enamels require frequent polishing to maintain a good appearance. With Chevrolet enamel, however, even after 18 months of normal weathering a simple washing will restore the original brilliance of the finish.

Another outstanding characteristic of Chevrolet enamel is its extremely hard finish which is as much as six times harder than other enamels. This not only provides greater protection from marring and scratching, but also reduces chipping caused by flying stones or gravel.

SPECIAL PAINTS

In addition to the wide selection of standard colors offered on Chevrolet trucks, virtually any special color can be obtained on an order for two or more trucks. For details and prices on special paints, consult the Chevrolet Zone Office.

EXTERIOR COLORS

SOLID COLORS AND TWO-TONE COMBINATIONS

Refinish paints can be obtained from local sources by using the paint numbers shown in the September, 1964, issue of Chevrolet Service News.

Solid Color or Main Two-Toning Color	Secondary Two-Toning Color	Option Numbers (Except Step-Vans)		Step-Van 7 Option Numbers		Step-Van Option Numbers		Step-Van King Option Numbers	
		Solid	Two-Tone	Solid	Two-Tone	Solid	Two-Tone	Solid	Two-Tone
Black	Off-White	500	530	E30BA	E30CA	E31CA	E31DA	E32CA	E32DA
Blue, Dark	Off-White	508	538	E30BE	E30CE	E31CF	E31DF	E32CF	E32DF
Blue, Light	Off-White	507	537	E30BD	E30CD	E31CE	E31DE	E32CE	E32DE
Fawn	Off-White	525	555	E30BS	E30CS	E31CS	E31DS	E32CS	E32DS
Gray	Off-White	522	552	E30BR	E30CR	E31CR	E31DR	E32CR	E32DR
Green, Dark	Off-White	505	535	E30BC	E30CC	E31CD	E31DC	E32CD	E32DC
Green, Light	Off-White	503	533	E30BB	E30CB	E31CB	E31DB	E32CB	E32DB
Maroon●	Off-White	[illegible]	542	E30BT	E30CT	E31CT	E31DT	E32CT	E32DT
Orange	Off-White	516	546	E30BK	E30CK	E31CL	E31DL	E32CL	E32DL
Red	Off-White	514	544	E30BJ	E30CJ	E31CK	E31DK	E32CK	E32DK
Turquoise●	Off-White	510	540	E30BG	E30CG	E31CH	E31DH	E32CH	E32DH
White	—	521	—	E30BL	—	E31CM	—	E32CM	—
Off-White	—	526	—	E30BP	—	E31CQ	—	E32CQ	—
Yellow, Dark (School Bus)	Off-White	519	549	E30BH	E30CH	E31CJ	E31DJ	E32CJ	E32DJ
Yellow, Light	Off-White	518	548	E30BU	E30CU	E31CU	E31DU	E32CU	E32DU

● Metallic-type paint.

TRIM COLORS

All Series—White vehicles have White bumpers, grille and hub caps. With all other exterior colors, the bumpers, grille and hub caps are painted Off-White except the grille on the G10 which is painted the body color. Mirror brackets are body color; mirror backs are black.

All Pickups—Tailgate lettering is Off-White with all colors except White and Off-White, in which cases black lettering is used.

WHEEL COLORS

Series 10-30—With all solid colors and the Black/Off-White 2-tone combination, wheels are painted black. With all other 2-tone combinations, wheels are painted the main body color.

Series 50-90—Wheels are painted black with all exterior colors.

INDEX

ENGINE FEATURES, POWER CURVES AND SPECIFICATIONS:

ENGINE APPLICATION BY TRUCK SERIES

Engine	Series	
	Standard	Optional
➔ **153 Four**	P10	—
➔ **194 Six**	G10, 133-13580	—
230 Six	CKP10-30, CLPST50	P10, G10, 133-13580
292 Six	CLMT60, S62-64-67	C10-30, K10-20, P20-30, CLPST50
283 Turbo-Fire V8	134-13680	—
➔ **283 220-hp Turbo-Fire V8**	—	134-13680
283 V8	—	CK10-30, CLT50
327 250-hp Turbo-Fire V8	—	134-13680
327 300-hp Turbo-Fire V8	—	134-13680
327 350-hp Turbo-Fire V8	—	134-13680
327 V8	S69	CLMT60, S62-64-67
327 V8	—	C20-30
348 V8	CLMT80	CLMST60
409 V8	—	CLMT80
3-53N GM Diesel	D50	—
4-53N GM Diesel	DXY60	—
6V-53N GM Diesel	EUW80	—
D351 Diesel	NQ50	—
D478 Diesel	ANQV60	—
DH478 Diesel	ANQV80	ANQV60

➔ Indicates revised specifications.

53 FOUR

HIGH TORQUE 153 FOUR PERFORMANCE

Basic Specifications

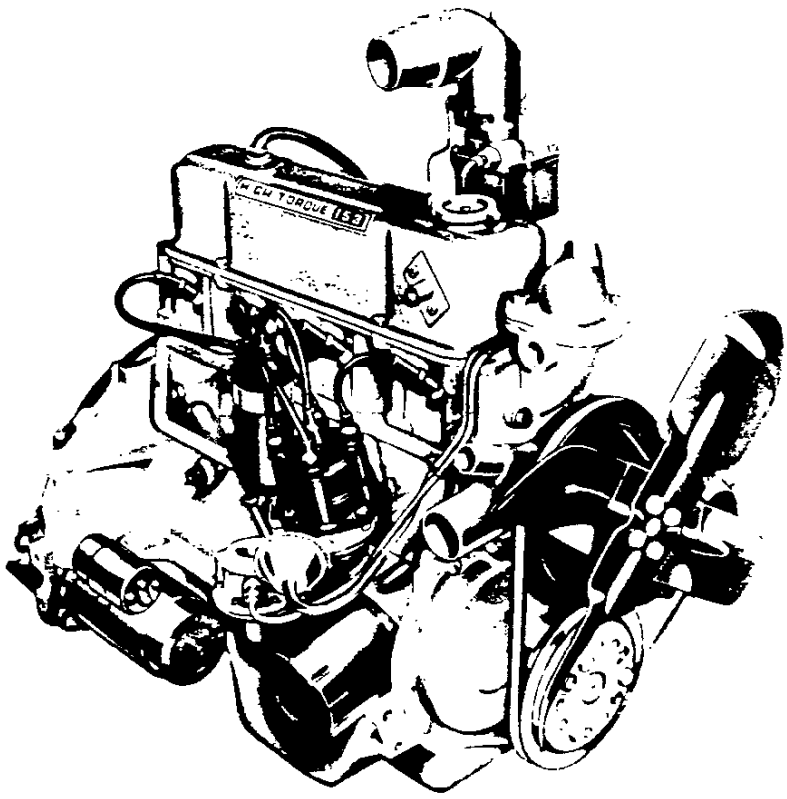
Engine type	Valve-in-head
Piston displacement	153 cu in
Bore & stroke (nominal)	3⅞" x 3¼"
Dry weight (with clutch)	359 lb
Compression ratio	8.50 to 1
Taxable horsepower (SAE)	24.0
Idling speed—Synchromesh trans	475 rpm
Carburetor type	Downdraft

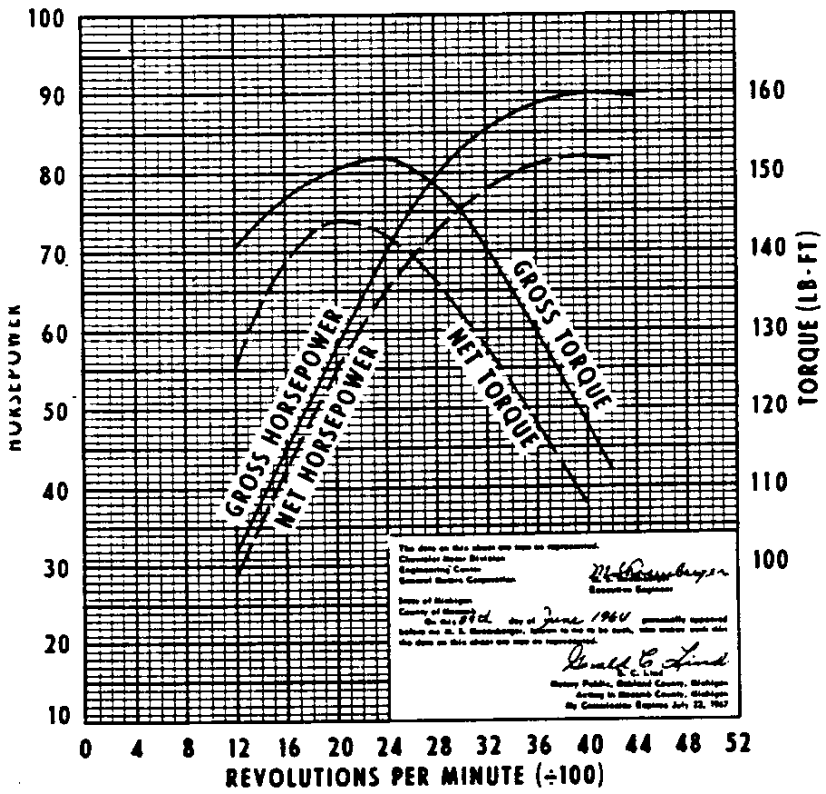
Test Procedures

These curves represent full-throttle performance as obtained from dynamometer test data corrected to barometric pressure of 29.92" mercury and 60° F dry air.

Gross horsepower and torque were obtained in a regular dynamometer test with the dynamometer exhaust system, no fan, generator not charging, and optimum spark advance.

Net horsepower and torque were obtained from a dynamometer test simulating actual operating conditions when the engine is in the vehicle.





Gross horsepower	90 @ 4000 rpm
Net horsepower	82 @ 4000 rpm
Gross torque, lb-ft	152 @ 2400 rpm
Net torque, lb-ft	144 @ 2000 rpm

194 SIX PERFORMANCE

Basic Specifications

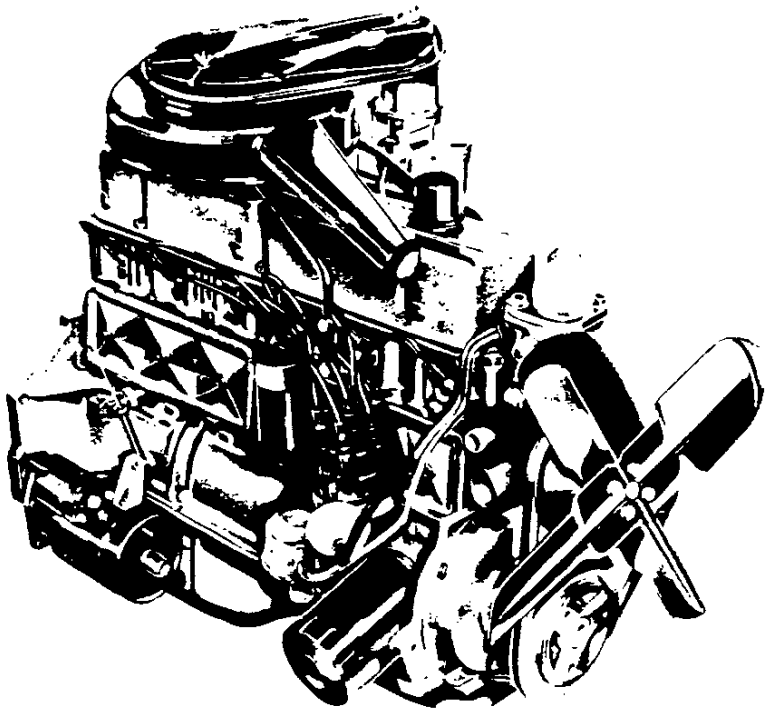
Engine type	Valve-in-head
Piston displacement	194 cu in
Bore & stroke (nominal)	3 9/16" x 3 1/4"
Dry weight (with clutch)	492 lb
Compression ratio	8.5:1
Taxable horsepower (SAE)	30.5
Idling speed	450–500 rpm
Carburetor type	1-barrel

Test Procedures

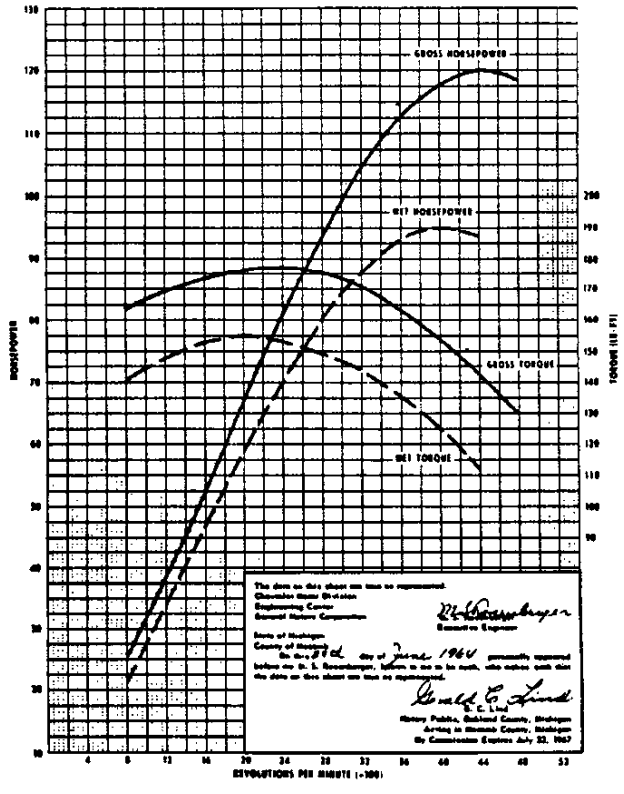
These curves represent full-throttle performance as obtained from dynamometer test data corrected to barometric pressure of 29.92 mercury and 60°F dry air.

Gross horsepower and torque were obtained in a regular dynamometer test with the dynamometer exhaust system, no fan, Delcotron not charging and optimum spark advance.

Net horsepower and torque were obtained from a dynamometer test simulating actual operating conditions when the engine is in the vehicle.



Gross horsepower	120 @ 4400 rpm
Net horsepower	95 @ 4000 rpm
Gross torque, lb-ft	177 @ 2400 rpm
Net torque, lb-ft	155 @ 2000 rpm



230 SIX PERFORMANCE

Basic Specifications

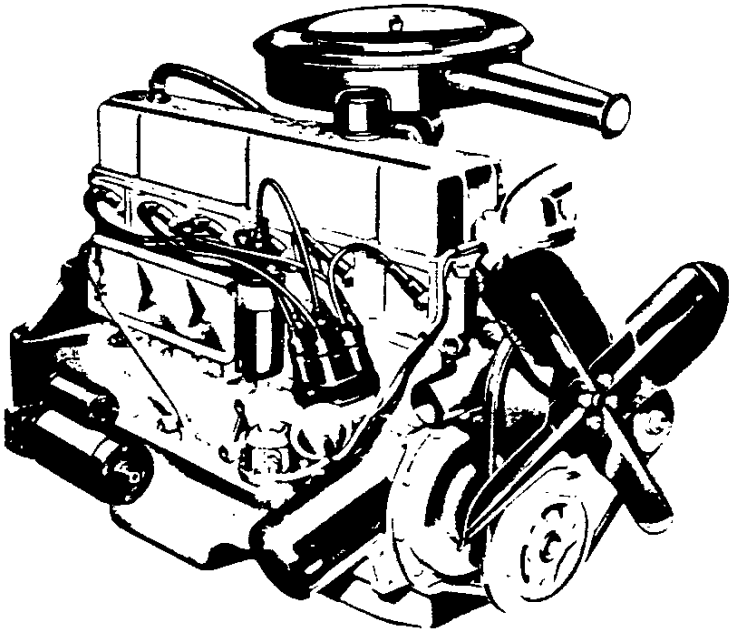
ngine type	Valve-in-head
iston displacement	230 cu in
ore & stroke (nominal)	3⅞" x 3¼"
ry weight (with clutch)	465 lb
ompression ratio	8.50 to 1
axable horsepower (SAE)	36.0
lling speed—Synchromesh trans	475 rpm
—Powerglide in "drive"	450 rpm
arburetor type	Downdraft

Test Procedures

hese curves represent full-throttle performance as btained from dynamometer test data corrected to arometric pressure of 29.92" mercury and 60° F ry air.

Gross horsepower and torque were obtained in a egular dynamometer test with the dynamometer xhaust system, no fan, generator not charging, and ptimum spark advance.

Net horsepower and torque were obtained from a ynamometer test simulating actual operating con- itions when the engine is in the vehicle.



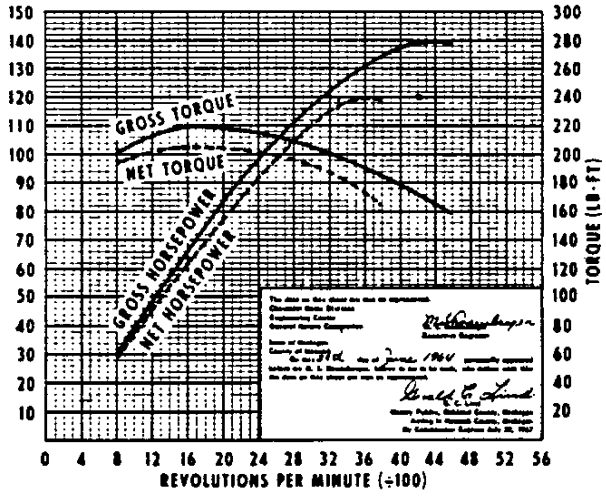
With Standard Carburetor

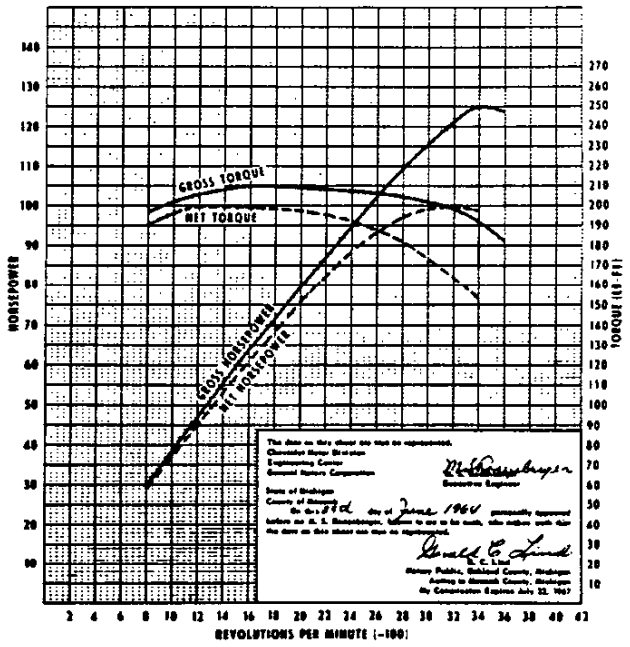
ross horsepower	140 @ 4400 rpm
et horsepower	120 @ 3600 rpm
ross torque, lb-ft	220 @ 1600 rpm
et torque, lb-ft	205 @ 1600 rpm

With Economy Carburetor*

Gross horsepower	125 @ 3400 rpm
Net horsepower	100 @ 3200 rpm
Gross torque, lb-ft	210 @ 1600 rpm
Net torque, lb-ft	200 @ 1200 rpm

*Available on C10 Series only





HIGH TORQUE 230 SIX PERFORMANCE

Basic Specifications

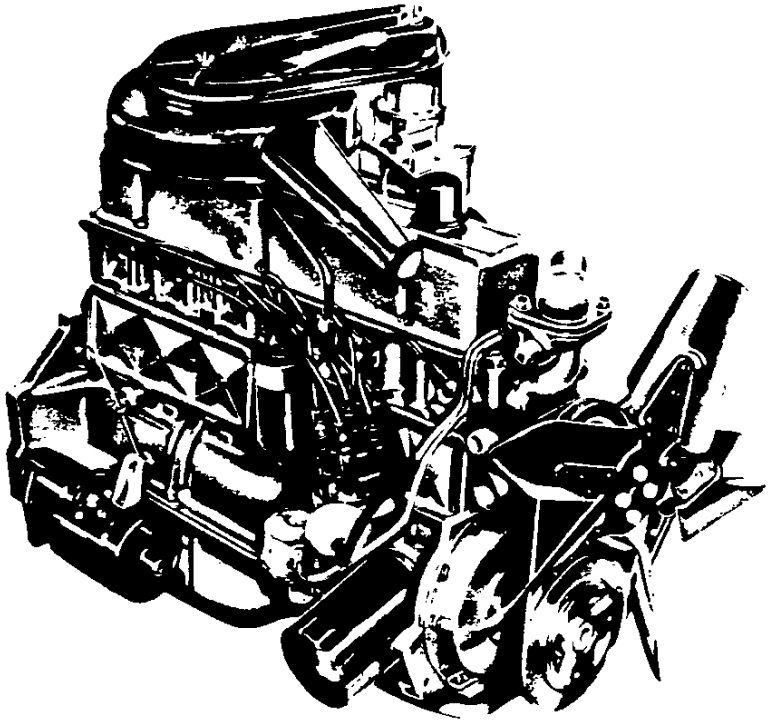
Engine type	Valve-in-head
Piston displacement	230 cu in
Bore & stroke (nominal)	3⅞" x 3¼"
Dry weight (with clutch)	465 lb
Compression ratio	8.5:1
Taxable horsepower (SAE)	36
Idling speed—Synchromesh trans	450–500 rpm
—Automatic trans	450–500 rpm
Carburetor type	1-barrel

Test Procedures

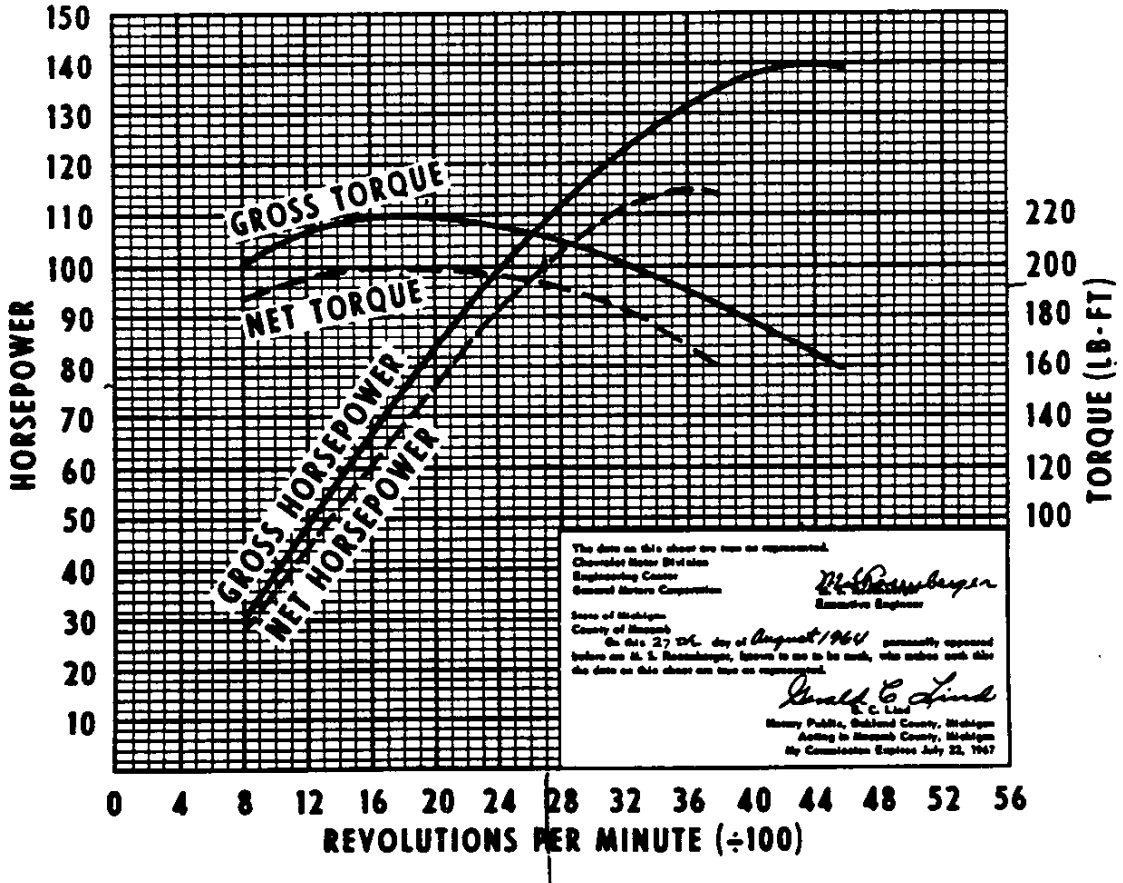
These curves represent full-throttle performance as obtained from dynamometer test data corrected to barometric pressure of 29.92 mercury and 60°F dry air.

Gross horsepower and torque were obtained in a regular dynamometer test with the dynamometer exhaust system, no fan, Delcotron not charging and optimum spark advance.

Net horsepower and torque were obtained from a dynamometer test simulating actual operating conditions when the engine is in the vehicle.



Gross horsepower	140 @ 4400 rpm
Net horsepower	115 @ 3600 rpm
Gross torque, lb-ft	220 @ 1600 rpm
Net torque, lb-ft	200 @ 1600 rpm



HIGH TORQUE 292 SIX PERFORMANCE

Basic Specifications

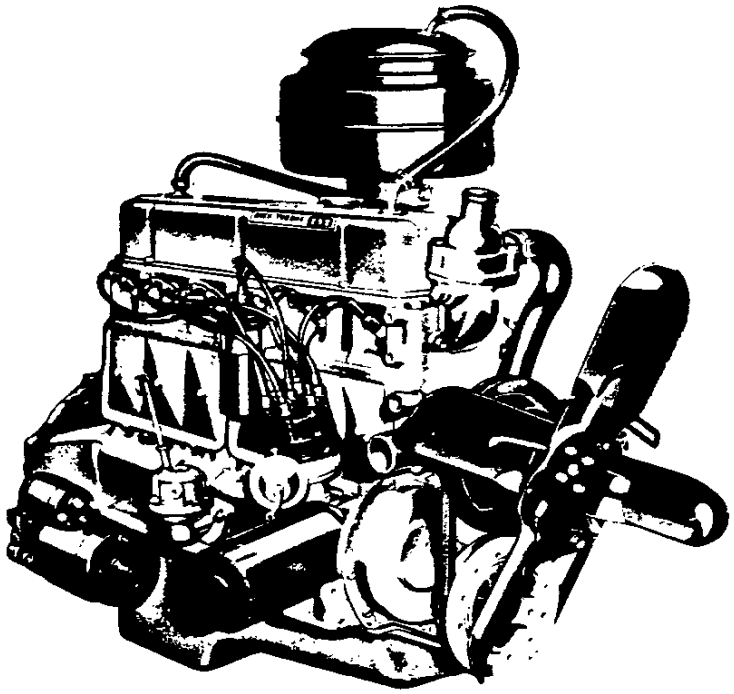
ıgine type	Valve-in-head
ore & stroke (nominal)	3⅞" x 4⅛"
ıston displacement	292 cu in
ry weight (with clutch)	561 lb
ompression ratio	8.0 to 1
axable horsepower (SAE)	36.0
lling speed—Synchromesh trans.	475 rpm
—Powermatic in "drive"	450 rpm
arburetor type	Downdraft

Test Procedures

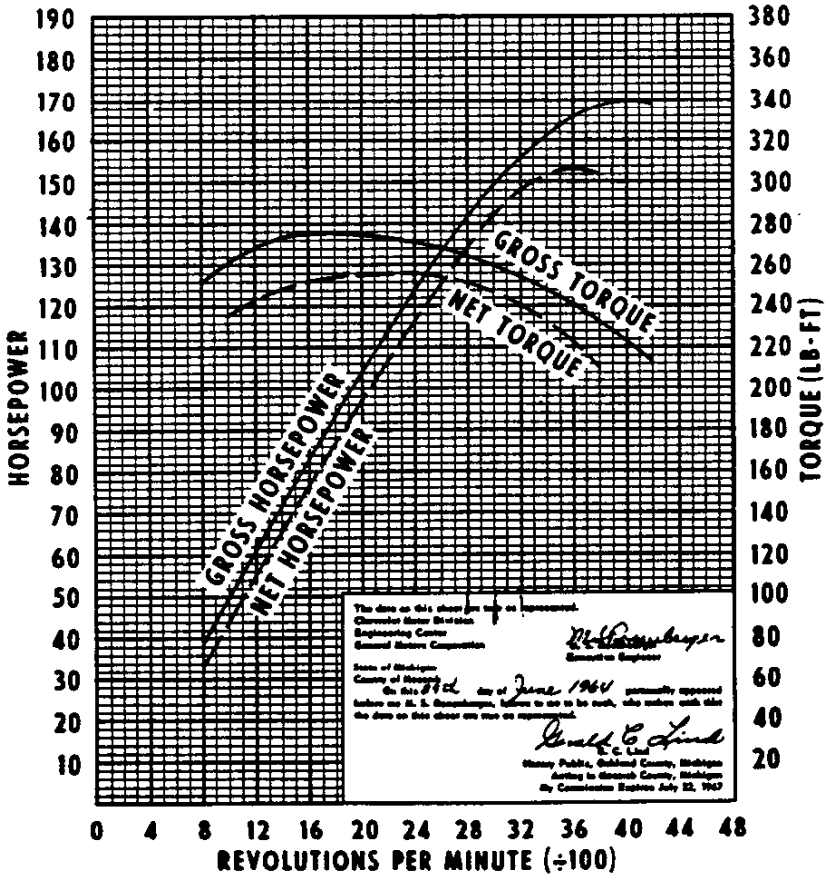
hese curves represent full-throttle performance as btained from dynamometer test data corrected to arometric pressure of 29.92" mercury and 60° F ry air.

Gross horsepower and torque were obtained in a egular dynamometer test with the dynamometer xhaust system, no fan, generator not charging, and ptimum spark advance.

Net horsepower and torque were obtained from a ynamometer test simulating actual operating conitions when the engine is in the vehicle.



Gross horsepower	170 @ 4000 rpm
Net horsepower	153 @ 3600 rpm
Gross torque, lb-ft	275 @ 1600 rpm
Net torque, lb-ft	255 @ 2400 rpm



ENGINE FEATURES

Valve-in-head design—Inlet valves admit fuel mixture directly into cylinders, and exhaust valves allow burned gases to escape with a minimum of work-wasting restriction. Accessibility of valves makes these engines easy to service.

Independently mounted valve rockers—Each valve rocker is mounted on an individual ball pivot. Oil is fed through the hollow pushrods into the depressed tops of the valve rockers, thus assuring thorough pivot lubrication. Spill-over oil lubricates the valve stems.

Rotocoils for 292 engine—The 292 engine is fitted with Rotocoil exhaust valve rotators. This reduces build-up of deposits on the valve faces and stems, and increases valve life by as much as 300 per cent.

Regular grade fuel—No need for premium fuels with these high-efficiency engines—regular grade fuels will do the job. The high anti-knock characteristics of the combustion chamber assure full power with economical fuels.

Precision bearings—Connecting rod and main bearings are of the replaceable insert type. The inserts, made of specially selected bearing metals on tough steel shells, are precision fitted to main and connecting rod journals of the crankshaft.

Full crankshaft support—Bearings are used between every cylinder—a total of 5 main bearings in the 153 engine and 7 bearings in the 194, 230 and 292 engine. Full crankshaft support reduces vibration and gives added durability.

Precision-cast cylinder block—Precision casting techniques allow more efficient use of metal. Dead weight is kept to a minimum without sacrifice of strength in areas of high stress.

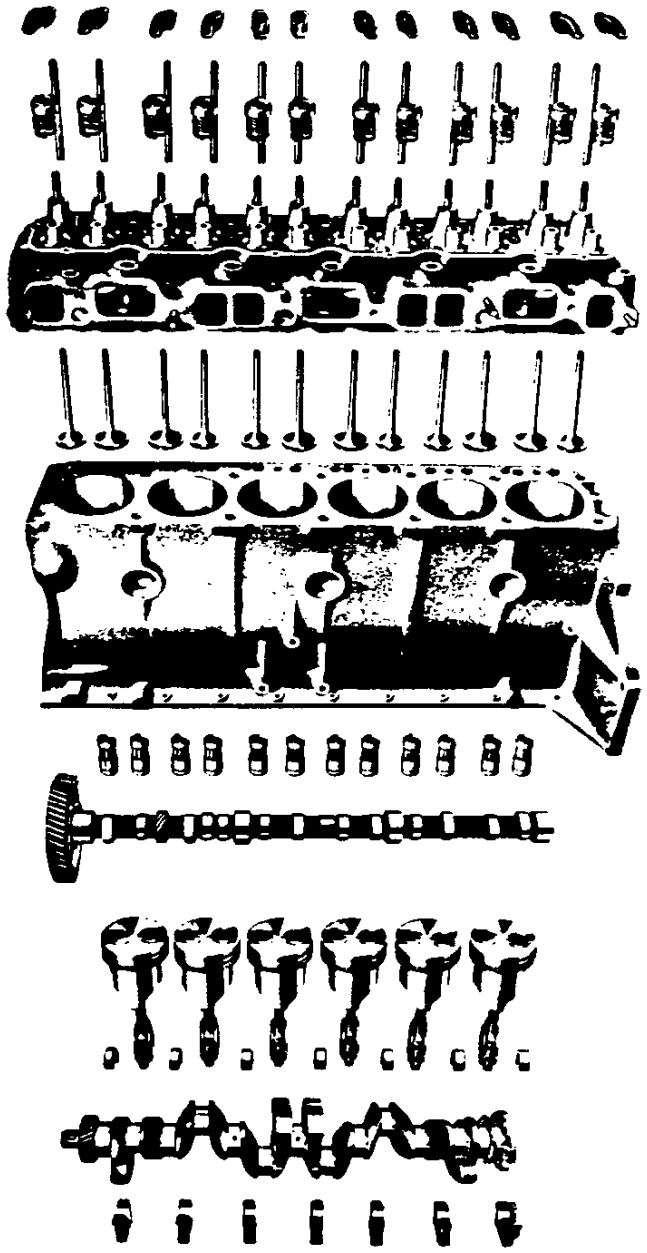
Pressurized cooling—Radiator cap keeps coolant under pressure. This permits coolant to operate at higher temperatures without boiling, thus giving greater cooling effectiveness and extra insurance against engine overheating.

Full-length water jackets—Coolant circulates the full length of the cylinder walls, keeping engine temperatures more uniform and reducing engine wear.

Oiled-paper and oil-bath air cleaners—Long engine life is assured by the effective action of oil-wetted and oil-bath air cleaners which remove harsh, abrasive dust. One-pint oil-bath air cleaners are standard with P10, 20 and 30 models; oiled-paper element air cleaners are standard with G10, C10, 20 and 30 models; two-pint oil-bath cleaners are standard with Series 50 and 60 models.

Positive ventilation systems—Engines are protected against acid- and sludge-forming vapors by engine ventilation systems which conduct crankcase vapors through the engine so they are expelled by the exhaust system.

Optional maximum economy equipment—For maximum fuel economy, Series C10 trucks with the 230 engine can be fitted with a special economy carburetor and 3.07 ratio rear axle. This equipment is available for use only with the standard 3-speed transmission.



Optional governor—Both the 230 and 292 engines can be fitted with governors on which the maximum engine speed can be adjusted within a certain range. Available ranges are:

Engine	Governor Range
230	1800 rpm to 3100 rpm
	3000 rpm to 4000 rpm
292	2200 rpm to 3100 rpm
	2800 rpm to 3900 rpm

Optional oil filter—Series 60 trucks with the 292 engine can be fitted with a 2-quart full-flow type oil filter. This replaces the 1-quart filter used as standard equipment.

IX-CYLINDER ENGINES

SPECIFICATIONS

	194 Six	Chevy-Van 230 Six
Basic Description	valve-in-head design	
Displacement	194 cu in	230 cu in
Bore & Stroke	3 9/16" x 3 1/4"	3 7/8" x 3 1/4"
Compression Ratio	8.5:1	
Gross Horsepower @ rpm	120 @ 4400	140 @ 4400
Net Horsepower @ rpm	95 @ 4000	115 @ 3600
Gross Torque (lb-ft) @ rpm	177 @ 2400	220 @ 1600
Net Torque (lb-ft) @ rpm	155 @ 2000	200 @ 1600
Air Cleaner	oil-wetted polyurethane element*	oil-wetted paper element
Bearings, Camshaft	steel-backed babbitt	
ID x Length (Projected Area): Bearing 1 (front) Bearing 2 Bearing 3 Bearing 4	 1.871" x 0.86" (1.61 sq in) 1.871" x 0.86" (1.61 sq in) 1.871" x 0.86" (1.61 sq in) 1.871" x 0.86" (1.61 sq in)	
Bearings, Connecting Rod (Crank end)	removable	
Material	steel-backed babbitt	
ID x Length	2.155" x 0.837"	
Bearings, Main	removable	
Material	sintered copper nickel backed babbitt on steel or copper-lead alloy	
End Thrust	taken by bearing 7	
ID x Length (Projected Area): Bearing 1 (front) Bearing 2 Bearing 3 Bearing 4 Bearing 5 Bearing 6 Bearing 7	 2.300" x 0.75" (1.73 sq in) 2.300" x 0.75" (1.73 sq in) 2.300" x 0.75" (1.73 sq in) 2.300" x 0.75" (1.73 sq in) 2.300" x 0.75" (1.73 sq in) 2.300" x 0.75" (1.73 sq in) 2.300" x 0.76" (1.75 sq in)	
Camshaft	cast-alloy iron	
Carburetor		
Type	downdraft	
Make	Rochester ♦	
Venturi ID	1.34"	
SAE Flange Size	1.56"	
Choke Control	automatic●	manual
Coil, Ignition	Delco-Remy	
Connecting Rods	forged steel	
Length (Center to Center)	5.70"	
Crankshaft	cast-nodular iron	
Cylinder Block	cast-alloy iron	
Cylinder Head	cast-alloy iron; valve-in-head design	
Distributor	Delco-Remy	
Filter, Fuel	fine mesh plastic in fuel tank; sintered bronze in carburetor inlet	
Filter, Oil	full-flow throw-away type	
Lubrication	Full-pressure system: direct pressure to main, connecting rod & camshaft bearings; pressure stream to cylinder walls & piston pins; pressure spray to timing gears; metered pressure and gravity flow to valve mechanism. See Owner's Guide for lubricant types.	
Oil Capacity	4 qt	5 qt
Piston Pins	chromium steel	
Diameter	0.927"	

*Paper element on G10 ♦Carter on G10 ●Manual on G10

SPECIFICATIONS

	194 Six	Chevy-Van 230 Six
Piston Rings	two compression, one oil-control ring per piston	
Upper Compression	inside bevel	
Lower Compression	inside bevel	
Oil Control	3-piece: 2 flat spring-steel chrome-faced rails; 1 formed stainless-steel spacer	
Pistons	cast-alloy aluminum; 3 ring grooves above piston pin	
Weight	17.60 oz	20.40 oz
Plugs, Spark	AC; 14-mm size	
Model	46N	
Pump, Fuel	AC	
Pump, Oil	spur-gear type driven by distributor shaft	
Pressure	30-45 psi at 1500 engine rpm	40-60 psi @ 2000 engine rpm
Capacity	17.2 qts per minute at 2000 engine rpm	6 gallons/min @ 2000 engine rpm
Pump, Water	centrifugal type driven by fan belt	
Capacity	58 gpm @ 4400 rpm	60 gpm @ 4400 rpm
Lubrication	permanently lubricated and sealed	
Thermostat	Harrison	
Type	pellet	
Timing, Ignition Crankshaft Position	8° + 1° BTC	4° BTC
Timing Mark	on harmonic balancer	
Firing Order	1-5-3-6-2-4	
Timing, Valve (excluding ramps)		
Inlet Opens	16° BTC	
Inlet Closes	48° ABC	
Exhaust Opens	46° 30′ BBC	
Exhaust Closes	17° 30′ ATC	
Valve Guides	integral	
Valve Lifters	hydraulic	
Valve Mechanism	individual steel stampings on ball pivots; pushrod actuated	
Valves, Exhaust	high-alloy steel	
Face	untreated	
Overall Length	4.93″	
Head Diameter	1.50″	
Face Angle	45°	
Seat Angle	46°	
Lift	.3350″	
Rotators	none	
Valves, Inlet	carbon steel	alloy steel
Face	untreated	
Overall Length	4.902″	
Head Diameter	1.72″	
Face Angle	45°	
Seat Angle	46°	
Lift	.3350″	
Ventilation	positive	

SIX-CYLINDER ENGINES

SPECIFICATIONS

	153 Four	230 Six	292 Six
Basic Description	in-line, valve-in-head design		
Displacement	153 cu in	230 cu in	292 cu in
Bore & Stroke	3⅞" x 3¼"		3⅞" x 4⅛"
Compression Ratio	8.5		8.0
Gross Horsepower @ rpm	90 @ 4000	140 @ 4400	170 @ 4000
Net Horsepower @ rpm	82 @ 4000	120 @ 3600	153 @ 3600
Gross Torque (lb-ft) @ rpm	152 @ 2400	220 @ 1600	275 @ 1600
Net Torque (lb-ft) @ rpm	144 @ 2000	205 @ 1600	255 @ 2400
Air Cleaner	1-pint oil bath	1-pint oil bath (P10, 20 & 30) oil-wetted (C10, 20 & 30) 2-pint oil bath (C, L & S50)	oil-wetted (C10, 20 & 30) 2-pint oil bath (C, L & S50) 2-pint oil bath (C, L, S & T60)
Bearings, Camshaft	steel-backed babbitt		
ID x Length (Projected Area):			
Bearing 1 (front)	1.871" x 0.86" (1.61 sq in)	1.871" x 0.86" (1.61 sq in)	
Bearing 2	1.871" x 0.86" (1.61 sq in)	1.871" x 0.86" (1.61 sq in)	
Bearing 3	1.871" x 0.86" (1.61 sq in)	1.871" x 0.86" (1.61 sq in)	
Bearing 4		1.871" x 0.86" (1.61 sq in)	
Bearings, Connecting Rod (Crank end)	removable		
Material	steel-backed babbitt	premium aluminum	
ID x Length	2.001" x 0.807"	2.314" x 1.01"	
Bearings, Main	removable		
Material	steel-backed babbitt		
End Thrust	taken by bearing 5	taken by bearing 7	
ID x Length (Projected Area):			
Bearing 1 (front)	2.300" x 0.75" (1.73 sq in)	2.300" x 0.75" (1.73 sq in)	
Bearing 2	2.300" x 0.75" (1.73 sq in)	2.300" x 0.75" (1.73 sq in)	
Bearing 3	2.300" x 0.75" (1.73 sq in)	2.300" x 0.75" (1.73 sq in)	
Bearing 4	2.300" x 0.75" (1.73 sq in)	2.300" x 0.75" (1.73 sq in)	
Bearing 5	2.300" x 0.76" (1.75 sq in)	2.300" x 0.75" (1.73 sq in)	
Bearing 6		2.300" x 0.75" (1.73 sq in)	
Bearing 7		2.300" x 0.86" (1.97 sq in)	
Camshaft	cast-alloy iron		
Carburetor Type	downdraft		
Make	Carter	Rochester	
Venturi ID	1.34"	1.34"	1.63"
SAE Flange Size	1.50"		
Choke Control	manual		
Coil, Ignition	Delco-Remy		
Current Draw	4 amp with engine stopped; 1.5 amp with engine idling		
Connecting Rods	forged steel		
Length (Center to Center)	5.70"	6.76"	
Crankshaft	forged steel		
Cylinder Block	cast-alloy iron		
Cylinder Head	cast-alloy iron; valve-in-head design		
Distributor	Delco-Remy with centrifugal & vacuum control		
Fan	See Cooling System Specifications		
Filter, Fuel	wire mesh in fuel tank; sintered bronze in carburetor inlet		
Filter, Oil	full-flow throw-away type		
Lubrication	Full-pressure system: direct pressure to main, connecting rod & camshaft bearings; pressure stream to cylinder walls & piston pins; pressure spray to timing gears; metered pressure and gravity flow to valve mechanism. See Owner's Guide for lubricant types.		
Oil Capacity	4 qt	5 qt	6 qt
Piston Pins	chromium steel		
Diameter	0.927"		
Retention	shrink fit		

SPECIFICATIONS

	153 Four	230 Six	292 Six
Piston Rings	two compression, one oil-control ring per piston		
Upper Compression	inside bevel		
Lower Compression	inside bevel		
Oil Control	3-piece: 2 flat spring-steel chrome-faced rails; 1 formed stainless-steel spacer		
Pistons	cast-alloy aluminum; 3 ring grooves above piston pin		
Weight	20.40 oz		24.90 oz
Plugs, Spark	AC; 14 mm size		
Model	46N	44N	42N
Pump, Fuel	AC; model EM (model EK on chassis-cowls and Series P20-P30)		
Pump, Oil	spur-gear type driven by distributor shaft		
Pressure	40-60 psi at 2000 engine rpm		
Capacity	6 gallons per minute at 2000 engine rpm		
Pump, Water	centrifugal type driven by fan belt		
Capacity	70 gallons per minute at 4400 engine rpm		
Lubrication	permanently lubricated and sealed		
Radiator	See Cooling System Specifications		
Thermostat	Harrison		
Type	pellet		
Timing, Ignition Crankshaft Position	5° BTC	5° BTC	TC
Timing Mark	steel ball on flywheel		
Firing Order	1-3-4-2	1-5-3-6-2-4	1-5-3-6-2-4
Timing, Valve Inlet Opens	17° 30′ BTC	18° BTC	45° BTC
Inlet Closes	54° 30′ ABC	54° ABC	99° ABC
Exhaust Opens	57° BBC	52° BBC	88° BBC
Exhaust Closes	15° ATC	20° ATC	56° ATC
Valve Guides	removable		
Valve Lifters	hydraulic		
Valve Mechanism	individual steel stampings on ball pivots; pushrod actuated		
Valves, Exhaust	high-alloy steel		
Face		untreated	cobalt-based alloy
Overall Length	4.93″		
Head Diameter	1.50″		
Face Angle	45°		46°
Seat Angle	46°		
Lift	.3973	.335	.407
Rotators		none	
Valves, Inlet	alloy steel		high-alloy steel
Face	untreated		aluminized
Overall Length	4.92″		
Head Diameter	1.72″		1.88″
Face Angle	45°		
Seat Angle	46°		
Lift	.397″	.335″	.407″
Ventilation	positive		

HIGH TORQUE 283 V8 PERFORMANCE

Basic Specifications

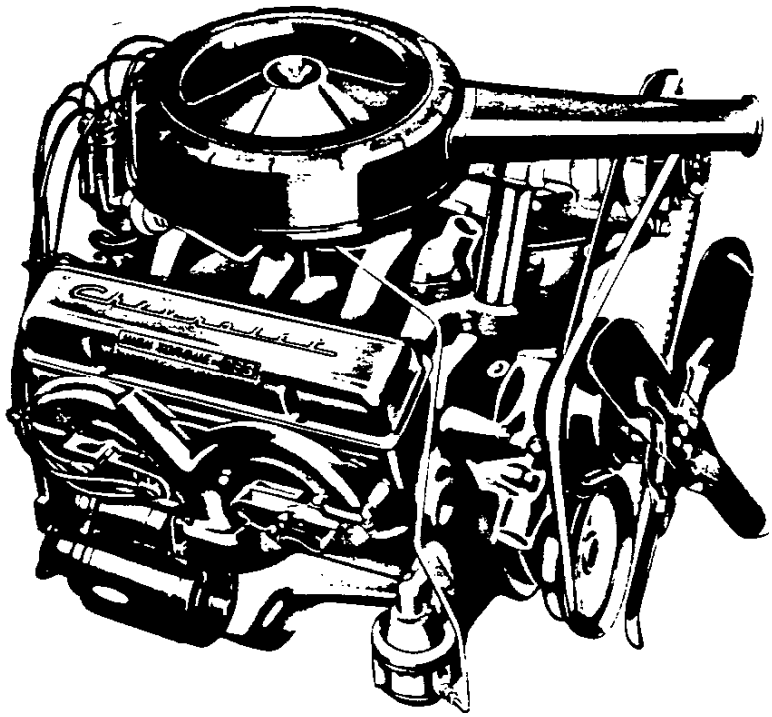
Engine type	Valve-in-head
Piston displacement	283 cu in
Bore & Stroke (nominal)	3⅞" x 3"
Dry Weight (with clutch)	607 lb
Compression ratio:	
Series 10-20-30	9.0 to 1
Series C & L50	8.5 to 1
Taxable horsepower (SAE)	48.0
Idling speed—Synchromesh trans	475 rpm
—Powerglide in "drive"	450 rpm
Carburetor type	2-Barrel

Test Procedures

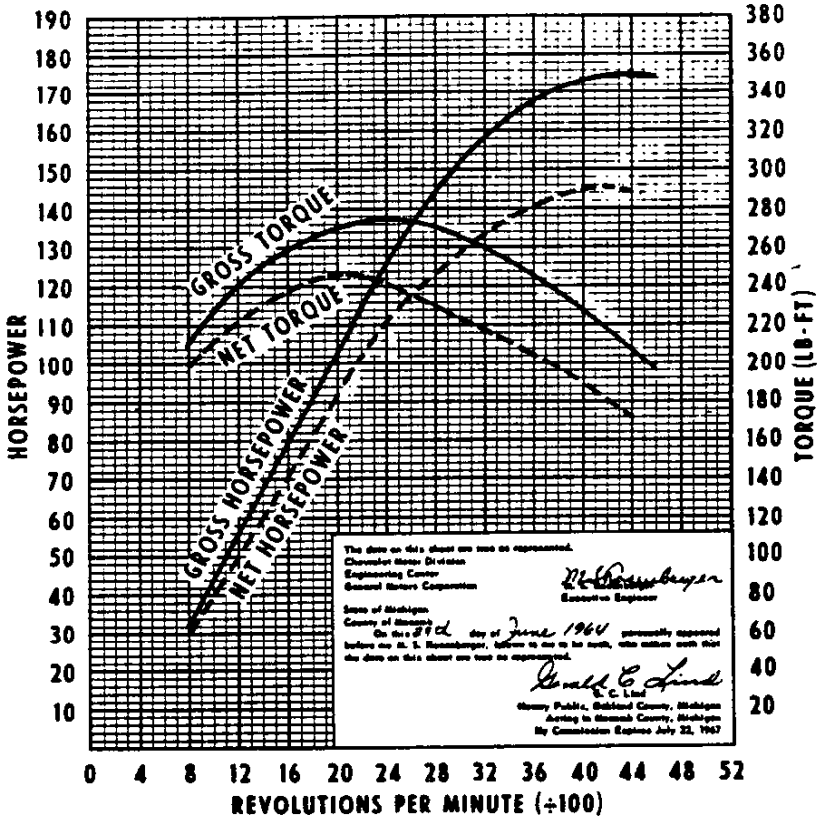
These curves represent full-throttle performance as obtained from dynamometer test data corrected to barometric pressure of 29.92" mercury and 60° F dry air.

Gross horsepower and torque were obtained in a regular dynamometer test with the dynamometer exhaust system, no fan, generator not charging, and optimum spark advance.

Net horsepower and torque were obtained from a dynamometer test simulating actual operating conditions when the engine is in the vehicle.



Gross horsepower	175 @ 4400 rpm
Net horsepower	145 @ 4200 rpm
Gross torque, lb-ft	275 @ 2400 rpm
Net torque, lb-ft	245 @ 2000 rpm



TURBO-FIRE 283 V8 PERFORMANCE

Basic Specifications

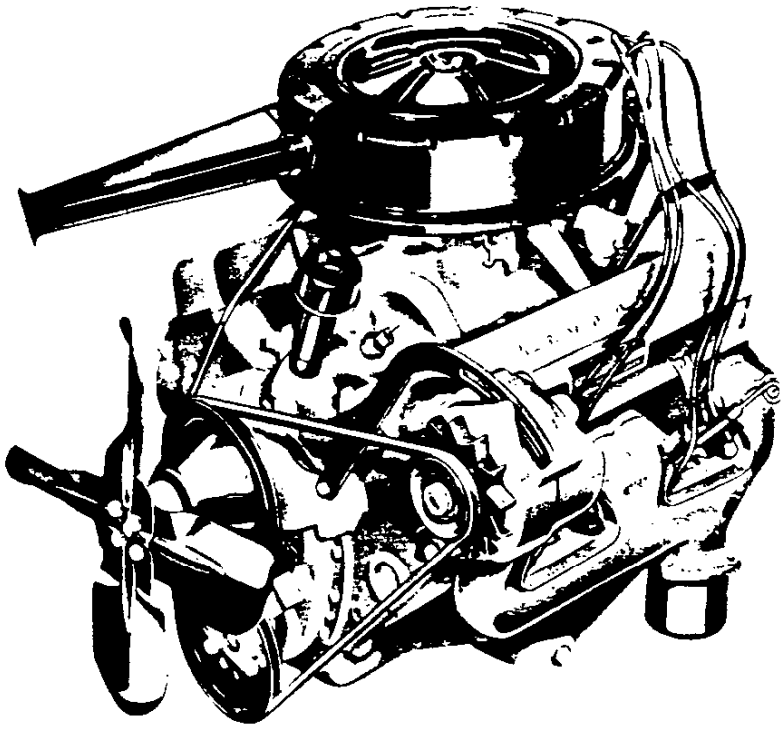
Engine type	Valve-in-head
Piston displacement	283 cu in
Bore & stroke (nominal)	3⅞" x 3"
Dry weight (with clutch)	607 lb
Compression ratio	9.25:1
Taxable horsepower (SAE)	48.0
Idling speed—Synchro trans in neutral	500 rpm
—Powerglide in "drive"	475 rpm
Carburetor type	2-barrel on 195-hp
	4-barrel on 220-hp

Test Procedures

These curves represent full-throttle performance as obtained from dynamometer test data corrected to barometric pressure of 29.92" mercury and 60° F dry air.

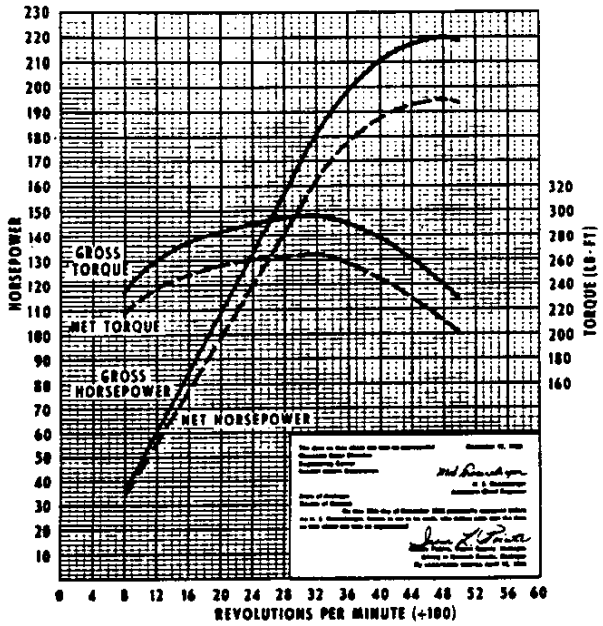
Gross horsepower and torque were obtained in a regular dynamometer test with the dynamometer exhaust system, no fan, generator not charging, and optimum spark advance.

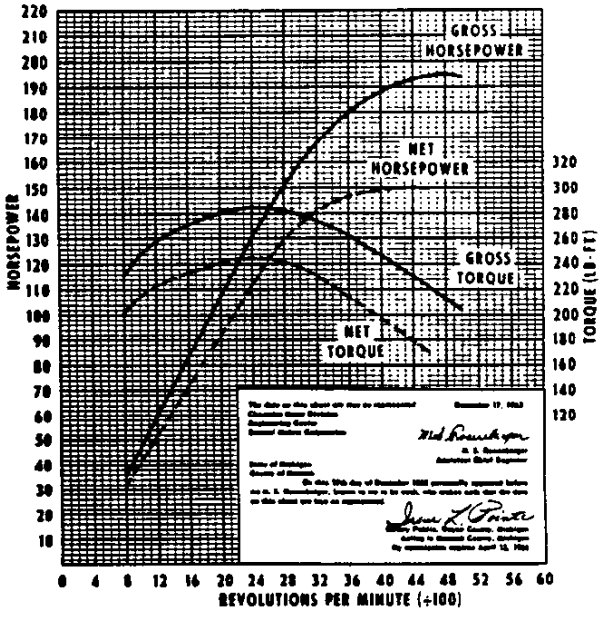
Net horsepower and torque were obtained from a dynamometer test simulating actual operating conditions when the engine is in the vehicle.



Gross horsepower	220 @ 4800 rpm
Net horsepower	195 @ 4800 rpm
Gross torque, lb-ft	295 @ 3200 rpm
Net torque, lb-ft	265 @ 3200 rpm

Gross horsepower	195 @ 4800 rpm
Net horsepower	150 @ 4400 rpm
Gross torque, lb-ft	285 @ 2400 rpm
Net torque, lb-ft	245 @ 2400 rpm





HIGH TORQUE 327 V8 PERFORMANCE

Basic Specifications

	60 Series	C20-30 Series
Engine type	Valve-in-head	
Piston displacement	327 cu in	
Bore & stroke (nominal)	4" x 3¼"	
Dry weight (with clutch)	622 lb	
Compression ratio	8.0 to 1	8.5 to 1
Taxable horsepower (SAE)	51.2	
Idling speed—		
Synchromesh trans	450–500 rpm	
Powermatic in "drive"	450–500 rpm	
Carburetor type	2-barrel	4-barrel

Test Procedures

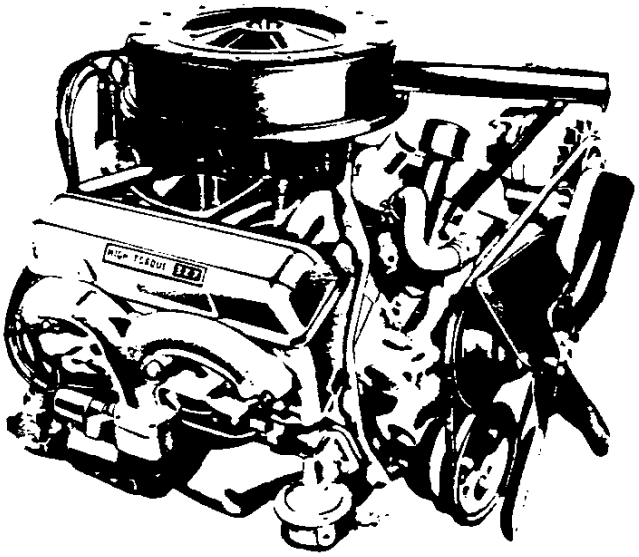
These curves represent full-throttle performance as obtained from dynamometer test data corrected to barometric pressure of 29.92" mercury and 60° F dry air.

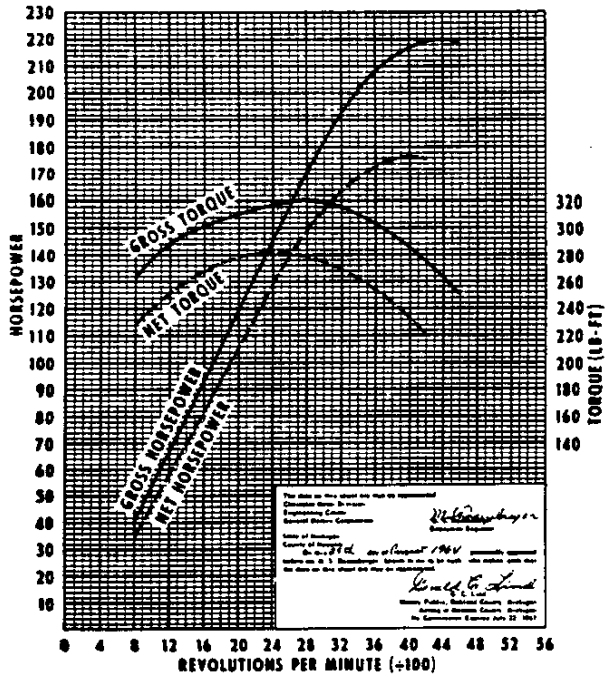
Gross horsepower and torque were obtained in a regular dynamometer test with the dynamometer exhaust system, no fan, generator not charging, and optimum spark advance.

Net horsepower and torque were obtained from a dynamometer test simulating actual operating conditions when the engine is in the vehicle.

C20-30 Series Application

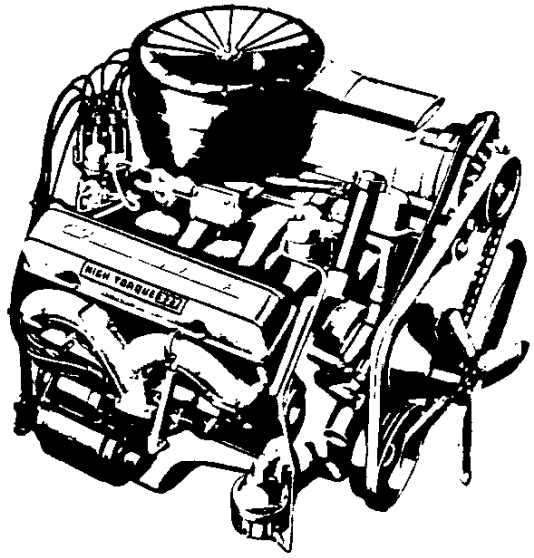
Gross horsepower.....220 @ 4400 rpm
Net horsepower.....177 @ 4000 rpm
Gross torque, lb-ft.....320 @ 2800 rpm
Net torque, lb-ft.....283 @ 2400 rpm

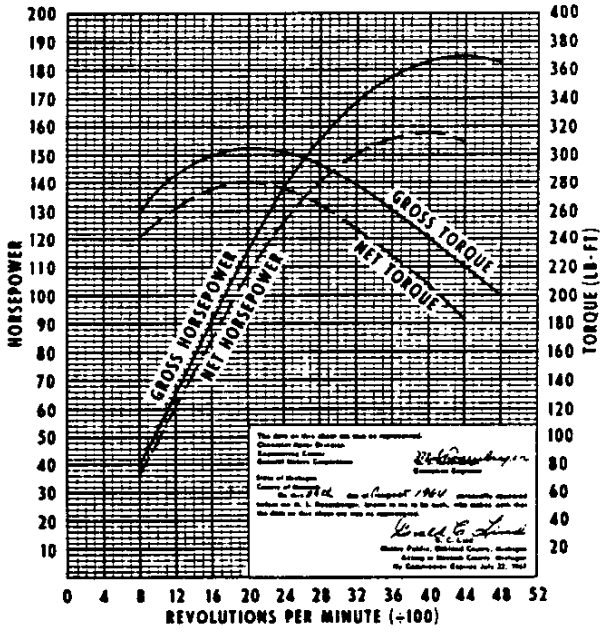




60 Series Application

Gross horsepower.....185 @ 4400 rpm
Net horsepower.....158 @ 4000 rpm
Gross torque, lb-ft.....305 @ 2000 rpm
Net torque, lb-ft.....280 @ 2000 rpm





TURBO-FIRE 327 V8 PERFORMANCE

Basic Specifications

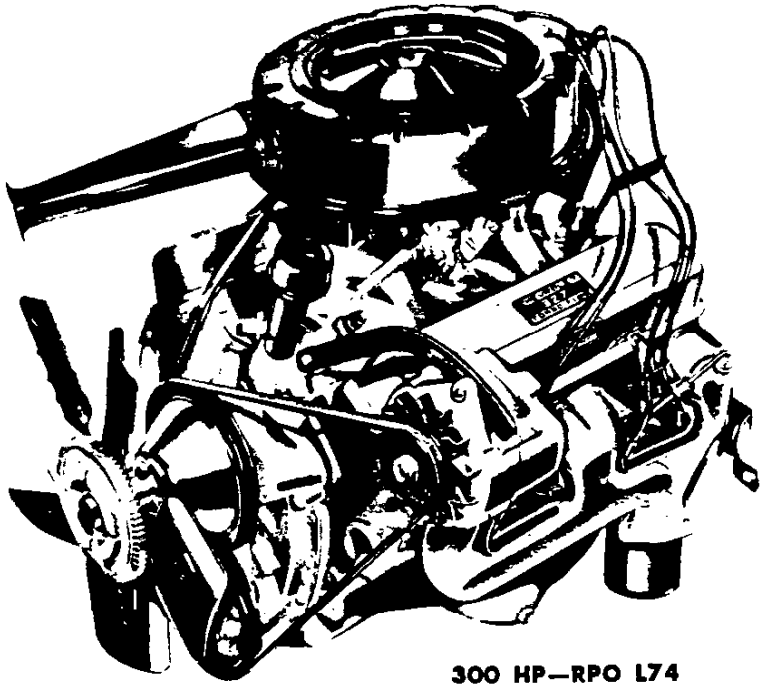
Engine type	Valve-in-head
Piston displacement	327 cu in
Bore & stroke (nominal)	4.0" x 3¼"
Dry weight (with clutch)	622 lb
Compression ratio	10.5:1
Taxable horsepower (SAE)	51.2
Idling speed—Synchromesh trans	500 rpm
—Powerglide in "drive"	475 rpm
Carburetor type	4-barrel

Test Procedures

These curves represent full-throttle performance as obtained from dynamometer test data corrected to barometric pressure of 29.92" mercury and 60°F dry air.

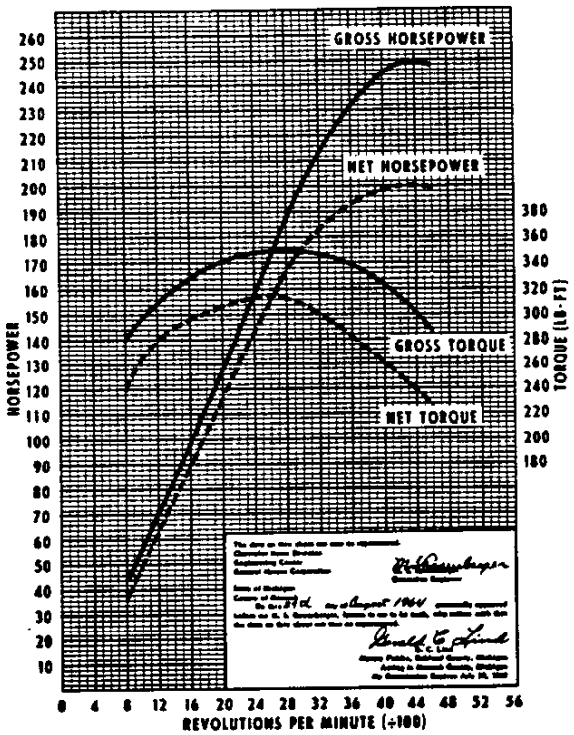
Gross horsepower and torque were obtained in a regular dynamometer test with the dynamometer exhaust system, no fan, generator not charging, and optimum spark advance.

Net horsepower and torque were obtained from a dynamometer test simulating actual operating conditions when the engine is in the vehicle.



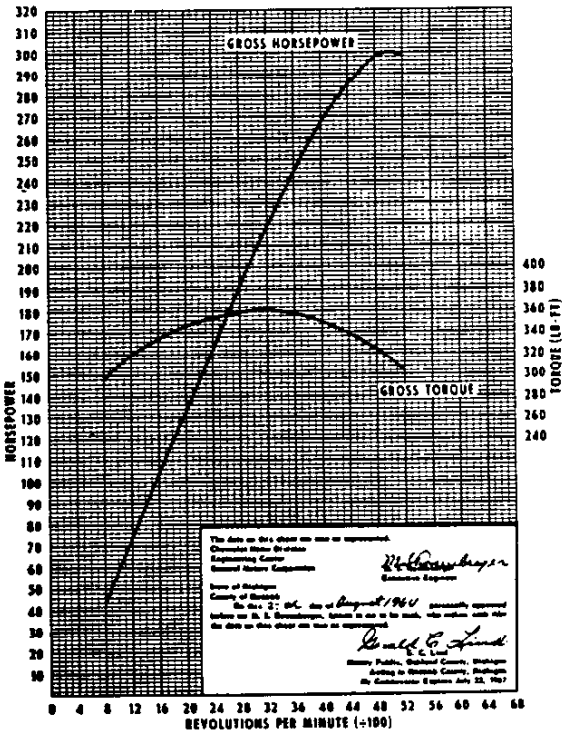
250 HP—RPO L30

Gross horsepower	250 @ 4400 rpm
Net horsepower	200 @ 4400 rpm
Gross torque, lb-ft	350 @ 2800 rpm
Net torque, lb-ft	315 @ 2600 rpm



300 HP—RPO L74

Gross horsepower	300 @ 5000 rpm
Gross torque, lb-ft	360 @ 3200 rpm



TURBO-FIRE 327 V8 PERFORMANCE

Basic Specifications

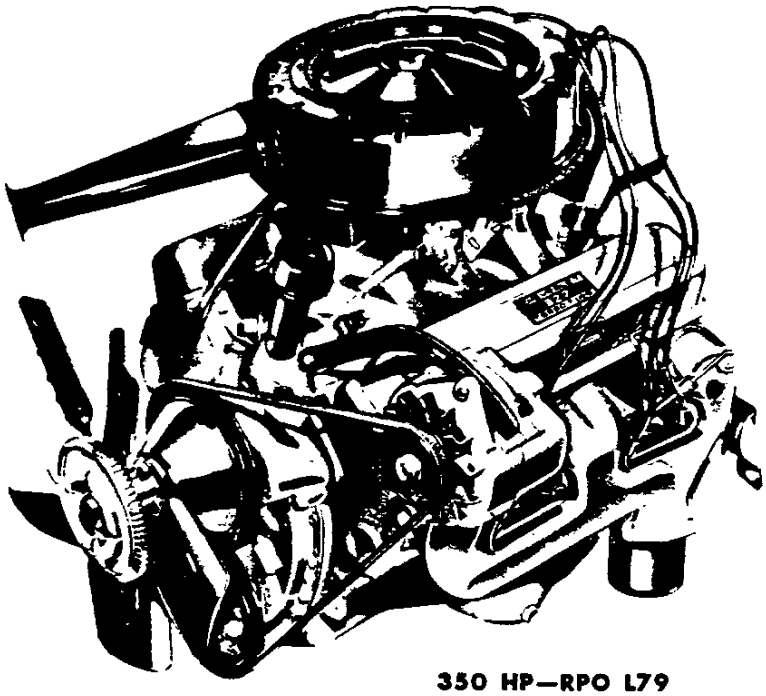
Engine type	Valve-in-head
Piston displacement	327 cu in
Bore & stroke (nominal)	4.0" x 3¼"
Dry weight (with clutch)	622 lb
Compression ratio	11.0:1
Taxable horsepower (SAE)	51.2
Idling speed—Synchromesh trans	500 rpm
—Powerglide in "drive"	475 rpm
Carburetor type	4-barrel

Test Procedures

These curves represent full-throttle performance as obtained from dynamometer test data corrected to barometric pressure of 29.92" mercury and 60°F dry air.

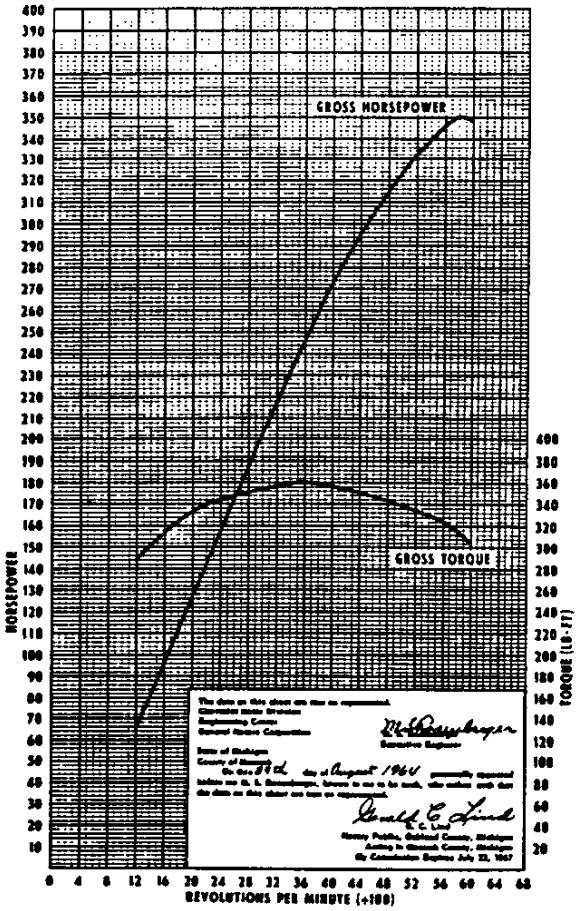
Gross horsepower and torque were obtained in a regular dynamometer test with the dynamometer exhaust system, no fan, generator not charging, and optimum spark advance.

Net horsepower and torque were obtained from a dynamometer test simulating actual operating conditions when the engine is in the vehicle.



350 HP—RPO L79

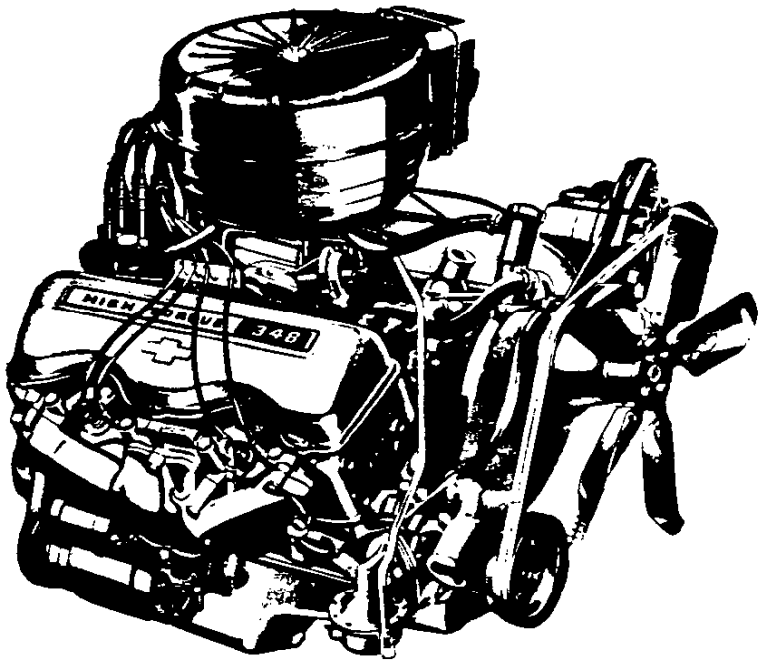
Gross horsepower.....350 @ 5800 rpm
Gross torque.....360 @ 3600 rpm



HIGH TORQUE 348 V8 PERFORMANCE

Basic Specifications

Engine type	Valve-in-head
Piston displacement	348 cu in
Bore & stroke (nominal)	4⅛" x 3¼"
Dry weight (with clutch)	802 lb
Compression ratio	7.75 to 1
Taxable horsepower (SAE)	54.45
Idling speed—Synchromesh trans	475 rpm
—Powermatic in "drive"	450 rpm
Carburetor type—348 V8	4-barrel

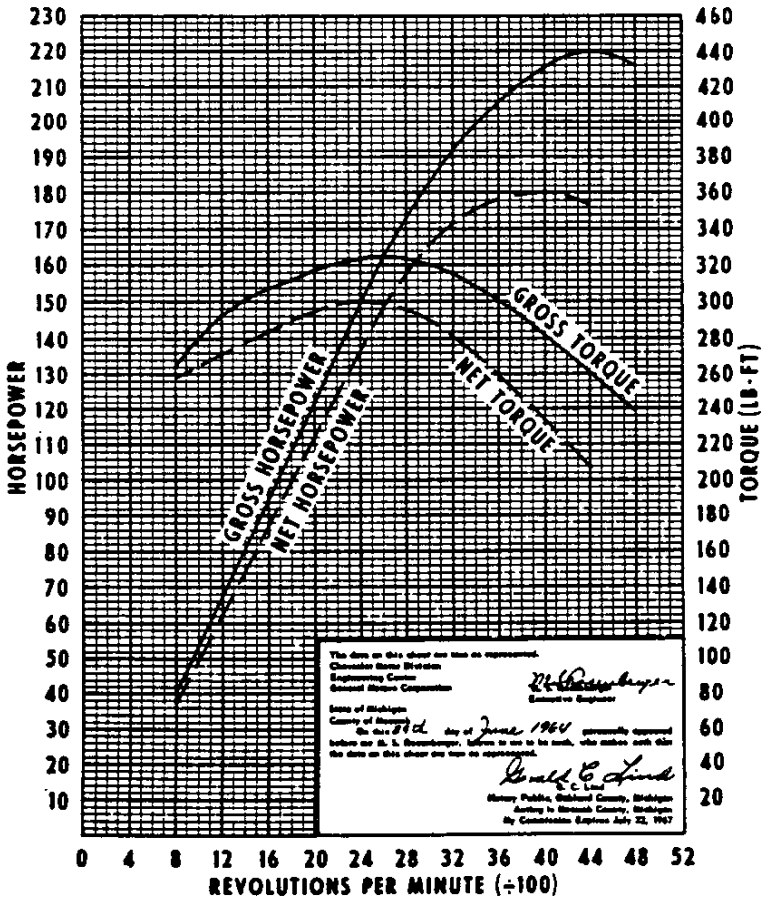


Test Procedures

These curves represent full-throttle performance as obtained from dynamometer test data corrected to barometric pressure of 29.92" mercury and 60° F dry air.

Gross horsepower and torque were obtained in a regular dynamometer test with the dynamometer exhaust system, no fan, generator not charging, and optimum spark advance.

Net horsepower and torque were obtained from a dynamometer test simulating actual operating conditions when the engine is in the vehicle.



Gross horsepower	220 @ 4400 rpm
Net horsepower	180 @ 4000 rpm
Gross torque, lb-ft	325 @ 2600 rpm
Net torque, lb-ft	300 @ 2400 rpm

HIGH TORQUE 409 V8 PERFORMANCE

Basic Specifications

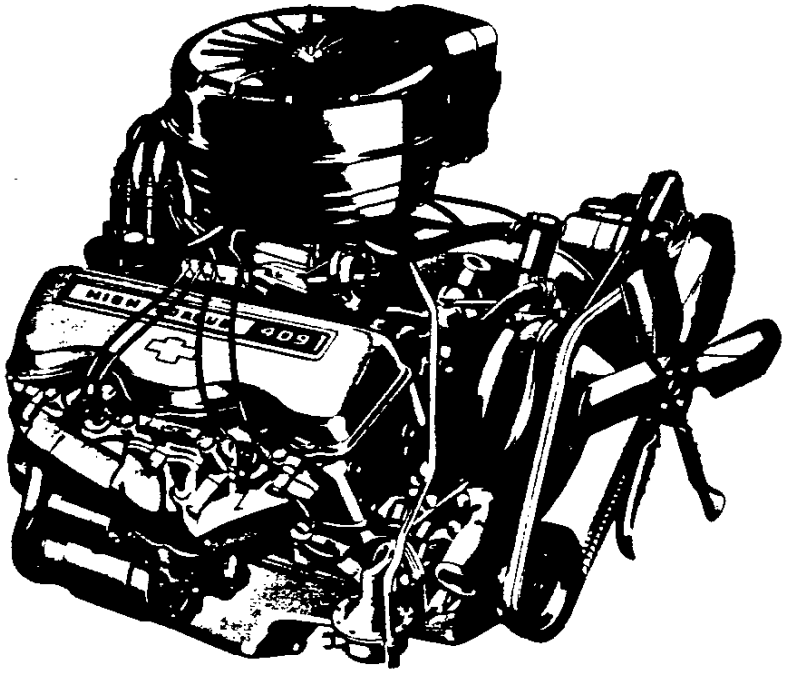
Engine type	Valve-in-head
Piston displacement	409 cu in
Bore & Stroke (nominal)	4⅝" x 3½"
Dry Weight (with clutch)	817 Lb
Compression ratio	7.75 to 1
Taxable horsepower (SAE)	74.4
Idling speed	475 rpm
Carburetor type	4-barrel

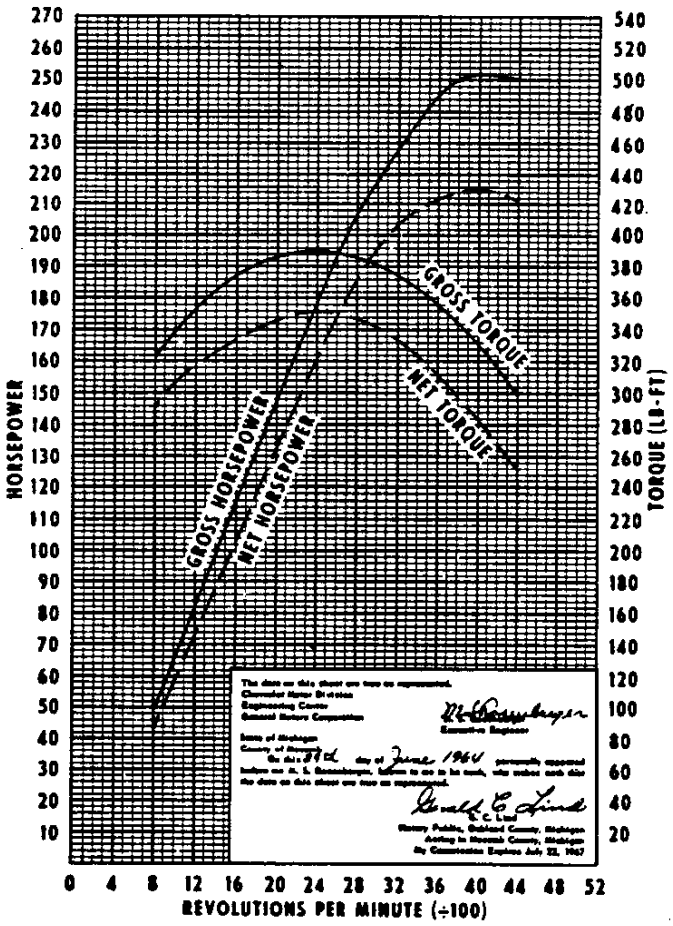
Test Procedures

These curves represent full-throttle performance as obtained from dynamometer test data corrected to barometric pressure of 29.92" mercury and 60° F dry air.

Gross horsepower and torque were obtained in a regular dynamometer test with the dynamometer exhaust system, no fan, generator not charging, and optimum spark advance.

Net horsepower and torque were obtained from a dynamometer test simulating actual operating conditions when the engine is in the vehicle.





Gross horsepower	252 @ 4000 rpm
Net horsepower	215 @ 4000 rpm
Gross torque, lb-ft	390 @ 2400 rpm
Net torque, lb-ft	352 @ 2400 rpm

ENGINE FEATURES

Valve-in-head design—Inlet valves admit fuel mixture directly into cylinders, and exhaust valves allow burned gases to escape with a minimum of work-wasting restriction. Accessibility of valves simplifies maintenance.

Independently mounted valve rockers—Each valve rocker is mounted on an individual ball pivot. Oil is fed through the hollow pushrods into the depressed tops of the valve rockers, thus assuring thorough pivot lubrication. Spill-over oil lubricates the valves.

Forged-steel crankshaft—Rugged forged steel assures extra strength and durability. Precision balancing reduces vibration and gives longer bearing life. Main and connecting rod journals are induction hardened on the 348 and 409 engines for outstanding durability.

High-alloy steel inlet valves—Tough high-alloy steel gives extra durability. Valves on the 327, 348 and 409 engines have aluminized faces to retard the formation of deposits, thereby increasing valve life and reducing maintenance requirements.

Long-life exhaust valves—The 327, 348 and 409 engines have valves faced with a cobalt-based alloy for long valve life. Aluminized head retards build-up of deposits, and chrome-plated stem reduces scuffing and wear. Aluminized exhaust valve faces on the 283 engine with applications in the 50 Series slow the formation of deposits, keep valves cleaner and longer lived.

Induction hardened exhaust valve seats—Hardened exhaust valve seats on the 327, 348 and 409 engines reduce wear and distortion—insure better valve seating.

Rotocoils for 50-80 Series—V8 engines for all 50 through 80 Series trucks are fitted with Rotocoil exhaust valve rotators. These reduce build-up of deposits on valve faces and stems.

Hydraulic valve lifters—Both intake and exhaust valves have quiet, no-adjustment hydraulic valve lifters.

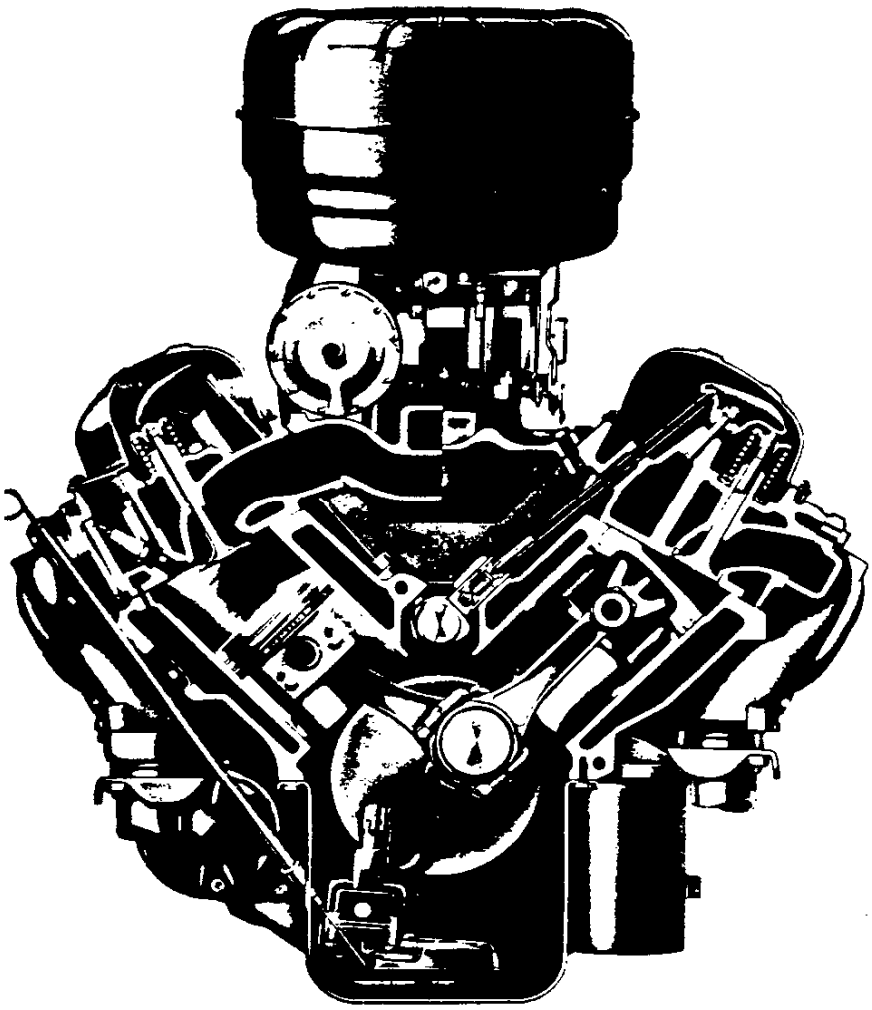
Full-pressure lubrication—Assures proper lubrication of all moving parts. Bearing temperatures are kept low for longer life.

Full-flow oil filter—All engines are equipped with high-efficiency oil filters that increase engine life.

283, 327, 348 and 409
'8 ENGINES

ENGINE FEATURES

409 Engine Cross Section



Bypass cooling—Thermostatic control of coolant flow during warm-up of the 327, 348 and 409 engines brings them quickly up to proper running temperature and top operating efficiency.

Full-jacket cylinder cooling—Coolant circulates completely around the cylinder walls to keep engine temperatures more uniform and reduce engine wear.

Crankcase ventilation systems—Engines are protected against acid- and sludge-forming vapors by positive type ventilating systems. Crankcase vapors are forced through the engine and are expelled by the exhaust system.

Multiple fuel filters—A fine-mesh metal cloth filter in the fuel tank and a porous bronze filter inside the carburetor are included in 283 engine applications. The 327, 348 and 409 engines have a replaceable element filter in the fuel line and wire mesh screen in the carburetor for added protection and dependable operation.

Roller timing chain—The 327, 348 and 409 engines use a quiet roller timing chain which has a long trouble-free life.

Governor—The 327, 348 and 409 engines have a 4000-rpm vacuum spinner governor. Governors are available as an option at extra cost for the 283 engine.

Precision distributor adjustment—A convenient access door in the distributor cap permits precision adjustment of breaker point gap while engine is running. This greatly simplified maintenance procedure assures more dependable ignition.

Air cleaners—Efficient air cleaners filter harsh, abrasive dust out of the intake air to protect the engine from excessive wear. An oil-wetted paper element is used on the 283 engine for Series 10 through 30. Two-pint oil-bath air cleaners are used on the 327, 348 and 409 engines and on the 283 engine for use in the 50 Series.

Optional governor—The 283 engine can be fitted with a governor on which the maximum engine speed can be adjusted within a certain range. The two available ranges are: 2400 rpm to 3600 rpm and 3000 rpm to 3800 rpm.

Optional tachometer—An electric tachometer reading up to 5000 rpm is available for all engines. With the 283 engine on Series 10-30 trucks, a different instrument panel is included to accommodate the tachometer. This panel also employs an ammeter, engine temperature and oil pressure gauges instead of the indicator lights used on the standard instrument panel.

Optional oil filter—A 2-quart full-flow oil filter is available for the 327 and 348 engines. This filter is included with the 409 engine.

SPECIFICATIONS

	283 V8	327 V8 (60 Series)	➔ 327 V8 (C20-30)
Basic Description	valve-in-head design		
Displacement	283 cu in	327 cu in	
Bore x Stroke	3⅞" x 3"	4" x 3¼"	
Compression Ratio	9.0 ✦	8.0	8.5
Gross Horsepower @ rpm	175 @ 4400	185 @ 4400	220 @ 4400
Net Horsepower @ rpm	145 @ 4200	158 @ 4000	177 @ 4000
Gross Torque (lb-ft) @ rpm	275 @ 2400	305 @ 2000	320 @ 2800
Net Torque (lb-ft) @ rpm	245 @ 2000	280 @ 2000	283 @ 2400
Air Cleaner	Oil-wetted (Series 10, 20 & 30) 2-pint oil bath (Series 50)	2-pint oil bath	Oil-wetted paper element
Bearings, Camshaft	steel-backed babbitt		
ID x Length (Projected Area): Bearing 1 (front), 2, 3, 4 Bearing 5	1.871" x 0.74" (1.38 sq in) 1.871" x 0.94" (1.76 sq in)		
Bearings, Connecting Rod (Crank end)	removable		
Material	steel-backed babbitt	premium aluminum	
ID x Length	2.001" x 0.82"		
Bearings, Main	removable		
Material: Bearings 1-4 Bearing 5	steel-backed babbitt steel-backed babbitt	premium aluminum steel-backed babbitt	
End Thrust	taken by bearing 5		
ID x Length (Projected Area): Bearing 1 (front), 2, 3, 4 Bearing 5	2.300" x 0.76" (1.73 sq in) 2.300" x 1.17" (2.71 sq in)		
Camshaft	cast-alloy iron		
Drive Chain Type	link	roller	link
No. of Links or Rollers	46	58	46
Carburetor	downdraft type		
No. of Barrels	2		4
Make	Rochester		
Venturi ID	1.09"		1.06" primary 1.25" secondary
SAE Flange Size	1.25"		1.50"
Choke Control	manual		
Coil, Ignition	Delco-Remy, hermetically sealed		
Current Draw	4 amp with engine stopped; 1.5 amp with engine idling		
Connecting Rods	forged carbon steel; I-beam section		
Length (Center to Center)	5.70"		
Crankshaft	forged high-carbon steel		
Cylinder Block	cast-alloy iron		
Cylinder Heads	cast-alloy iron; valve-in-head design		
Distributor	Delco-Remy with centrifugal & vacuum control		
Fan	See Cooling System Specifications		
Filter, Fuel In Tank	strainer	none	
Frame-Mounted	none	replaceable element	none
In Carburetor	porous bronze	fine screen	
Filter, Oil	full-flow		
Lubrication	Full-pressure system: direct pressure to valve lifters and main, connecting rod & camshaft bearings; pressure stream to cylinder walls & piston pins; pressure spray to timing sprockets and chain; metered pressure and gravity flow to valve mechanism. See Owner's Guide for lubricant types.		
Oil Capacity	5 qt (Series 10-30) 6 qt (Series 50)	6 qt	5 qt with filter
Piston Pins	tubular, hardened chrome-alloy steel		
Diameter	0.927"		
Retention	shrink fit in connecting rod		

✦ 8.5 to 1 on C & L50 models.

➔ Indicates revised specifications.

SPECIFICATIONS

	283 V8	327 V8 (60 Series)	➔ 327 V8 (C20-30)
Piston Rings	two compression, one oil-control ring per piston		
Compression	thickwall, inside bevel		
Oil Control	3-piece: 2 flat spring-steel chrome-faced rails; 1 formed stainless-steel spacer		
Pistons	cast-alloy aluminum with steel struts; flat head on 283; sump head on 327; 3 ring grooves above piston pin		
Skirt	open slipper	solid slipper	
Weight	20.42 oz	23.46 oz	
Plugs, Spark		AC; 14-mm size	
Model	44	C42	C44
Pump, Fuel	AC; model EN	AC; model GR	
Pump, Oil	spur-gear type driven by distributor shaft		
Pressure	30 psi at 1200 engine rpm		
Capacity	4.22 gallons per minute at 1200 engine rpm		
Pump, Water	centrifugal type driven by fan belt		
Capacity	44.5 gallons per minute at 4000 engine rpm		
Lubrication	permanently lubricated and sealed		
Radiator	See Cooling System Specifications		
Thermostat	Harrison	Dole	
Type	pellet		
Timing, Ignition Crankshaft Position	4° BTC	8° BTC	2° BTC
Timing Mark	on harmonic balancer		
Firing Order	1-8-4-3-6-5-7-2		
Timing, Valve			
Inlet Opens	12° 30′ BTC		
Inlet Closes	57° 30′ ABC		
Exhaust Opens	54° 30′ BBC		
Exhaust Closes	15° 30′ ATC		
Valve Guides	integral with head		
Valve Lifters	hydraulic		
Valve Mechanism	individual rocker arms on ball pivots; pushrod actuated		
Valves, Exhaust	high-alloy steel		
Face	aluminized (Series 50 only)	cobalt-based alloy	
Overall Length	4.92″		
Head Diameter	1.50″		
Face Angle	45°	46°	
Seat Angle	46°		
Lift	0.40″★	0.40″	
Rotators	Rotocoil (Series 50 only)	Rotocoil	
Valves, Inlet	alloy steel	high-alloy steel	
Face	untreated	aluminized	
Overall Length	4.91″		
Head Diameter	1.72″		
Face Angle	45°		
Seat Angle	46°		
Lift	0.40″★	0.40″	
Ventilation	positive		

★ 0.33″ on C-L50 Series

➔ Indicates revised specifications.

SPECIFICATIONS

	283 V8 2-Bbl	➔283 V8 4-Bbl	327 V8	327 V8	327 V8
Basic Description	valve-in-head design				
Displacement	283 cu in		327 cu in		
Bore & Stroke	3⅞" x 3"		4.0" x 3¼"		
Compression Ratio	9.25:1		10.5:1		11.0:1
Gross Horsepower @ rpm	195 @ 4800	220 @ 4800	250 @ 4400	300 @ 5000	350 @ 5800
Net Horsepower @ rpm	150 @ 4400	195 @ 4800	200 @ 4400		
Gross Torque (lb-ft) @ rpm	285 @ 2400	295 @ 3200	350 @ 2800	360 @ 3200	360 @ 3600
Net Torque (lb-ft) @ rpm	245 @ 2400	265 @ 3200	315 @ 2600		
Air Cleaner	oil-wetted paper element				
Bearings, Camshaft	steel-backed babbitt				
ID x Length (Projected Area): Bearings 1 (front), 2, 3, 4	1.871" x 0.74" (1.38 sq in)				
Bearing 5	1.871" x 0.94" (1.76 sq in)				
Bearings, Connecting Rod (Crank end)	removable				
Material	steel-backed babbitt		premium aluminum		
ID x Length	2.001" x 0.82"				
Bearings, Main	removable				
Material: Bearings 1–4	steel-backed babbitt		premium aluminum		
Bearing 5	steel-backed babbitt		steel-backed babbitt		
End Thrust	taken by bearing 5				
ID x Length (Projected Area): Bearings 1 (front), 2, 3, 4	2.300" x 0.76" (1.73 sq in)				
Bearing 5	2.300" x 1.17" (2.71 sq in)			2.300" x 1.18" (2.72 sq in)	
Camshaft	cast-alloy iron				
Drive Chain Type	chain				
No. of Links or Rollers	46		40		
Carburetor	downdraft type				
No. of Barrels	2	4	4		
Make	Rochester			Carter	Holley
Venturi ID	1.09"	1.06", 1.13"	1.06", 1.25"	1.25", 1.56"	1.13", 1.39"
SAE Flange Size	1.50"				
Choke Control	automatic				
Coil, Ignition	Delco-Remy				
Current Draw	4 amp with engine stopped; 1.8 amp with engine idling				
Connecting Rods	forged carbon steel				
Length (Center to Center)	5.70"				
Crankshaft	forged high-carbon steel				
Cylinder Block	cast-alloy iron				
Cylinder Heads	cast-alloy iron; valve-in-head design				
Distributor	Delco-Remy				
Filter, Fuel					
In Tank	fine mesh plastic strainer				
In Carburetor	sintered bronze		glass bowl paper element		
Filter, Oil	full-flow				
Lubrication	Full-pressure system: direct pressure to valve lifters and main, connecting rod & camshaft bearings; pressure stream to cylinder walls & piston pins; pressure spray to timing sprockets and chain; metered pressure and gravity flow to valve mechanism. See Owner's Guide for lubricant types.				
Oil Capacity	4 qt				
Piston Pins	tubular, hardened chrome-alloy steel				
Diameter	0.927"				
Retention	shrink fit in connecting rod				

➔ Indicates revised specifications.

URBO-FIRE V8 ENGINES

SPECIFICATIONS

	283 V8 2-Bbl	➔ 283 V8 4-Bbl	327 V8	327 V8	327 V8
Piston Rings	two-compression, one oil-control ring per piston				
Compression	thickwall, inside bevel				
Oil Control	3-piece: 2 flat spring-steel chrome-faced rails; 1 formed stainless-steel spacer				
Pistons	cast-alloy aluminum; 3 ring grooves above piston pin				impact-extruded aluminum alloy
Head	flat, notched head				domed
Skirt	slipper				
Weight	20.30 oz		21.60 oz		
Plugs, Spark	AC; 14-mm size				
Model	AC 44				
Pump, Fuel	AC				
Pump, Oil	spur-gear type driven by distributor shaft				
Pressure	30–45 psi at 1500 rpm			40 psi at 2000 rpm	
Capacity	4.3 gallons per minute at 2000 engine rpm				
Pump, Water	centrifugal type driven by fan belt				
Capacity	54 gpm @ 4400 rpm			55 gpm @ 4400 rpm	
Lubrication	permanently lubricated and sealed				
Thermostat	Harrison				
Type	pellet				
Timing, Ignition Crankshaft Position	4° BTC				
Timing Mark	crankshaft pulley hub	vibration damper			
Firing Order	1–8–4–3–6–5–7–2				
Timing, Valve Inlet Opens	32° 30′ BTC				
Inlet Closes	87° 30′ ABC				
Exhaust Opens	74° 30′ BBC				
Exhaust Closes	45° 30′ ATC				
Valve Guides	integral with head				
Valve Lifters	hydraulic				
Valve Mechanism	individual rocker arms on ball pivots; pushrod actuated				
Valves, Exhaust	high-alloy steel				
Face	aluminized				
Overall Length	4.92″				
Head Diameter	1.50″				
Face Angle	45°				
Seat Angle	46°				
Lift	0.40″				
Rotators	none				
Valves, Inlet	alloy steel				
Face	untreated				
Overall Length	4.91″			4.88″	
Head Diameter	1.72″			1.94″	2.02″
Face Angle	45°				
Seat Angle	46°				
Lift	0.40″				
Ventilation	positive				

➔ Indicates revised specifications.

SPECIFICATIONS

	348 V8	409 V8
Basic Description	valve-in-head design	
Displacement	348 cu in	409 cu in
Bore & Stroke	4 1/8" x 3 1/4"	4 5/16" x 3 1/2"
Compression Ratio	7.75	
Gross Horsepower @ rpm	220 @ 4400	252 @ 4000
Net Horsepower @ rpm	180 @ 4000	215 @ 4000
Gross Torque (lb-ft) @ rpm	325 @ 2600	390 @ 2400
Net Torque (lb-ft) @ rpm	300 @ 2400	352 @ 2400
Air Cleaner	2-pint oil bath	
Bearings, Camshaft	steel-backed babbitt	
ID x Length (Projected Area): Bearing 1 (front), 2, 3, 4 Bearing 5	 1.871" x 0.86" (1.61 sq in) 1.871" x 0.94" (1.76 sq in)	
Bearings, Connecting Rod (Crank end)	removable	
Material	premium aluminum	
ID x Length	2.201" x 0.86"	
Bearings, Main	removable	
Material: Bearings 1-4 Bearing 5	premium aluminum steel-backed babbitt	
End Thrust	taken by bearing 5	
ID x Length (Projected Area): Bearing 1 (front), 2, 3, 4 Bearing 5	 2.500" x 1.00" (2.48 sq in) 2.501" x 1.26" (3.13 sq in)	
Camshaft	cast-alloy iron	
Drive Chain Type	roller	
No. of Drive Chain Rollers	64	
Carburetor	downdraft type	
No. of Barrels	4	
Make	Rochester	
Venturi ID	1.12" (pri) 1.25" (sec)	
SAE Flange Size	1.25"	
Choke Control	manual	
Coil, Ignition	Delco-Remy; hermetically sealed	
Current Draw	4 amp with engine stopped; 1.5 amp with engine idling	
Connecting Rods	forged carbon steel; I-beam section	
Length (Center to Center)	6.135"	6.010"
Crankshaft	forged carbon steel; induction-hardened journals	
Cylinder Block	cast-alloy iron	
Cylinder Heads	cast-alloy iron; valve-in-head design	
Distributor	Delco-Remy with centrifugal & vacuum control	
Fan	See Cooling System Specifications	
Filter, Fuel Frame-Mounted	 replaceable element	
In Carburetor	fine mesh screen	
Filter, Oil	full-flow (1 qt)	full-flow (2 qt)
Lubrication	Full-pressure system: direct pressure to valve lifters and main, connecting rod & camshaft bearings; pressure stream to cylinder walls & piston pins; pressure spray to timing sprockets and chain; metered pressure and gravity flow to valve mechanism. See Owner's Guide for lubricant types.	
Oil Capacity	7 qt	8 qt
Piston Pins	tubular, hardened chrome-alloy steel	
Diameter	0.990"	
Retention	shrink fit in connecting rod	

SPECIFICATIONS

	348 V8	409 V8
Piston Rings	two compression, one oil-control ring per piston	
Upper Compression	inside counterbore	
Lower Compression	tapered face, inside bevel	
Oil Control	3-piece: 2 flat spring-steel chrome-faced rails; 1 formed stainless-steel spacer	
Pistons	cast-alloy aluminum with cast-in steel ring; angular head; 3 ring grooves above piston pin	
Skirt	solid slipper	
Weight	32.5 oz	32.0 oz
Plugs, Spark	AC; 14-mm size	
Model	C42-N	
Pump, Fuel	AC; model GR	AC; model GR
Pump, Oil	spur-gear type driven by distributor shaft	
Pressure	30 psi at 1200 engine rpm	
Capacity	4.22 gallons per minute at 1200 engine rpm	
Pump, Water	centrifugal type driven by fan belt	
Capacity	81 gallons per minute at 4000 engine rpm	
Lubrication	permanently lubricated and sealed	
Radiator	See Cooling System Specifications	
Thermostat	Dole	
Type	pellet	
Timing, Ignition Crankshaft Position	8° BTC	4° BTC
Timing Mark	on harmonic balancer	
Firing Order	1-8-4-3-6-5-7-2	
Timing, Valve Inlet Opens	12° 30′ BTC	
Inlet Closes	73° 30′ ABC	
Exhaust Opens	62° 30′ BBC	
Exhaust Closes	31° 30′ ATC	
Valve Guides	integral with head	
Valve Lifters	hydraulic	
Valve Mechanism	rocker arms on individual ball pivots; pushrod actuated	
Valves, Exhaust	high-alloy steel	
Face	cobalt-based alloy	
Overall Length	5.13″	
Head Diameter	1.66″	
Face Angle	46°	
Seat Angle	44°	
Lift	0.41″	
Rotators	Rotocoil	
Valves, Inlet	high-alloy steel	
Face	aluminized	
Overall Length	5.04″	
Head Diameter	1.94″	
Face Angle	45°	
Seat Angle	46°	
Lift	0.40″	
Ventilation	positive type	

HIGH TORQUE 3-53N GM DIESEL PERFORMANCE

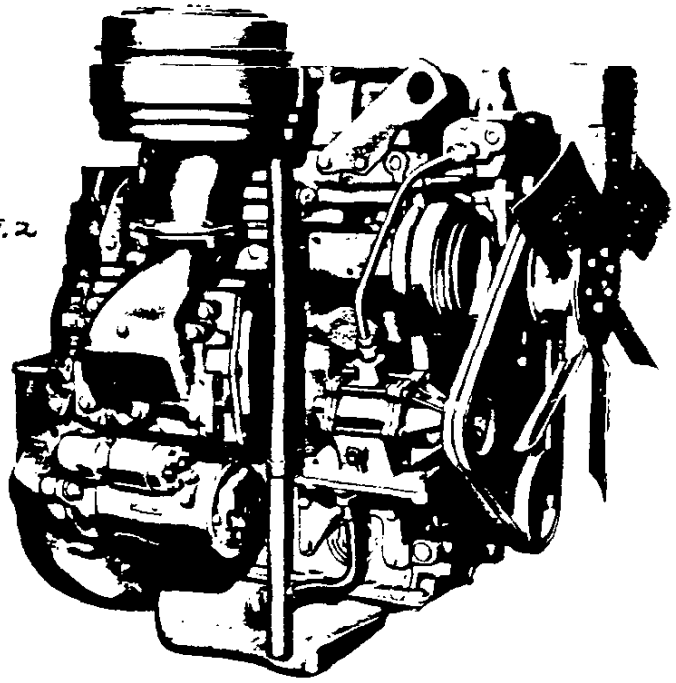
Basic Specifications

Engine type	In-line 2-cycle diesel
Piston displacement	~~352~~ 159.2 cu in
Bore & stroke (nominal)	3⅞" x 4½"
Dry weight (with clutch)	1203 lb
Compression ratio	21 to 1
Idling speed	450 rpm

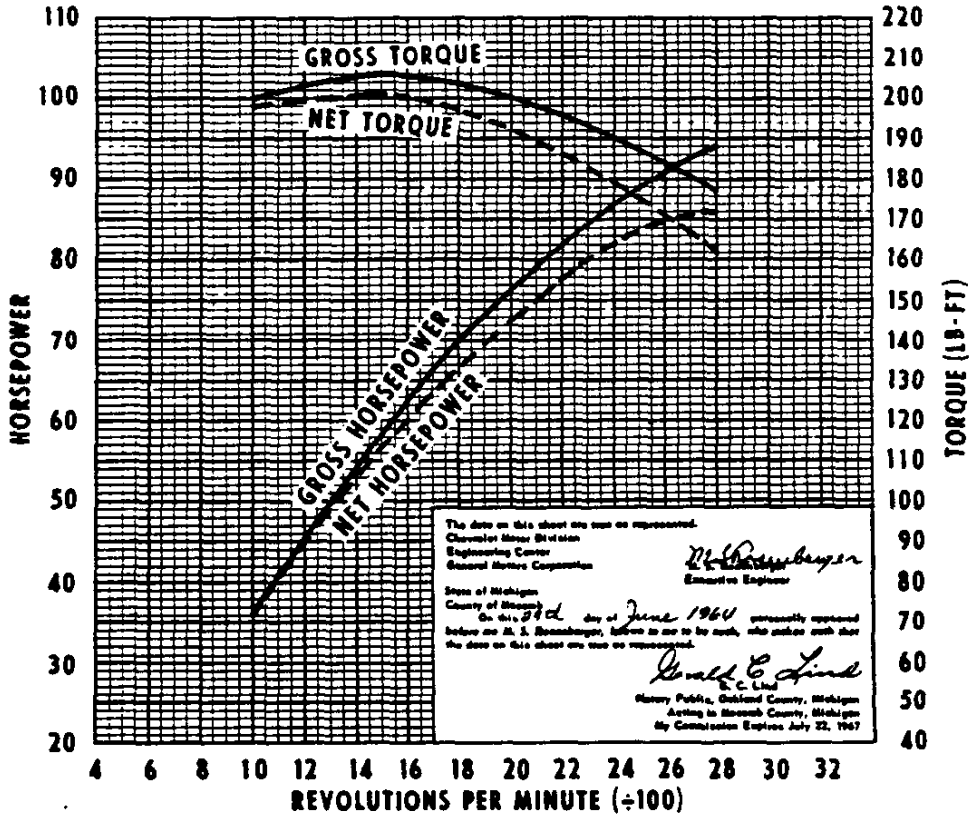
Test Procedures

These curves represent performance as obtained from dynamometer test data corrected to barometric pressure of 29.92" mercury and 60° F dry air.

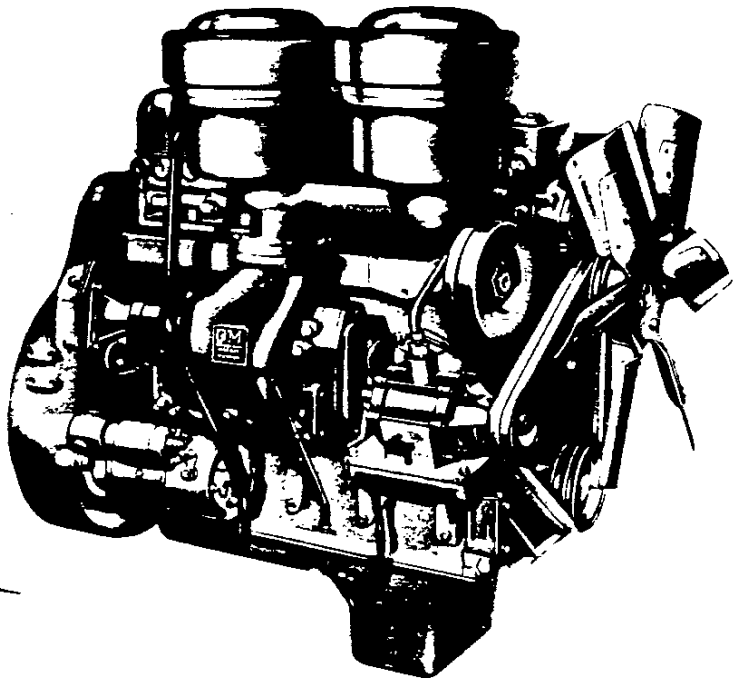
Gross horsepower and torque were obtained in a *regular dynamometer test* with the dynamometer exhaust system, no fan and generator not charging.



Gross horsepower	94 @ 2800 rpm
Net horsepower	86 @ 2800 rpm
Gross torque, lb-ft	205 @ 1500 rpm
Net torque, lb-ft	201 @ 1500 rpm



HIGH TORQUE 4-53N GM DIESEL PERFORMANCE



Basic Specifications

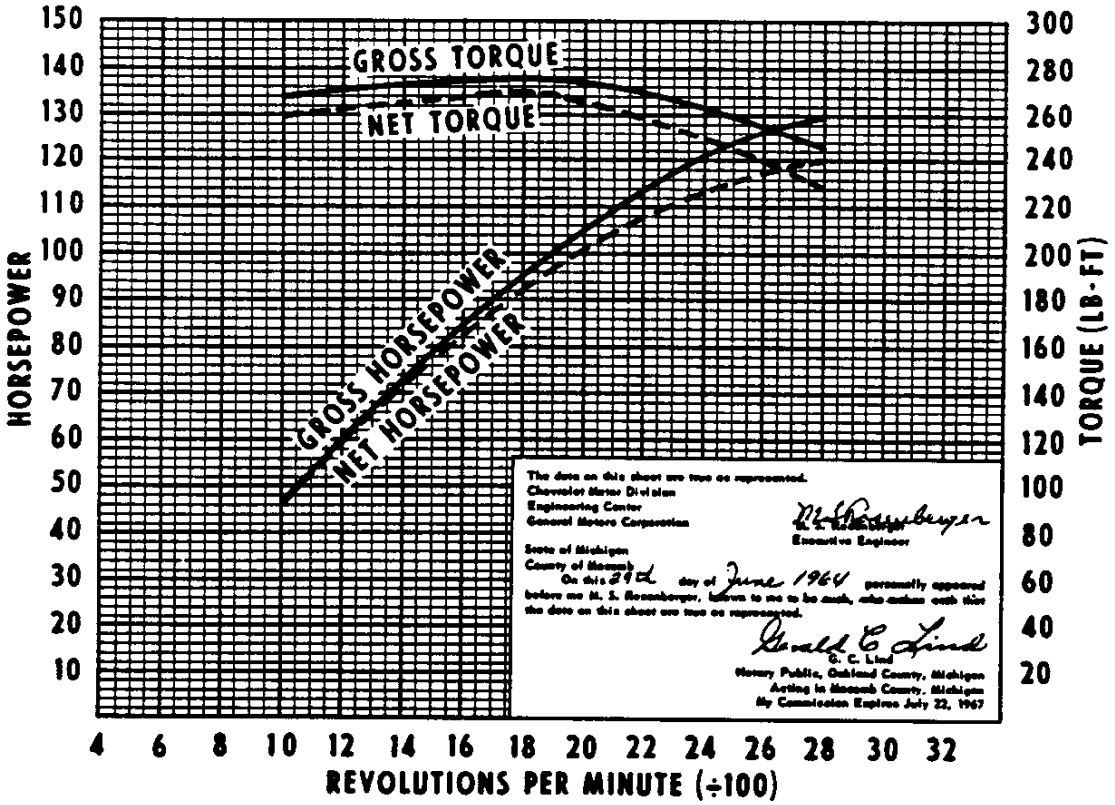
Engine type	In-line 2-cycle diesel
Piston displacement	212 cu in
Bore & stroke (nominal)	3⅞" x 4½"
Dry weight (with clutch)	1203 lb
Compression ratio	21 to 1
Idling speed	450 rpm

Test Procedures

These curves represent performance as obtained from dynamometer test data corrected to barometric pressure of 29.92" mercury and 60° F dry air.

Gross horsepower and torque were obtained in a regular dynamometer test with the dynamometer exhaust system, no fan and generator not charging.

Gross horsepower	130 @ 2800 rpm
Net horsepower	120 @ 2800 rpm
Gross torque, lb-ft	278 @ 1800 rpm
Net torque, lb-ft	270 @ 1800 rpm



HIGH TORQUE 6V-53N GM DIESEL PERFORMANCE

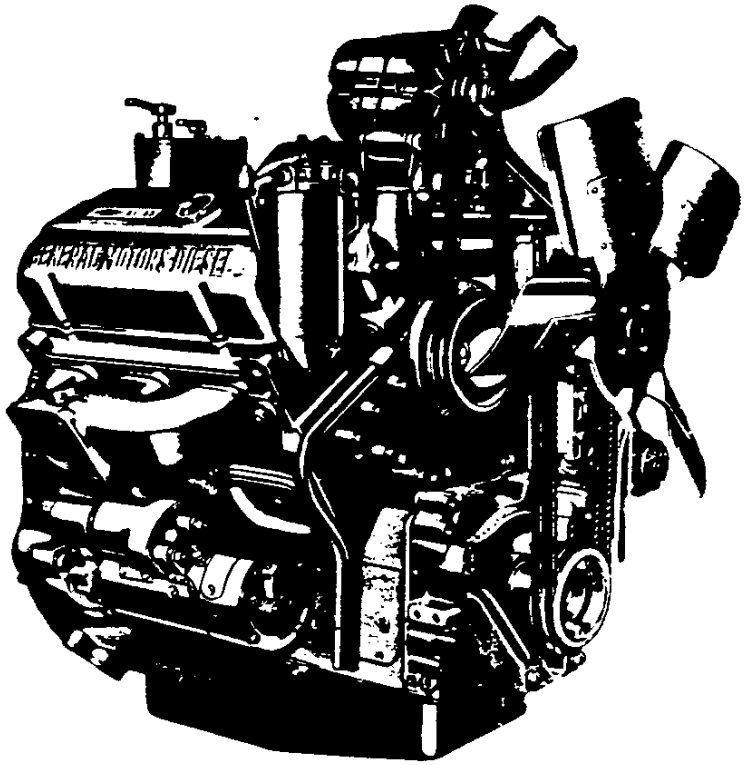
Basic Specifications

Engine type	V6 2-cycle diesel
Piston displacement	318 cu in
Bore & stroke (nominal)	3⅞" x 4½"
Dry weight (with clutch)	1412 lb
Compression ratio	21 to 1
Idling speed	450 rpm

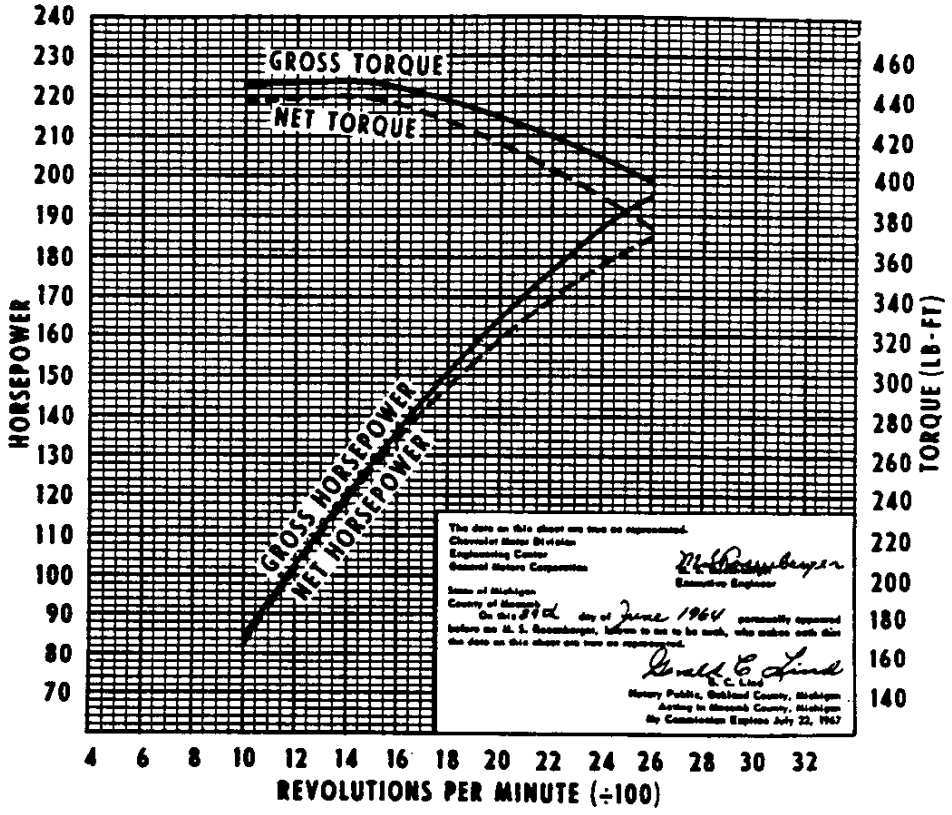
Test Procedures

These curves represent performance as obtained from dynamometer test data corrected to barometric pressure of 29.92" mercury and 60° F dry air.

Gross horsepower and torque were obtained in a regular dynamometer test with the dynamometer exhaust system, no fan and generator not charging.

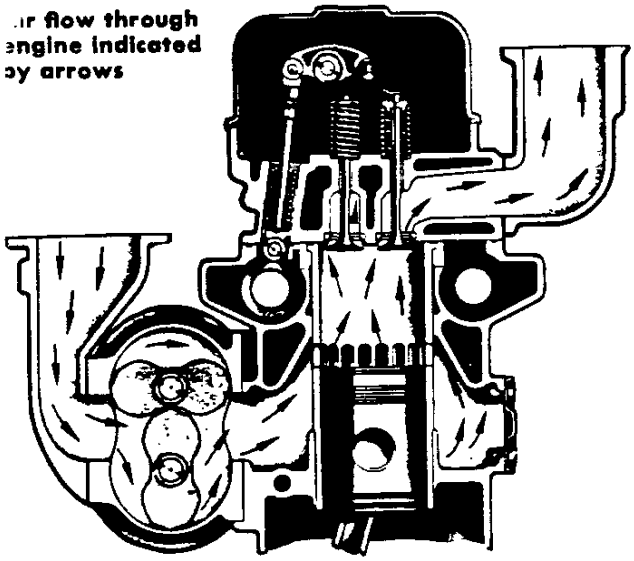


Gross horsepower	195 @ 2600 rpm
Net horsepower	185 @ 2600 rpm
Gross torque, lb-ft	447 @ 1400 rpm
Net torque, lb-ft	439 @ 1400 rpm



-53N, 4-53N and 6V-53N GM DIESELS

ENGINE FEATURES



Compression ignition—Spark plugs, ignition coil and distributor are eliminated. Fuel ignition is caused by the high-compression temperatures reached in the cylinders. Air is blown into the cylinder, and compressed and heated by the piston upstroke. Near the top of the stroke, fuel is injected into the cylinder. The fuel burns evenly and completely, producing a strong power-creating downstroke of the piston.

High-efficiency Roots blower—A two-vane Roots blower supplies air for combustion of fuel and for scavenging the engine of exhaust gases. Air enters the cylinder through a ring of ports in the cylinder wall. The ports are uncovered as the piston approaches the bottom of its downstroke. The inrushing air forces the burned gases out through the open exhaust valves. As the valves close, a fresh charge of air is trapped in the cylinder to be compressed by the rising piston. The copious quantities of air supplied by the blower provide complete scavenging of exhaust gases, and also serve to cool the cylinder walls, piston head and exhaust valves.

2-Cycle design—Every downstroke of every piston is a power stroke. The engine cycle is completed with just two strokes of the piston; a 4-cycle engine requires four strokes to do the same job. This means that the 2-cycle engine is smaller and lighter for a given power output. This also means that the engine accelerates more rapidly, is more responsive to power demands.

Replaceable cylinder liners—For major overhaul, cylinder liners are readily replaced. When installed, the top portion of each liner is surrounded by coolant, thus keeping operating temperatures more nearly uniform and prolonging engine life.

Precision, replaceable bearings—All main and connecting rod bearings are of the replaceable insert type, and are made of premium bearing alloys.

Drop-forged camshaft—Rugged camshaft has hardened cams and journals.

Hardened valve seats—Alloy iron seats are shrunk into the cylinder head. Hardened seats increase cylinder head life and reduce valve grinding.

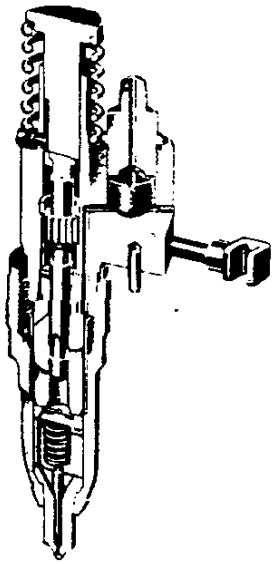
Parts interchangeability—All Series 53 GM Diesel engines have many interchangeable parts regardless of the number of cylinders in the engine or whether it is an in-line or "V" engine. Interchangeable parts include injectors, exhaust valves, cylinder liners, pistons, piston rings and many other related parts. Thus, truck operators using other equipment powered by GM diesel engines can fit Chevrolet trucks right into their existing maintenance programs with a minimum of difficulty and expense.

High compression ratio—Higher compression means more efficient use of fuel. The 21 to 1 compression ratio of the GM diesel engines makes them one of the most efficient internal combustion engines ever designed.

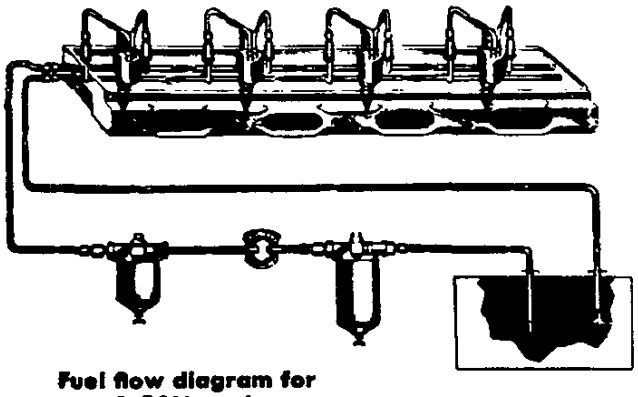
4-Valve design—Each cylinder is fitted with four exhaust valves. (Inlet valves are not required in a 2-cycle engine.) The large exhaust valve area permits quick removal of exhaust gases, and aids in keeping valve head temperatures low.

High-energy fuel—Diesel fuel has a higher energy content than gasoline. This fact combined with the high efficiency of the GM diesel means more miles per gallon of fuel.

Unit injectors—Each cylinder is fitted with an injector which is actuated by the camshaft through pushrods. The injector performs the functions of metering, pressurizing, atomizing and injecting the fuel. An excess of fuel flows through the injector at all times, helping to keep it cool and to operate properly. Injectors are easily removed and replaced when cleaning or other maintenance is required.



Low-pressure fuel system—The fuel supply system includes two fuel filters, a low-pressure fuel transfer pump, fuel lines and injectors. The high pressure required for fuel injection is created by the injectors. All the rest of the system operates at low pressure, thus reducing maintenance requirements and the likelihood of leaking fuel lines—a more common ailment with high-pressure systems.



Fuel flow diagram for 4-53N engine

SPECIFICATIONS

	3-53N	4-53N	6V-53N
Basic Description	2-cycle, in-line, diesel	2-cycle, in-line, diesel	2-cycle, V6, diesel
Displacement	159 cu in	212 cu in	318 cu in
Bore & Stroke	3.875" x 4.50"		
Compression Ratio	21		
Gross Horsepower @ rpm	94 @ 2800	130 @ 2800	195 @ 2600
Net Horsepower @ rpm	86 @ 2800	120 @ 2800	185 @ 2600
Gross Torque (lb-ft) @ rpm	205 @ 1500	278 @ 1800	447 @ 1400
Net Torque (lb-ft) @ rpm	201 @ 1500	270 @ 1800	439 @ 1400

Air Cleaner	(2) oil bath; 1 qt each	
Bearings, Connecting R ' 'Crank end)	precision, removable	
Material	heavy-duty, copper-lead alloy, steel-backed	
ID x Length (Projected Area)	2.500" x 1.32" (3.300 sq in)	2.750" x 1.10" (3.020 sq in)
Bearings, Main	precision, removable	
Material	heavy-duty, copper-lead alloy, steel-backed	
ID x Length (Projected Area)	3.000" x 1.18" (3.540 sq in)	3.500" x 1.00" (3.500 sq in)
Blower	Roots	
Pressure @ Engine rpm	8.7" in hg @ 2800	
Ratio (Blower to Engine Speed)	2.49 to 1	
Connecting Rods	drop-forged steel; I-beam section	
Length (Center to Center)	8.80"	
Crankshaft	drop-forged steel	
Cylinder Block	cast iron	
Cylinder Heads	valve-in-head design	
Material	cast iron	
Cylinder Liners	wet; cast iron	
Number of Ports	18	
Fan	See Cooling System Specifications	
Filter, Fuel	two; replaceable elements	
Filter, Oil	full-flow	
Capacity	2 qt	
Governor	mechanical	
Make	King Seely	
Setting (Full Load)	2800 rpm	2600 rpm
Injectors, Fuel	unit type; model N-45	

53N, 4-53N and 6V-53N GM DIESELS

SPECIFICATIONS

	3-53N	4-53N	6V-53N
Lubrication	Full-pressure system; direct pressure to piston pins, main, connecting rod and camshaft bearings; pressure and splash to valve mechanism; splash to cylinder walls and timing gears. (See Owner's Guide for lubricant types.)		
Oil Capacity	12 qt	14 qt	14 qt
Piston Pins	hardened chrome-alloy steel; full floating		
Diameter	1.375"		
Piston Rings	four compression, two oil-control rings per piston		
Compression	steel; chrome plated		
Oil Control	double scraper with expander; cast alloy iron		
Pistons	Trunk-Arma steel; tin plated; dished head, full skirt		
Pump, Fuel Transfer			
Make	Detroit Diesel		
Type	mechanical gear		
Pressure Range	60GPH @ 65 psi		

TORQ-FLOW D351 DIESEL PERFORMANCE

Basic Specifications

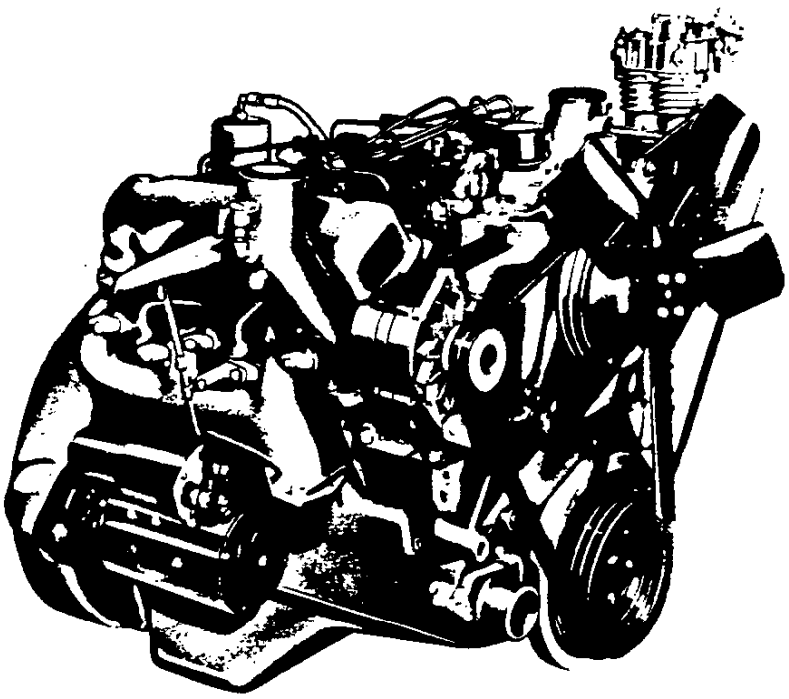
Engine type.....V6 4-cycle
Piston displacement.....351 cu in
Bore & stroke (nominal).....4 9/16" x 3 9/16"
Compression ratio.....17.5:1

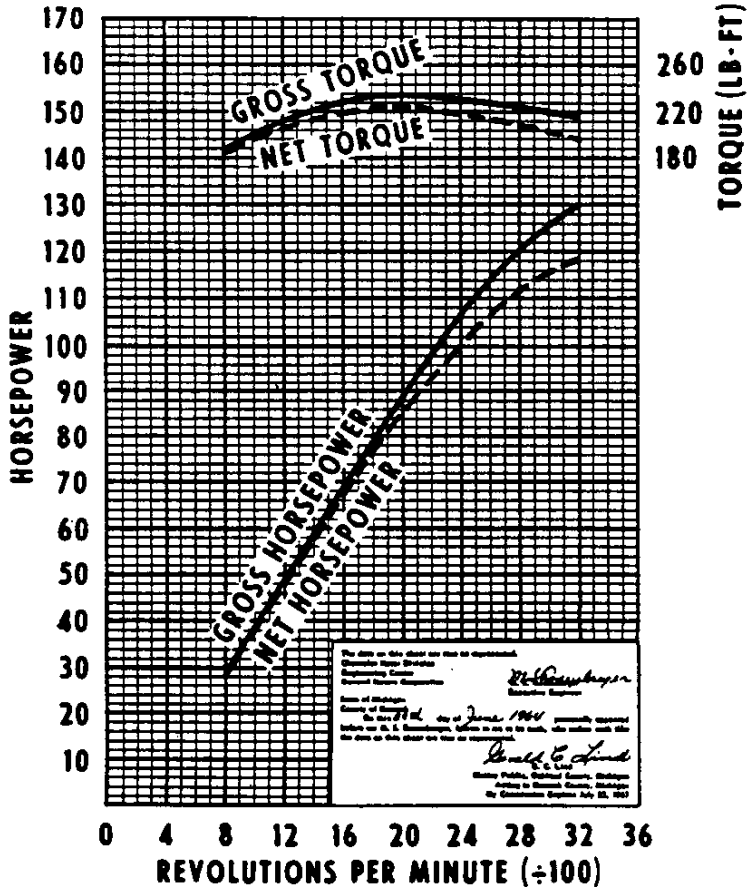
Test Procedures

These curves represent full-throttle performance as obtained from dynamometer test data corrected to barometric pressure of 29.92" mercury and 60° F dry air.

Gross horsepower and torque were obtained in a regular dynamometer test with the dynamometer exhaust system, no fan, generator not charging, and optimum spark advance.

Net horsepower and torque were obtained from a dynamometer test simulating actual operating conditions when the engine is in the vehicle.





Gross horsepower.....130 @ 3200 rpm
Net horsepower.....118 @ 3200 rpm
Gross torque, lb-ft.....234 @ 2000 rpm
Net torque, lb-ft.....223 @ 2000 rpm

TORQ-FLOW D478 DIESEL PERFORMANCE

Basic Specifications

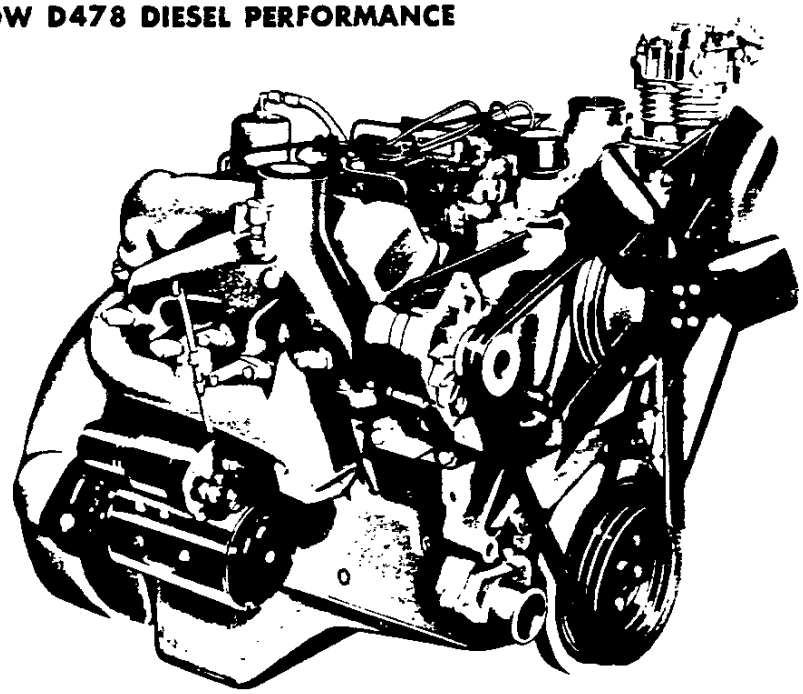
Engine type	V6 4-cycle diesel
Piston displacement	478 cu in
Bore & stroke (nominal)	5⅛" x 3⅞"
Compression ratio	17.5:1

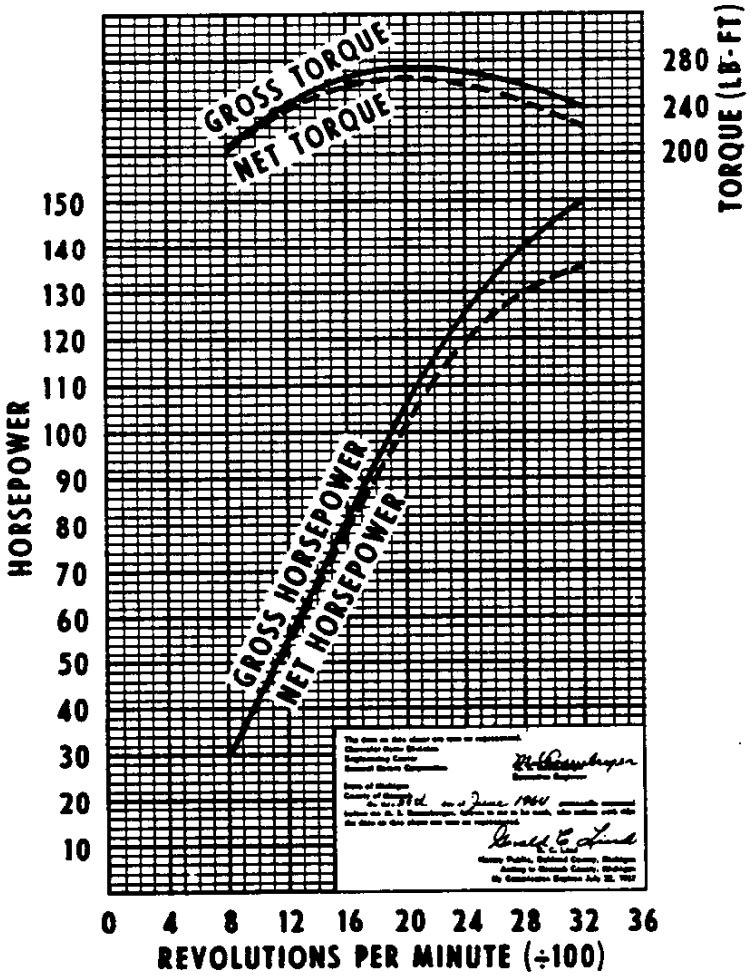
Test Procedures

These curves represent performance as obtained from dynamometer test data corrected to barometric pressure of 29.92" mercury and 60° F dry air.

Gross horsepower and torque were obtained in a regular dynamometer test with the dynamometer exhaust system, no fan and generator not charging.

Net horsepower and torque were obtained from a dynamometer test simulating actual operating conditions when the engine is in the vehicle.





Gross horsepower	150 @ 3200 rpm
Net horsepower	135 @ 3200 rpm
Gross torque, lb-ft	275 @ 2000 rpm
Net torque, lb-ft	266 @ 2000 rpm

TORQ-FLOW DH478 DIESEL PERFORMANCE

Basic Specifications

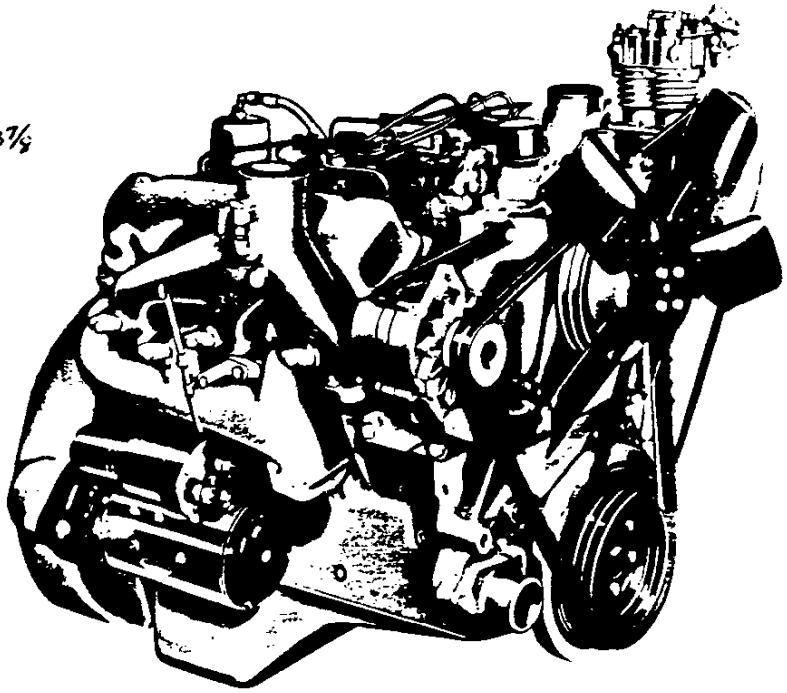
Engine type.....V6 4-cycle
Piston displacement.....478 cu in
Bore & stroke (nominal).....5⅛" x 3⅞" 3 7/8
Compression ratio.....17.5:1

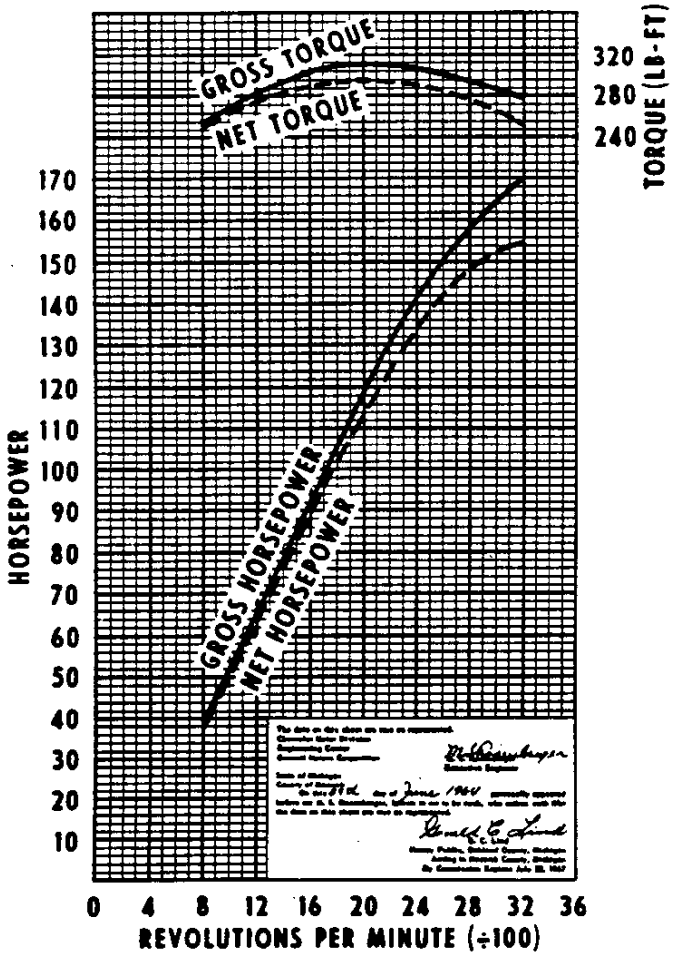
Test Procedures

These curves represent full-throttle performance as obtained from dynamometer test data corrected to barometric pressure of 29.92" mercury and 60° F dry air.

Gross horsepower and torque were obtained in a regular dynamometer test with the dynamometer exhaust system, no fan, generator not charging, and optimum spark advance.

Net horsepower and torque were obtained from a dynamometer test simulating actual operating conditions when the engine is in the vehicle.





Gross horsepower.....170 @ 3200 rpm
Net horsepower.....155 @ 3200 rpm
Gross torque, lb-ft.....310 @ 2000 rpm
Net torque, lb-ft.....298 @ 2000 rpm

ENGINE FEATURES

Cylinder block and crankcase—The cylinder block is a 60° V-design and is cast integrally with the crankcase providing a strong and rigid unit. Close-grain chromium-nickel alloy iron is used to form the block and crankcase. Overall rigidity is obtained by a three-inch dropped skirt below the crankshaft centerline, staggered banks of cylinders, ribs extending several inches below the outer head bosses and six head bolt bosses which are blind tapped and equally spaced around each cylinder bore. All cylinders are surrounded by coolant passages assuring uniform expansion, superior heat transfer, low oil consumption and greater engine life.

Cylinder heads—Cylinder heads are cast of fine-grain chromium-nickel alloy iron for close control of strength and hardness. Intake ports are shaped to provide maximum air swirl within each bore. Swirl is important since it aids in rapid fuel burning for efficient engine performance. Short individual exhaust ports are located on the outside of the engine. The ports contribute to volumetric efficiency of the engine since the gases are discharged readily. Valve guides are completely surrounded by water jacket coolant. This provides rapid heat transfer from the valve stem.

Crankshaft—V-6 diesels have a crankshaft with four main and six connecting rod journals. Premium-aluminum main and connecting rod bearings are used. The crankshaft is forged of fine-grained steel and is heat-treated for maximum strength.

Engine balance—A combination of crankshaft counterweights, rubber-type damper, weighted flywheel and balance shaft is used to provide smooth and relatively motionless engine operation. The balance shaft rotates at twice the engine speed in the opposite direction of the crankshaft. The shaft is supported in the block with four steel-backed sintered-bronze bearings.

Connecting rods and pistons—Connecting rods have a large I-beam section for maximum rigidity and are precision-balanced with piston pins. Excellent fuel combustion is attained through the use of a toroidal-shaped combustion chamber at the top of each piston. This chamber sets up toroidally directed air currents within the cylinder and is positioned on the piston to receive the full fuel spray from the injector.

Lubrication system—Full-pressure lubrication is incorporated into the engines. The high pressure is developed by a high-output rotor-type oil pump which draws oil through a fixed-screen intake assembly. The oil pump has a capacity of 16 gallons per minute at 3200 engine RPM. An oil cooler is standard on DH478 engine and optional on the D478 engine. Cooling of the hot engine oil is accomplished by heat transfer to the engine coolant.

Crankcase ventilation—Crankcase ventilation is essentially the positive type. Fumes, blow-by gases and condensation are drawn from the block and heads into the combustion chamber by ventilating hoses from the engine back to the oil-bath air cleaner. The fumes then pass through the induction system and are burned in the engine and pass out the exhaust system as exhaust gases.

Cooling system—Radiator shutters are not required with the constant-flow by-pass system. A centrifugal-type water pump with a capacity of 106 gallons per minute at 3200 RPM is used to provide a large flow of coolant at high velocity through the cylinder block and end-to-end flow through the heads.

Fuel system—A high-pressure system with a single injection pump is used to deliver fuel to all six cylinders. The fuel pump and assembly consists of a fuel supply pump, fuel injection pump and an engine speed governor. The unit also has an automatic timing device that varies engine timing as engine RPM's change. Fuel filtration is accomplished by twice filtering the fuel before it reaches the injector spray nozzles.

A primary filter with a replaceable element is located in the fuel line between the fuel tank and the fuel supply pump. Final filtering is through a secondary throw-away-type filter located between the supply pump and the fuel injection pump.

Exhaust system—Dual mufflers horizontally mounted to the engine are used. The D351 uses straight-through resonator-type dual mufflers and the D478/DH478 use dual mufflers with aluminized tubes and baffles.

SPECIFICATIONS

	D351	D478	DH478
Basic Description			
Displacement	351.2	477.7	
Bore and stroke	4.56 x 3.58	5.125 x 3.86	
Gross horsepower @ rpm	130 @ 3200	150 @ 3200	170 @ 3200
Net horsepower @ rpm	118 @ 3200	135 @ 3200	155 @ 3200
Gross torque @ rpm	234 @ 2000	275 @ 2000	310 @ 2000
Net torque @ rpm	223 @ 2000	266 @ 2000	298 @ 2000
Governor rpm	3200		
Compression ratio	17.5 to 1		
Weight (lbs)	940	950	
General			
Type and number of cylinders	60° V-6		
Cylinder block and crankcase	Cast in unit with dropped skirt and left-bank offset		
Material	Chrome-nickel alloy cast iron		
Cylinder head			
Attachment to block	14 9/16" heat-treated bolts on each head		
Material	Chrome-nickel alloy cast iron		
Valve arrangements	In head		
Valve seat inserts	None	Exhaust	
Stroke cycle	Four		
Ignition method	Compression		
Fuel injection	Through high-pressure line to nozzle at each cylinder		
Air intake system	Naturally aspirated		
Crankcase ventilation	Positive		
Firing order	1-6-5-4-3-2		
Camshaft			
Material	High-strength electric furnace iron		
Bearing material	Steel-backed babbitt		
Number of bearings	4		
Total bearing length (in)	4.59		
Total projected area (sq in)	9.12		
Camshaft drive type	Helical gears		
Camshaft gear material	Cast Armasteel		
Idler gear material	Cast Armasteel		
Crankshaft gear material	Case-hardened steel		
Crankshaft			
Material	Drop-forged steel		
Counterweights	Forged integral		
Main journal diameter	3.125		
Crankpin diameter	2.81		
Crankshaft weight (lbs)	96	99.5	
Flywheel material	High-strength iron		
Main bearing type	Precision replaceable		
Number of bearings	4		
Material	Steel-backed aluminum		
Diameter	3.125		
End thrust taken by	3		
Total bearing length (in)	4.71		
Total projected area (sq in)	14.764		

SPECIFICATIONS

	D351	D478	DH478
Connecting Rods			
Type	I-beam section		
Material	Drop-forged heat-treated steel		
Length center to center (in)	7.19		
Piston pin bushing type	Steel-backed bronze		
Projected area (sq in)	2.08		
Lower end rod bearing type	Precision replaceable		
Material	Steel-backed aluminum		
Diameter and length (in)	2.812 x 935		
Projected area (sq in)	2.628		
Pistons			
Type	Heavy duty, arm ground, barrel shaped		
Material	Permanent mold cast aluminum, tin plated		
Compression ring grooves	Two		
Top grooves insert	No-resist cast iron bonded in place		
Oil control ring grooves	One above piston pin with drilled holes for drainage		
Projected pin bearing area in piston (sq in)	3.34	4.06	
Piston pin type	Full-floating		
Material	Tubular alloy steel		
Diameter (in)	1.615		
Retention method	Snap rings in piston		
Piston rings			
Top compression ring	Barrel faced		
Material	High-strength chrome-faced ductile iron		
Second compression ring	Inside bevel	Taper faced	
Material	Cast iron		
Oil control ring	Cast iron type		
Material	Chrome-plated cast iron with steel expander		
Valve Mechanism			
Type	Rocker arm and shaft, pushrod actuated		
Valve lifters	Mechanical barrel, rotating		
Material	Hardened cast iron		
Guide	Reamed holes in cylinder block		
Pushrod	Tubular steel		
Length	9.33		
Rocker arm	Pearlitic malleable iron		
Adjustment	Self-locking screw		
Shaft support	Five aluminum die-cast brackets		
Shaft material	Tubular cast-hardened steel		
Lubrication			
Type	Full-pressure		
Distribution			
Main bearings	Direct		
Connecting rod bearings	Direct		
Connecting rod bushings	Oil splash through drilled hole in top end of rod		
Camshaft bearings	Direct		
Camshaft lobes	Dip in oil reservoirs		
Timing mechanism	Direct spray and overflow		
Lifters	Direct		
Rocker arms	Direct		
Rocker arm shaft	Direct		
Piston pins	Oil splash through two slots in each piston pin boss		
Cylinder walls	Splash		
➔ Oil cooler	—	Optional	Standard
Oil pump type	Rotor		
Normal pressure (PSI)	60		
Capacity GPM @ RPM	16 @ 3200		
Inlet screen	Fixed		
Oil filter			
Type	Full-flow replaceable element		
Location	Left side of block		
Crankcase capacity			
Without filter change	8 qts		
With filter change	10 qts		

➔ Indicates revised specifications.

SPECIFICATIONS

	D351	D478	DH478
Manifolds			
Air inlet	Vertical downdraft with three ports for each bank		
Exhaust	Three ports for each bank of three cylinders		
Fuel System			
Fuel pump make and model	American Bosch with positive displacement gear transfer pump		
Type	Single-plunger distributor type		
Pump drive	Gear drive from camshaft		
Fuel strainer	Screen in fuel tank		
Secondary fuel filter	Replaceable element on frame rail		
Fuel filter	Throw-away type		
Fuel injector make	American Bosch		
Type	Multiple orifice		
Size	Four-hole .014" diameter		
Injector coolant	High-velocity water in cylinder head		
Fuel flow control	Fuel-metering sleeve in pump		
Injector actuation	High-pressure fuel from pump		
Injection pressure	3000 PSI		
Governor	Built in with mechanical fuel pump		
Type	Mechanical centrifugal		
Air cleaner			
Type and size	Oil-bath—1-quart		
Location	On engine		
Quantity used	1		
Exhaust System			
Engine to muffler	Dual 2.50 in OD steel tubing		
Muffler size (in)	5 1/16 OD x 21 1/2		6 5/8 OD x 28
Type	Straight-through resonator		Two-passage
Number used	2		
Features			Aluminized tubes and baffles

CLUTCH CONTROLS

Both mechanical linkage and hydraulic clutch controls are utilized. On models using the hydraulic control system (see chart below) a master cylinder and reservoir (integral with the brake master cylinder housing) contain hydraulic fluid which is forced through the hydraulic line when the clutch pedal is depressed. The fluid pressure actuates the slave cylinder which moves the clutch fork, releasing the clutch. Releasing the clutch pedal engages the clutch.

Hydraulically Actuated Clutches

MODEL APPLICATION		P10	C60, S60	LT50	M60, LT60	CLMT80	D50	NQ50	DXY60	ANQV60-80	EUW80
ENGINE APPLICATION		153 230	327	230 283	292 327	348 409	3-53	D351	4-53	D478 DH478	6V-53
Cylinder	Location	On Firewall									
	Size	1⅛" Diameter									
	Stroke	1½" Stroke									
Slave Cylinder	Location	R.H. Side of Clutch Housing									
	Size	1 1/16" Diameter									
	Stroke	1½" Stroke									
Clutch Fork		Drop-Forged Steel, Pivoted, Mounted on Ball								Lever on Clutch Shaft	

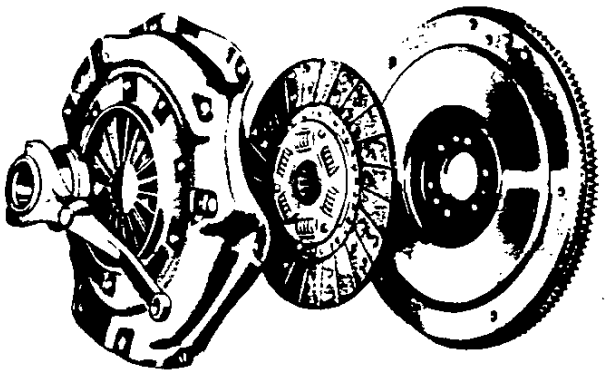
Mechanically Actuated Clutches

MODEL APPLICATION	133-134-135-13680	G10	P20-30	CK10-30	C50	S50	C60, S60
➤ENGINE APPLICATION	194 230 283 327	194 230	230 292	230 283 292 327*	230 283 292	230 292	292

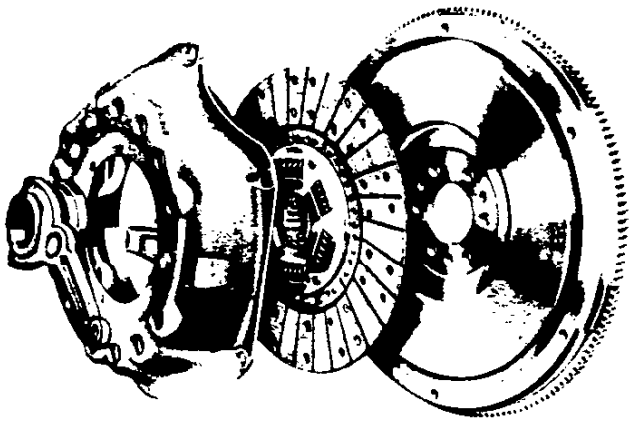
*C20-30 only.

Diaphragm-Spring Clutches

Chevrolet's diaphragm-spring clutches are well known for driving ease and dependability. The diaphragm spring operates with very light pedal pressure, yet directs uniformly high pressure to the pressure plate and clutch disc. Self-lubricating pilot bushing and permanently lubricated throw-out bearing require no maintenance between normal clutch overhauls.



Coil-Spring Clutches



Chevrolet's coil-spring clutches combine operating ease with high torque capacity and durability in severe truck service. Heat-treated coil springs direct pressure to the pressure plate and driven disc. Coil spring construction affords good ventilation for cooler operation and protection against burned facings. Pilot bushing and throw-out bearing are self-lubricated.

➤ Indicates revised specifications.

CLUTCH SPECIFICATIONS

Diaphragm Clutches

Clutch Size	➔ 9⅛"	➔ 10"	10"	10"	10 13/32"	11"
Engine Application	Std with 194 Six and 230 Six on 133–13580	Std on G10 Opt with 194 Six on 133–13580	Std with 283 Turbo-Fire V8 on 134–13680 with 3-speed transmission	Std with 153 Four on P10 Std with 230 Six on CK10–20	Std with 327 Turbo-Fire V8	Std with 230 Six on P20, CP30, CLSPT50 Std with 292 Six on CKP 10–30 Std with 283 V8 on CK10–50 Std with 327 V8 on C20-30 Std with 3–53 on D50
Clutch Springs						
Material	Spring steel					
Number used						
Total pressure (lbs)	1300–1600 R10 1700–1950 G10 1250 133–13580 (w/194 Six) 1500–1800 133–13580 (w/230 Six)	1700–1950	1750–1950	1325–1500	2100–2300	1450–1600
Driven Disc						
Type	Dry disc with two facings					
Number of plates						
Vibration dampers	6 Springs	6 Springs	12 Springs	6 Springs	10 Springs	6 Springs
Material	Woven asbestos composition					
Outside diameter	9⅛"	10"	10"	10"	10 13/32"	11"
Inside diameter	6⅛"	6"	6½"	6"	6½"	6½"
Thickness	.135"	.135"	.135"	.133"	.135"	.133"
Area (sq in)	71.8	100.54	90.7	100.53	103.5	123.7
Bearings						
Clutch-release type	Single-row ball					
Pilot type	Sintered-powered bronze bushing					
Flywheel Material	Cast iron					
Ring Gear						
Type	Cold-drawn steel					
Number of teeth	153	153	153	168	153	168

Coil Clutches

Clutch Size	11"	12"	12"	12" 2-plate	13"	14"
Engine Application	Std with D351 on Q50	Std with 292 Six on CLPST50, CLMST60	Std with D478 on ANQV60 Std with DH478 on ANQV80 Std with DH478 on ANQV60 Opt with D351 on Q50	Std with 409 V8	Std with 327 V8 on CLMST60 Std with 348 Sp V8 on CLMST60 Std with 348 V8 on CLMST80 Std with 4–53 on DXY60 Opt with D478, DH478 on ANQV60–80	Std with 6V-53 on EUW80
Clutch Springs						
Material	Heat-treated spring wire					
Number used	—	12	—	16	12	21
Total pressure (lbs)	—	1877	—	1980	2179	3255
Driven Disc						
Type	Dry disc with two facings					
Number of plates	1	1	1	2	1	1
Vibration dampers	—	6 Springs	—	6 Springs	8 Springs	10 Springs
Material	Woven asbestos composition					
Outside diameter	11"	11⅞"	12"	11⅞"	12⅞"	13¾"
Inside diameter	6½"	6¾"	7"	6¾"	7¼"	7¼"
Thickness	.135"	.140"	.137"	.140"	.150"	.187"
Area (sq in)	123.7	149.74	149.2	299.48	177.76	218
Bearings						
Clutch-release type	Single-row ball					
Pilot type	Single-row ball					
Flywheel Material	Cast iron					
Ring Gear						
Type	Cold-drawn steel					
Number of teeth	—	168	—	197	168 (327 & 348 V8's) 138 (4–53)	138

➔ Indicates revised specifications.

Standard Cooling System Specifications

Series	Transmission	Engine	Radiator					System Capacity (qt)	Pressure Cap (lb)	Fan (No. blades x diameter)
			Type	Height (in)	Width (in)	Thickness (in)	Frontal Area (sq in)			
133-13580	Synchromesh	194	tube & center	14.1	18.1	1.26	255	11.5	13	4 x 17⅝
		230	tube & center	15.5	20.8	1.26	323	11.5	13	4 x 17⅝
	Powerglide	194	tube & center	14.1	18.1	1.26	255	11.5	13	4 x 17⅝
		230	tube & center	15.5	20.8	1.26	323	11.5	13	4 x 17⅝
134-13680	All	283	tube & center	15.5	23.0	1.26	357	17	13	4 x 17⅝
		283	tube & center	15.5	23.0	1.26	357	17	13	5 x 18
	All	327	tube & center	15.5	23.0	1.26	357	17	13	5 x 18
G10	Synchromesh	194	tube & center	17.4	18.1	1.26	314	11.0	13	4 x 18
		230	tube & center	17.4	18.1	1.26	314	11.0	13	4 x 18
	Powerglide	194	tube & center	17.4	19.2	1.75	334	12.0	13	4 x 18
		230	tube & center	17.4	19.2	1.75	334	12.0	13	4 x 18
C-K10, C-K20, C30	Synchromesh	230	tube & center	17.4	18.1	1.26	314	11.5	13	4 x 19
		292	tube & center	17.4	25.2	1.26	439	13.0	13	4 x 19
C-K10	Synchromesh	283	tube & center	17.4	25.2	1.26	439	14.0	13	4 x 17⅝
C-K20, C30	Synchromesh	283	tube & center	17.4	25.2	1.98	439	14.0	13	4 x 17⅝
C10, C20	Powerglide	230	tube & center	17.4	25.2	1.98	439	12.0	13	4 x 19
		292	tube & center	17.4	25.2	1.98	439	13.5	13	4 x 19
		283	tube & center	17.4	25.2	1.98	439	15.5	13	4 x 17⅝
C20-30	All	327	tube & center	17.4	25.2	1.98	439	15.5	13	4 x 18
P10	Synchromesh	153	tube & center	14.1	18.1	1.26	229	8.25	13	4 x 17⅝
		230	cellular	20.7	19.7	2.00	229	14.0	7	4 x 17⅝
	Powerglide	153	tube & center	14.1	18.1	1.26	229	8.25	13	4 x 17⅝
		230	cellular	20.7	19.7	2.00	407	14.0	7	4 x 17⅝
P20, P30	All	230	cellular	19.9	21.4	2.00	426	14.0	7	4 x 20
C50, L50, S50	Synchromesh	230	tube & center	24.7	23.0	1.26	569	12.0	9	4 x 20
		292	tube & center	24.7	23.0	1.26	569	18.5	9	4 x 20
		283	tube & center	24.7	23.0	1.98	569	15.5	9	4 x 20
D50	Synchromesh	3-53	tube & center	24.7	23.0	1.26	569	21.5	9	6 x 20
P50	Synchromesh	230	cellular	19.9	23.6	2.47	469	13.0	7	4 x 20
		292	cellular	19.9	23.6	2.47	469	13.3	7	4 x 20
T50	Synchromesh	230	tube & center	24.7	23.0	1.98	569	18.5	9	4 x 20
		292	tube & center	24.7	23.0	1.98	569	18.5	9	4 x 20
		283	tube & center	24.7	23.0	1.98	569	18.5	9	4 x 20
Q50	Synchromesh	D351	tube & center	24.7	23.0	1.98	569	35.0	9	4 x 19¼
N50	Synchromesh	D351	tube & center	24.7	23.0	1.98	569	35.0	9	5 x 22
C60, L60, S60, M60	Synchromesh	292	tube & center	24.7	23.0	1.26	569	15.5	9	4 x 20
		327	tube & center	24.7	23.0	1.98	569	18.5	9	5 x 20
		348	tube & center	29.7	23.0	1.75	685	30.0	9	5 x 20
C60, S60	Powermatic	292	tube & center	24.7	23.5	2.62	581	22.0	9	4 x 20
		327	tube & center	24.7	23.5	2.62	581	22.0	9	5 x 20
		348	tube & center	29.0	23.5	2.62	684	30.0	9	6 x 20
D60, X60, Y60	Synchromesh	4-53	tube & center	24.7	23.0	1.98	569	21.5	9	6 x 20
T60	Synchromesh	292	tube & center	24.7	23.0	1.98	569	23.5	9	4 x 20
		327	tube & center	24.7	23.0	1.98	569	26.0	9	5 x 20
		348	tube & fin	24.0	28.7	2.25	689	37.5	9	5 x 20
A60, Q60, V60	Synchromesh	D478	tube & center	24.7	23.0	1.98	569	40.0	9	5 x 22
		DH478	tube & center	24.7	23.0	1.98	569	40.0	9	5 x 22
N60	Synchromesh	D478	tube & center	24.7	23.0	1.98	569	47.0	9	5 x 22
		DH478	tube & center	24.7	23.0	1.98	569	47.0	9	5 x 22
C80, L80, M80	Synchromesh	348	tube & center	29.7	23.0	1.98	685	28.5	9	5 x 20
		409	tube & center	29.7	23.0	2.62	685	30.0	9	6 x 20
T80	Synchromesh	348	tube & fin	24.0	28.7	2.25	689	37.5	9	5 x 20
		409	tube & fin	24.0	28.7	2.88	689	37.5	9	6 x 20
C80, M80	Powermatic	348	tube & center	29.0	23.5	2.62	684	28.5	9	6 x 20
T80	Powermatic	348	tube & fin	22.0	28.7	2.88	632	37.5	9	5 x 20
A80, Q80, V80	Synchromesh	DH478	tube & center	24.7	23.0	1.98	569	37.0	9	5 x 22
N80	Synchromesh	DH478	tube & center	24.7	23.0	1.98	569	43.0	9	5 x 22
E80, W80	Synchromesh	6V-53	tube & center	29.7	23.0	2.62	684	26.7	9	5 x 22
U80	Synchromesh	6V-53	tube & fin	24.0	28.7	2.88	689	34.5	9	5 x 22

Optional Heavy-Duty Cooling System Specifications

Series	Transmission	Engine	Radiator					System Capacity (qt)	Pressure Cap (lb)	Fan (No. blades x diameter)
			Type	Height (in)	Width (in)	Thickness (in)	Frontal Area (sq in)			
133-13580	All	194	tube & center	14.1	23.0	1.26	325	12	13	4 x 17⅛
		230	tube & center	15.5	23.0	1.26	357	12	13	4 x 17⅛
134-13680	All	283	tube & center	15.5	25.2	1.98	391	18	13	4 x 17⅛
		327	tube & center	15.5	25.2	1.98	391	18	13	5 x 18
C-K10	Synchromesh	230	tube & center	17.4	25.2	1.26	439	12.5	13	4 x 19
		292	tube & center	17.4	25.2	1.98	439	13.5	13	4 x 19
		283	tube & center	17.4	25.2	1.98	439	15.5	13	4 x 17⅛
C-K20, C30	Synchromesh	230	tube & center	17.4	25.2	1.26	439	12.5	13	4 x 19
		292	tube & center	17.4	25.2	2.62	439	14.0	13	4 x 19
		283	tube & center	17.4	25.2	2.62	439	16.0	13	4 x 17⅛
C50, L50, S50	Synchromesh	230	tube & center	24.7	23.0	1.98	569	15	9	5 x 20
		292	tube & center	24.7	23.0	1.98	569	15.0	9	5 x 20
		283	tube & center	24.7	23.0	1.98	569	20.0	9	5 x 20
C60, L60, S60, M60	Synchromesh	292	tube & center	24.7	23.0	1.98	569	15.0	9	5 x 20
C80, L80, M80	Synchromesh	348	tube & center	29.0	23.6	2.62	684	30.0	9	6 x 20

Radiator Shutters

Air-actuated radiator shutters are available as optional equipment on Series D60, D60-H and C-M-E-U-W80 models. Thermostat-controlled, the shutters automatically maintain uniform engine temperatures within precise limits.

In extreme-duty operations, engine life may be prolonged and fuel saved by maintaining proper engine temperature for optimum combustion efficiency.

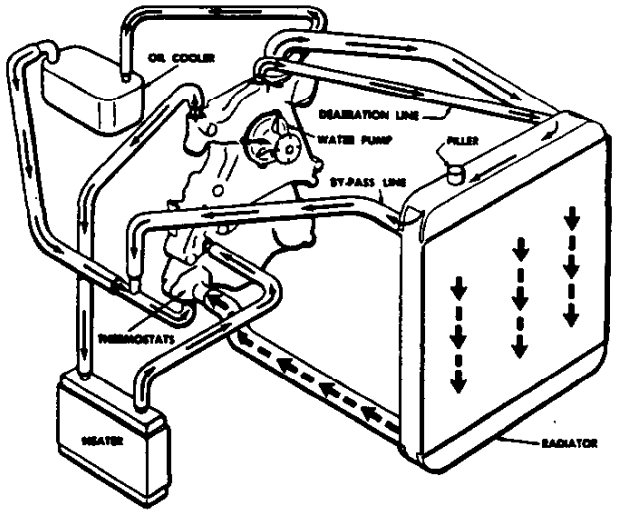
Radiator shutters also shorten engine warm-up periods.

Torq-Flow Cooling System

The Posi-Temp cooling system used in the D351, D478 and DH478 diesel engines permits a much closer control over coolant temperatures within the engine by reducing coolant temperature fluctuation. A relatively constant coolant temperature is maintained at a level required for highest engine operating efficiency.

Radiator shutters are not utilized because the coolant is not permitted to flow through the radiator when the engine temperature range is such that the two full blocking type thermostats remain closed. A centrifugal-type water pump with a capacity of 106 gallons per minute at 3200 rpm is used to provide a large flow of coolant at high velocity.

The flow is from the pump to the engine block and heads (smaller amounts circulate through oil cooler, optional on D478 and standard on DH478, and heater core) and through radiator inlet hose to radiator upper tank. Entrained air is allowed to pass from heads through a deaeration line to the radiator upper tank. The flow is then across the upper tank into a bypass line and back to the water pump. The coolant flows into and out of the radiator via the upper tank but is blocked from flowing through the core by closed thermostats.



Light arrows represent flow with thermostats closed and heavy arrows indicate flow with thermostats open.

UEL TANKS

FUEL TANK SPECIFICATIONS

All fuel tanks are of 2-piece seam-welded construction. Tanks for Series D60 and M80 trucks are made of 18-gauge steel; S50 and S60 tanks are of 16-gauge steel; all others are of 20-gauge steel.

Truck Series	Tank Location	Tank Capacity (gallons)
Chassis-Cab Models		
C10-60, L50-60, M60, K10-20	In cab, back of seat	18.5 **a**
D50-60, X60, ACLMQV80	In cab, back of seat	21
Q50, AQ60	In cab, back of seat	18.5 **c**
V60	In cab, back of seat	18.5
EUW80	On top of frame side rail	18
T50-80, Y60, N50	Outside right frame side rail	18
N60-80	Outside right frame side rail	18 **d**
Panel & Carry-all Models		
C10, K10	Inside frame, behind rear axle	20.5
C30	Outside left frame side rail	18
Cowl & School Bus Models		
C10, C20	Inside frame, behind rear axle	20.5
C30	Outside left frame side rail	21.0
C50, C60	Outside right frame side rail	18.0
S50, S60	Outside right frame side rail	30.0
Forward-Control Models		
P10	Inside frame, behind rear axle	20.5
P23, P33	Outside right frame side rail	15.5
P25, P26	Outside right frame side rail	18.0 **b**
P35, P36	Outside right frame side rail	18.0 **b**
P50	Outside right frame side rail	20

a—21 for optional tank **b**—30 for optional tank **c**—20 for optional tank **d**—31 for optional tank

ENGINE VENTILATION

Two basic methods of engine crankcase ventilation are used in Chevrolet truck gasoline engines—positive and closed positive. Positive Crankcase Ventilation is standard on all Series 10 through 30, except forward controls, but is included on the G10 and El Camino. Closed Positive Crankcase Ventilation is standard on Series 50 through 80, all forward-control models and optional at extra cost on the models listed above.

The Positive Crankcase Ventilation system has an open breather cap at the filler plus a tube leading from the rocker cover to the intake manifold for venting fumes. This tube includes a valve and a metered orifice to prevent flash-back.

The Closed Positive Crankcase Ventilation system has a **closed** breather cap at the filler and a tube from the air cleaner to the rocker arm cover that enters the cover near the filler location. It also provides a tube with a metered orifice extending from the rear of the rocker arm cover to the intake manifold for venting fumes.

Since both systems use manifold vacuum to permit easy flow of fumes back to the intake manifold, fumes could be forced out of the filler breather cap of the Positive Crankcase Ventilation system into the open air under full throttle conditions (no vacuum). The Closed Positive Crankcase Ventilation system would return these fumes to the air cleaner where in-rushing air of full throttle conditions would carry the fumes back into the carburetor.

The Closed Positive Crankcase Ventilation system has been approved by the State of California.

➔AIR CLEANERS

Two basic types of air cleaners are used in various sizes and capacities to meet the requirements of various cab and engine compartment configurations.

Disposable oil-treated paper element type air cleaners are base equipment for series G10, CK10–20, C30. The oil-treated paper element air cleaner is also used as the secondary filter in all optional 2-stage air cleaners. Oil-bath air cleaners are base equipment on all other models and available optionally on series G10, CK10–20, C30. Oil-bath air cleaners are designed to provide a longer operational interval and reduce maintenance costs.

A heavy-duty two-stage air cleaner system is available optionally on all conventional cab gasoline models (Series C10–80, K10–20, M60–80). A closed-positive crankcase ventilation system is incorporated into this air cleaner where it is not base engine equipment. This air cleaner uses an oil-treated paper element secondary cleaner and an oil-bath pre-cleaner.

Six-cylinder engines with the two-stage system have the distributor advance lever opening sealed with a rubber boot and a dust shield to prevent breaker-point dust contamination. Air is let in either from the cowl plenum chamber or from the engine compartment. A thermostatic valve automatically selects warmed air from the engine compartment at temperature below 80°F. and mixes cooler air from the plenum chamber to 100°F. With temperature over 100°F. all air is from the plenum chamber.

The two-stage air cleaner system is highly efficient at all vehicle and engine speeds. The oil-treated paper element is effective at all engine speeds. This combination provides cleaner air than is possible with either type of cleaner alone. In extremely dusty operations a small percentage of dust will pass to the engine under certain conditions. The effect of the two air cleaners in series is to provide cleaner air for added engine protection and to extend the operational interval about seven times that of a single cleaner system. The high level air inlet used with conventional cab gasoline and G10 models further extends the operational interval by reducing the dust intake.

In addition to the extended service life and reduced maintenance provided by the two-stage air cleaner system these other benefits are also derived:

Reduced combustion chamber deposits.

Longer spark plug life.

Reduced amount of abrasives in engine oil and filter for longer engine life.

➔ Indicates revised specifications.

GMC's "Posi-Temp" Cooling System

Reduces maintenance; minimizes cooling horsepower requirements

WHAT DOES THE ENGINE WANT in the way of a cooling system? This was the over-riding criteria for GMC Truck & Coach Division's engineers in the design of the cooling system for their Toro-Flow diesels and currently for all Detroit Diesel engines installed in GMC trucks. Then, bearing in mind that these engines were to be used primarily in relatively low-cost truck sizes, cost of giving the engine what it wanted was a definite factor.

Engines, talking through performance records, have expressed preferences for the following:

1. Fast warm-up of the coolant.
2. A substantially constant-volume, high-velocity flow.
3. Provisions for deaeration.
4. Minimum outlet-to-inlet temperature spread.
5. Minimum fluctuations of coolant inlet temperature.

So GMC engineers set out to please their Toro-Flow engines. The result was their "Posi-Temp" cooling system. While these features will be discussed separately, obviously, they are interrelated. Also, while the chief concern here is the "plumbing," design of the cooling system within the engine was also aimed at meeting this criteria. It must be stressed that success of the system depends on compatibility of both internal and external design and thus the system is not necessarily suitable for other engines.

Bypassing the radiator is an accepted, practical method of speeding warmup. One decision to make is "How much flow to bypass?" Too much bypass water can interfere with flow through the radiator and upset the cooling effect. Too little, restricts flow through the engine during warmup and broadens the outlet-to-inlet temperature differential.

Second decision to make is should a by-pass-type thermostat be used? It was decided that a readily available conventional thermostat with a permanent by-pass of proper size was most desirable.

In working out the system design for the Toro-Flow engines, the by-pass was sized such that with the thermostat open, it handled about 40% of total flow. With the stat closed, it handles about 60% of the maximum flow. This proportioning was found to work best.

High-Flow, High-Velocity

A high-volume, rapid water flow is very effective in removing heat from hot engine parts. The short period of contact does not heat the water much and what heat is picked up is carried at a fast rate out of the engine for dissipation. The fast flow also scrubs all areas, insuring against dead spots in the system.

To get the high flow rate, a circulating pump with a capacity of 106 gpm at 3200 rpm was used. Also, both the internal and external water passages were designed for minimum restriction. For example, in view of the projected moderate heat rise across the engine, a simplified flow pattern through the engine could be used—back through the block, up into the head and then forward to the outlet.

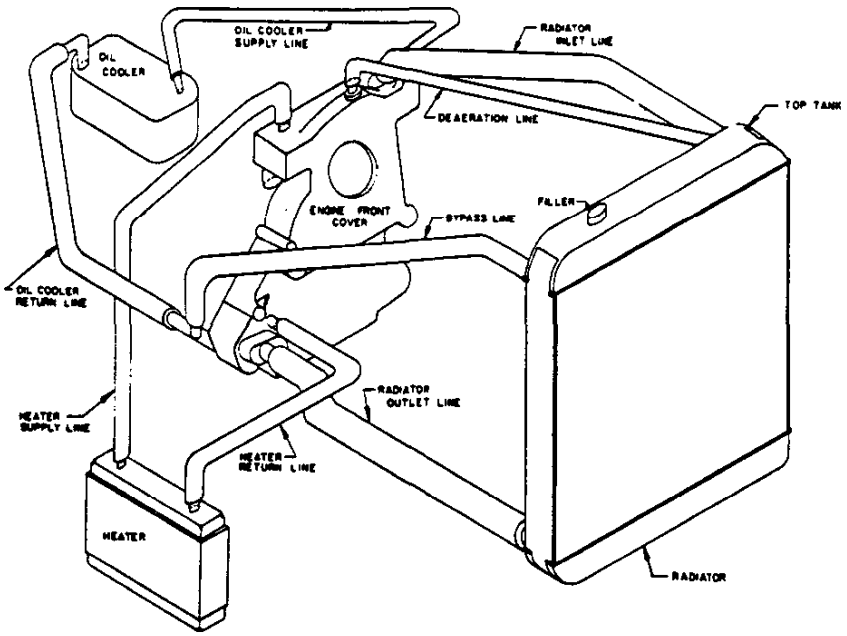


Diagram outlines components of GMC's Posi-Temp cooling system. Note deaeration line which runs to radiator top tank from a high point on engine. Water, with any accumulated air, is continually running in this line, purging all passages.

Getting Rid of Air

Air gets into practically all cooling systems and for best operation must be removed.

In the Toro-Flow engines, constant deaeration is achieved by system design. First, the thermostat was moved to the water inlet side of the cooling system where it blocks flow from the bottom of the radiator to the water pump. This means that the flow passage from the engine's water outlet to the radiator top tank is always unrestricted. Entry is at one side of the top tank. There is also a small deaeration line from a high spot in the engine to the same side of the tank.

At the opposite end of the tank there is a small water line that runs to pump suction. This line connects beyond the thermostat and, thus, flow through it is always open and independent of 'stat action. With this arrangement, there is always a modest flow of water across the top tank. As this water flows from the engine in both the outlet and deaeration lines, it carries with it any air in the system and this is vented to atmosphere at the radiator filler cap.

Holding Temperature Differentials

Here's the crux of efficient system operation. Engines like to operate continually at their design temperature regardless of ambient and operating conditions. Further, they prefer a narrow and reasonably constant temperature difference between water outlet and inlet. Under these conditions, the engine stabilizes dimensionally and with respect to lubrication, combustion chamber temperatures are optimum and there are the least thermal stresses between top and bottom of the cylinders.

System features discussed so far all contribute to the objective of holding a narrow temperature rise across the engine. Here's how they work together. Low flow restriction and high pump capacity combine to put a lot of water through the engine. With this flow volume, water temperature rise is moderate. Even during warm-up there is substantial flow.

Putting the thermostat in the return flow from radiator to engine gives positive control of inlet temperature. The separate deaeration system permits use of a blocking-type thermostat without any bleed hole. With the 'stat closed, there is no flow down through the radiator core (deaeration flow is all in the top tank in which practically no cooling occurs).

The thermostat allows only enough flow through the radiator core to maintain the desired inlet temperature. As to outlet temperature control, heat rise through the engine has been found to vary between 5F to 8F under most conditions and only about 10F at the extremes. Thus, outlet temperatures vary only within a 5F range. Most thermostats at the outlet won't do any better.

By limiting cooling to actual needs there is a reduction in cooling air requirements. Sufficiently large radiator and extreme attention to factors influencing air flow have reduced power required for radiator air flow. This is evidenced by use of a fan requiring only 5 hp at 3200 rpm. This low fan horsepower absorption is an added bonus of this system.

Chevrolet truck frames are designed to support the load, the power train, the steering mechanism and to maintain correct alignment of body and chassis components.

The ability of a truck to carry a load is due in part to the strength of the frame. Since all frames are not of the same size, shape or made of the same material, it is necessary to consider a number of factors when comparing relative strength. Three such factors are—1) Section Modulus, 2) Yield Strength and 3) R.B.M. (Resistance Bending Moment).

Section Modulus

Section modulus is an indication of frame strength based on the height, width, thickness and configuration of the side rail. All other things being equal, the frame with the higher section modulus will have the greater strength and stiffness.

Yield Strength

Yield strength is a measurement of the strength of the frame material. Chevrolet frames are of three general types; non-heat-treated steel, high-tensile steel and heat-treated alloy steel. High-tensile steel provides a frame of greater strength on certain models. The inherent strength of the material allows a greater payload with no increase in section modulus. Heat-treated alloy steel gives a frame of maximum strength with no increase in weight.

Yield strength then is the maximum load which can be put on a frame and still have it return to its original position when the load is removed.

R.B.M.—Resistance Bending Moment

Since section modulus indicates the strength of frames of the same material and yield strength is used to compare strength of frames of different material, it is the R.B.M. which can be used in comparing strength of frames of different sizes and materials. To calculate the R.B.M. of any frame, multiply the section modulus by the yield strength.

R.B.M. = Section Modulus × Yield Strength.

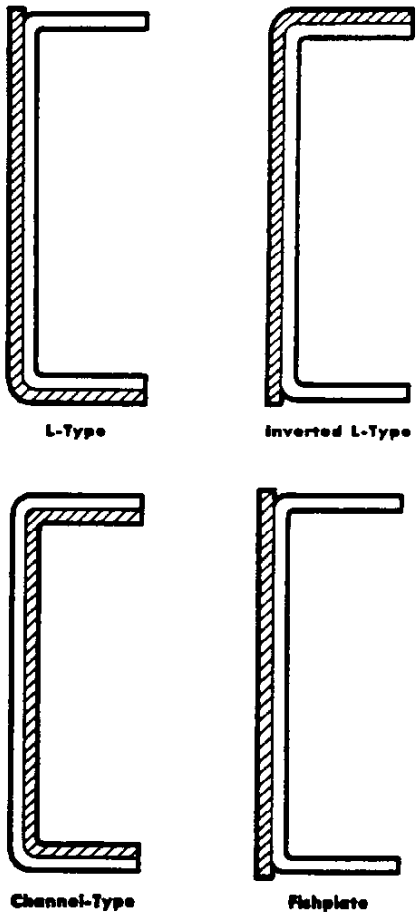
The R.B.M. for all Chevrolet truck frames can be found in the chart on the following page.

Crossmembers

The two primary functions of crossmembers are to keep the frame side rails in place and prevent buckling and resist frame twisting.

Frame Reinforcements

The strength of any frame can be substantially increased with the use of reinforcements. Frame reinforcements are normally of the same material as the frame rails. There are four types of reinforcements—L-type, inverted L-type, channel-type and fishplate. Reinforcements on Chevrolet trucks are of the L-type, inverted L-type or channel type.



Frame Reinforcement Locations

Series	Type	From	To
All Tilts	Inverted "L"	Ahead of front spring front hanger	Behind rear spring front hanger
Tandems	Outside Channel*	Behind front spring front hanger	End of frame
Conventional & LCF Cabs	Inverted "L"	Behind front spring rear hanger	Behind rear spring front hanger

*V80 models utilize "L"-type reinforcements.

RAME SPECIFICATIONS

GASOLINE MODELS

Series	Side Rail Dimensions			Section Modulus		RBM
	Depth (inches)	Width (inches)	Thickness (inches)	Rail	With Outer Reinforcement	
133-134-135-13680	4.18	6.00	Inner .081–.097 Outer .109–.129	—	—	—
CP10	6.03	2.42	.156	2.98	—	116,220
C25	6.11	2.46	.194	3.71	—	144,690
P20, P30	7.21	2.72	.194	5.02	—	195,780
C36	7.20	2.77	.194	5.05	—	196,950
C38	8.18	2.97	.224	7.29	—	284,310
K14	7.09	2.71	.141	3.62	—	141,180
K15, K25	7.18	2.76	.186	4.85	—	189,150
CPLS50, L65	9.12	3.00	.250	9.38	—	365,820
C61, CL62, CL63, C65, L66	9.12	3.00	.250	9.38	18.91	365,820
➤C61, CL62, CL63, C65, L66 High-tensile steel frame	9.12	3.00	.250	—	18.91	945,500
C68, L69	9.18	3.03	.281	10.59	18.91	413,010
➤C68, L69 High-tensile steel frame	9.18	3.03	.281	—	18.91	945,500
CL60 With heavy-duty frame Chassis-Cab models only (Except L65)	9.24	3.06	.312	11.80	18.91	460,200
CL60 Cowl models	9.12	3.00	.250	9.38	—	365,820
CL80	9.24	3.06	.312	11.80	18.91	460,200
➤CL80 High-tensile steel frame	9.24	3.06	.312	—	18.91	945,500◈
T50, T60	9.18	3.03	.281	10.59	15.95	413,010
➤T60 High-tensile steel frame	9.18	3.03	.281	—	15.95	797,500◈
S62	9.18	3.03	.281	10.59	—	413,010
S64, S67, S69	9.24	3.06	.312	11.80	—	460,200
T80	9.18	3.30	.281	10.59	15.95	413,010
➤T80 High-tensile steel frame	9.18	3.30	.281	—	15.95	797,500◈
M60, M80	9.24	3.06	.312	23.34*	—	910,260

* Outer frame reinforcements are standard equipment on M60 and M80 models. ◈ Calculated with reinforcements.

DIESEL MODELS

Series	Side Rail Dimensions			Section Modulus		RBM
	Depth (inches)	Width (inches)	Thickness (inches)	Rail	With Outer Reinforcement	
D51, D52, D53, D55	9.12	3.00	.250	9.38	—	365,820
Q51, Q52, Q53, Q55	9.12	3.00	.250	9.38	—	365,820
Q58	9.18	3.03	.281	10.59	—	413,010
N52, N53, N56, N58, N59	9.18	3.03	.281	10.59	—	413,010
A62, A63, A64, A66	9.12	3.00	.250	9.38	18.91	365,820
A67, A69	9.24	3.06	.312	11.80	18.91	460,200
A68	9.18	3.03	.281	10.59	18.91	413,010
D61, D62, D63, D65, D68	9.24	3.06	.312	11.80	18.91	460,200
N62, N63, N66, N67, N68, N69	9.18	3.03	.281	10.59	15.95	413,010
Q61, Q62, Q63, Q65	9.12	3.00	.250	9.38	18.91	365,820
Q67, Q69	9.24	3.06	.312	11.80	18.91	460,200
Q68	9.18	3.03	.281	10.59	18.91	413,010
V63, V65, V68	9.24	3.06	.312	23.34*	—	910,260
X63, X65, X68	9.24	3.06	.312	23.34*	—	910,260
Y62, Y63, Y66, Y68, Y69	9.18	3.03	.281	10.59	15.95	413,010
A82, A83, A86, A87, A88, A89	9.24	3.06	.312	11.80	18.91	460,200
E82, E83	9.24	3.06	.312	11.80	18.91	460,200
➤E82, E83 High-tensile steel frame	9.24	3.06	.312	—	18.91	945,500◈
N82, N83, N86, N87, N88, N89	9.18	3.03	.281	10.59	15.95	413,010
Q81, Q82, Q83, Q85, Q87, Q88, Q89	9.24	3.06	.312	11.80	18.91	460,200
U82, U83	9.18	3.03	.281	15.95*	—	622,050
➤U82, U83 High-tensile steel frame	9.18	3.03	.281	15.95*	—	797,500◈
V83, V85, V88	10.06	3.49	.312	14.66	23.28	571,740
➤V83, V85, V88 Heat-treated steel frame	10.06	3.50	.312	14.66	24.30♦	1,172,800
W83, W85, W88	9.24	3.06	.312	23.34*	—	910,260

* Outer frame reinforcements are standard equipment on V60, X60, U80 and W80. ♦ V88 only.
◈ Calculated with reinforcements. ➤Indicates revised specifications.

GASOLINE MODELS

Series	Number of Structural Crossmembers	Width Over Rails		Overall Length of Rail With Extension (inches)
		Front (inches)	Rear (inches)	
133-134-135-13680	3	35.60	42.71	145.35
C14 (Pickups and Chassis-Cabs)	7	28.20	33.96	179.78
C14 (Cowls, Panels and Carryalls)	8	28.20	33.96	179.78
P13	7	28.10	33.96	166.78
P23, P33	5	34.00	34.00	182.49
P25, P35	5	34.00	34.00	206.49
P26, P36	6	34.00	34.00	230.49
C15	7	28.20	33.96	199.78
C25	7	28.28	34.04	199.78
C36	6	28.28	33.96	211.28
C38	7	28.28	33.96	235.28
K14 (Pickups and Chassis-Cabs)	5	28.16	33.96	179.78
K14 (Panels and Carryalls)	6	28.16	33.96	179.78
K15, K25	5	28.26	34.02	199.78
P57	5	33.00	34.00	235.81
P58	6	33.00	34.00	265.81
C51, C61	5	33.00	34.00	198.81
C81	5	33.12	34.12	198.81
C52, C62	5	33.00	34.00	223.81
C82	5	33.12	34.12	223.81
L52, L62	5	33.00	34.00	198.81
L82	5	33.12	34.12	198.81
C53, C63	5	33.00	34.00	235.81
C83	5	33.12	34.12	235.81
L53, L63	5	33.00	34.00	223.81
L83	5	33.12	34.00	223.81
S53	5	33.00	33.50	235.81
C55, C65	6	33.00	34.00	265.81
C85	6	33.12	34.12	265.81
L56, L65, L66	6	33.00	34.00	260.06
L86	6	33.12	34.12	260.06
C68, L69	9	33.06	34.06	330.06
C88	9	33.12	34.12	330.06
S62	9	33.06	34.06	223.81
S64	9	33.12	34.12	357.06
S67	10	33.12	34.12	385.06
S69	10	33.12	34.12	411.06
T52	5	53.30	34.06	195.94
T53	5	53.30	34.06	207.94
T56	5	53.30	34.06	243.94
T58	6	53.30	34.06	255.94
T59	8	53.30	34.06	319.06
T62, T82	5	53.30	34.06	195.94
T63, T83	5	53.30	34.06	207.94
T66, T86	5	53.30	34.06	243.94
T68, T88	6	53.30	34.06	255.94
T69	8	53.30	34.06	285.94
M63, M83	6	33.12	34.68	247.56
M65, M85	7	33.12	34.68	277.56
M68, M88	8	33.12	34.68	307.56

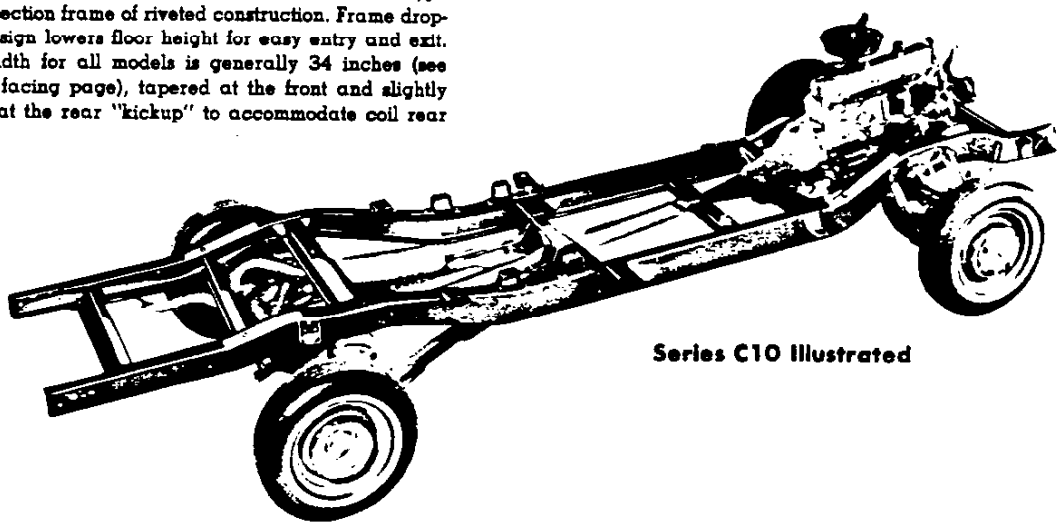
RAME SPECIFICATIONS

DIESEL MODELS

	Number of Structural Crossmembers	Width over Rails		Overall Length of Rail (inches)
		Front (in)	Rear (in)	
D51	6	33.00	34.00	198.81
D52	6	33.00	34.00	223.81
D53	6	33.00	34.00	235.81
D55	7	33.00	34.00	265.81
N52	6	53.30	34.06	195.94
N53	6	53.30	34.06	207.94
N56	6	53.30	34.06	243.94
N58	7	53.30	34.06	255.94
N59	9	53.30	34.06	319.06
Q51	6	33.00	34.00	198.81
Q52	6	33.00	34.00	223.81
Q53	6	33.00	34.00	235.81
Q55	7	33.00	34.00	265.81
Q58	10	33.06	34.06	330.06
A62	6	33.00	34.00	198.81
A63	6	33.00	34.00	223.81
A64	7	33.00	34.00	260.01
A66	7	33.00	34.00	265.81
A67	9	33.12	34.12	330.06
A68	9	33.06	34.06	310.93
A69	9	33.12	34.12	335.01
D61	6	33.12	34.12	198.81
D62	6	33.12	34.12	223.81
D63	6	33.12	34.12	235.81
D65	7	33.12	34.12	265.81
D68	10	33.12	34.12	330.06
N62	6	53.30	34.06	195.94
N63	6	53.30	34.06	207.94
N66	6	53.30	34.06	243.94
N67	9	53.30	34.06	307.06
N68	7	53.30	34.06	255.94
N69	9	53.30	34.06	319.06
Q61	6	33.00	34.00	198.81
Q62	6	33.00	34.00	223.81
Q63	6	33.00	34.00	235.81
Q65	7	33.00	34.00	265.81
Q67	9	33.12	34.12	335.01
Q68	10	33.06	34.06	330.06
Q69	10	33.12	34.12	356.06
V63	6	33.12	34.68	247.56
V65	7	33.12	34.68	277.56
V68	8	33.12	34.68	307.56
X63	7	33.12	34.68	247.56
X65	8	33.12	34.68	277.56
X68	9	33.12	34.68	307.56
Y62	6	53.30	34.06	195.94
Y63	6	53.30	34.06	207.94
Y66	6	53.30	34.06	243.94
Y68	7	53.30	34.06	255.94
Y69	9	53.30	34.06	319.06
A82	6	33.12	34.12	198.81
A83	6	33.12	34.12	223.81
A86	7	33.12	34.12	265.81
A87	9	33.12	34.12	330.06
A88	9	33.12	34.12	310.93
A89	9	33.12	34.12	335.01
E82	5	33.12	34.12	198.81
E83	5	33.12	34.00	223.81
N82	6	53.30	34.06	195.94
N83	6	53.30	34.06	207.94
N86	6	53.30	34.06	243.94
N87	9	53.30	34.06	307.06
N88	7	53.30	34.06	255.94
N89	9	53.30	34.06	319.06
Q81	6	33.12	34.12	198.81
Q82	6	33.12	34.12	223.81
Q83	6	33.12	34.12	235.81
Q85	7	33.12	34.12	265.81
Q87	9	33.12	34.12	335.01
Q88	10	33.12	34.12	330.06
Q89	10	33.12	34.12	356.06
U82	6	53.30	34.06	195.94
U83	6	53.30	34.06	207.94
V83	7	31.36	34.12	243.82
V85	7	31.36	34.12	265.82
V88	7	31.36	34.12	308.82
W83	7	33.12	34.68	247.56
W85	8	33.12	34.68	277.56
W88	9	33.12	34.68	307.56

SERIES C10, P10, C20

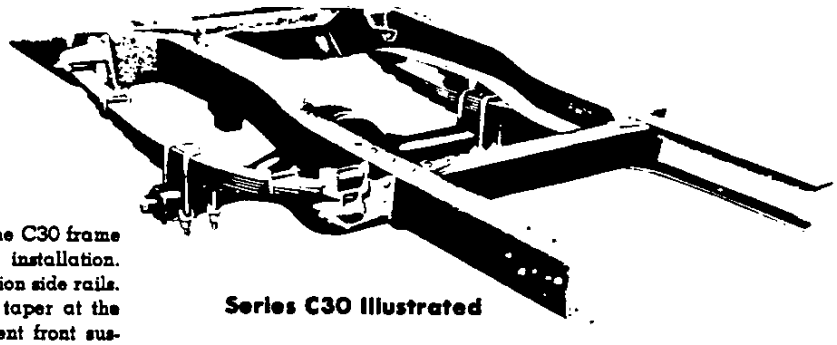
All Series C10, P10, and C20 models have a ladder-type channel-section frame of riveted construction. Frame drop-center design lowers floor height for easy entry and exit. Frame width for all models is generally 34 inches (see chart on facing page), tapered at the front and slightly widened at the rear "kickup" to accommodate coil rear springs.



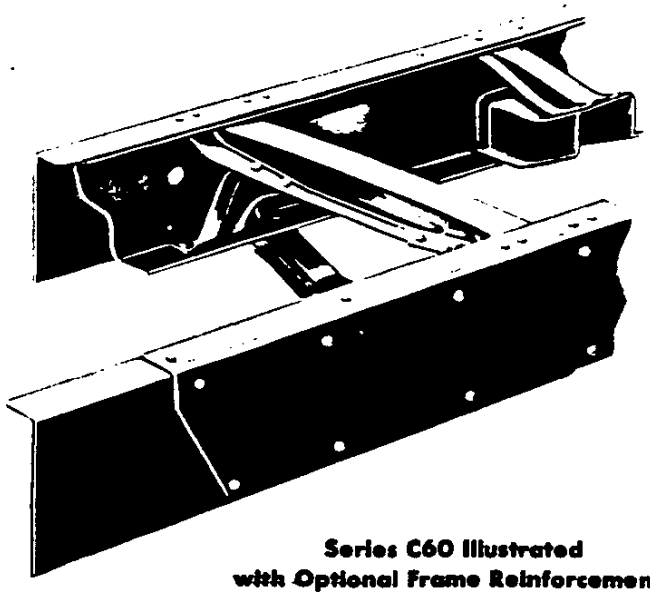
Series C10 Illustrated

SERIES C30

Also of the drop-center ladder-type design, the C30 frame is 34 inches wide to simplify special body installation. Crossmembers are riveted to the channel-section side rails. Like the lighter models, Series C30 frames taper at the front to accommodate coil spring independent front suspension. Leaf springs are used at the rear.



Series C30 Illustrated



Series C60 Illustrated with Optional Frame Reinforcements

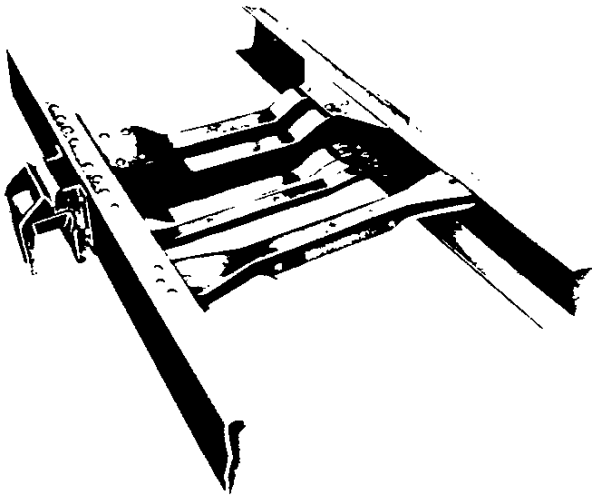
SERIES 50, 60, 80 (Except Tandems and Tilt Cabs)

Conventional and LCF 50 through 80 frames feature straight full-channel side rails to form a rugged ladder design with 34-inch over-all width. Crossmembers are of tough alligator-jaw design. Rear spring front hangers are connected by a massive arched crossmember. Gusset-braced channel crossmembers reinforce the rear spring rear hanger position.

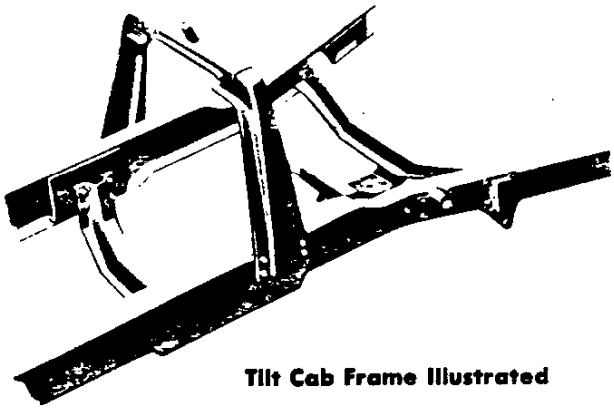
RAMES

SERIES 80 FRAME

Two back-to-back drop-center channel-section rear crossmembers are standard on Series 80 frames for extra strength and trailer kingpin clearance. Series 80 frames are available as optional equipment for all Series 60 gasoline models except Cowls and School Buses.



Series 80 Rear Crossmember Illustrated



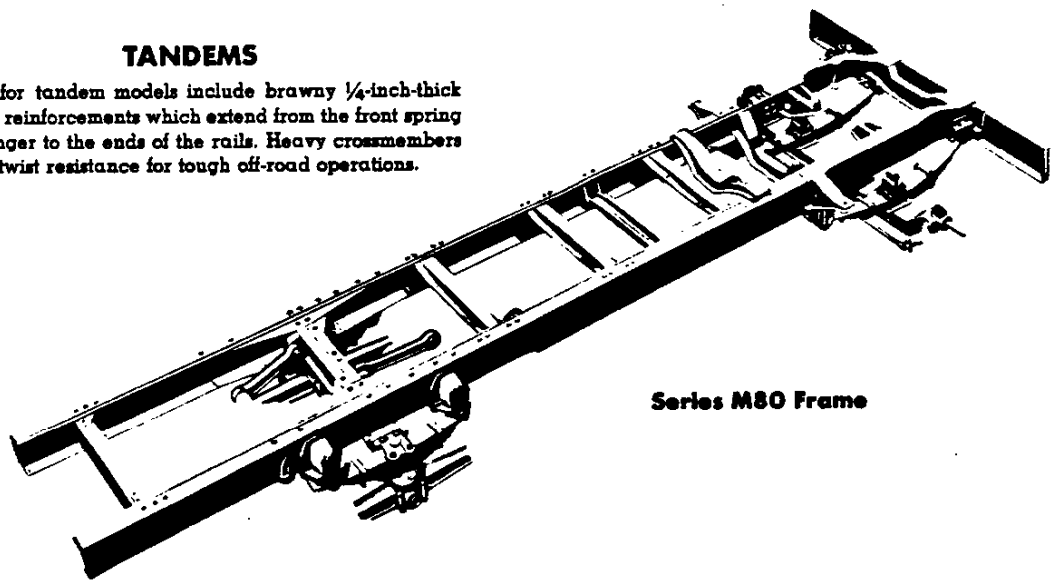
Tilt Cab Frame Illustrated

TILT CABS

Frames for tilt cabs are similar to those of conventional models except in the forward section. Side rails flare at the front to provide cab support at the pivot mounts. A heavy-gauge crossmember arches over the clutch housing to support and anchor the rear of the cab in driving position. Frame for Series U80 includes a ¼-inch-thick reinforcement.

TANDEMS

Frames for tandem models include brawny ¼-inch-thick side rail reinforcements which extend from the front spring rear hanger to the ends of the rails. Heavy crossmembers provide twist resistance for tough off-road operations.



Series M80 Frame

MANUAL STEERING

Specifications

Series	133-134-135-13680	610	CP10 C20-30	K10-20	P20-30	CKLPQ-850, ACDLM-QSVX60	ACEL-QV80	T50, NT60, NTU80	NTU80
Steering System Type	Manual Recirculating ball								
Ratios									
Gear	24:1	20:1	24:1	24:1	27.7:1	28:1	28:1	28:1	32.5:1
Overall	26.2:1	25:1	33:1	28.7:1	27.9:1	30:1	30:1	30:1	32.0:1
Mounting	Attached to front suspension crossmember	On frame side rail							
Steering Shaft Type	Single		Multiple P10 Single C10-30	Single		Multiple LS50, LS60 & Cowls Single All other Models	Multiple AEL80 Single CQV80	Single	
Pitman Shaft	Cast bronze								
Bushing	Nylon								
Location	On frame	Straddle mounted in steering gear housing							
Diameter (in)	1.12	.97	1.12	1.12	1.37	1.37	1.50	1.38	1.38
Steering Wheel Type	2-Spoke							3-Spoke*	
Diameter (in)	16.5	17	17	17	19	19	19	20	20

* 22-inch 3-spoke steering wheel available as an option at extra cost on N60 and N80 models.

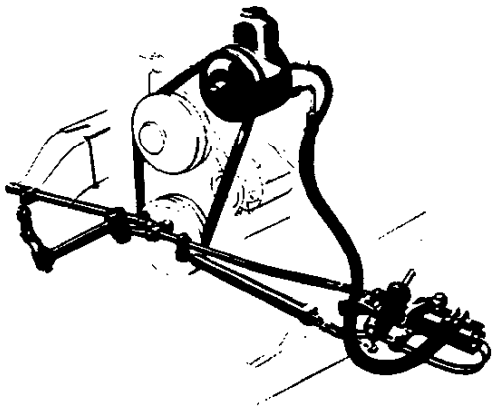
POWER STEERING

Medium- & Heavy-Duty Power Steering

Chevrolet's linkage-type power steering is standard on M-W80 Tandems and available as a regular production option on all other Series 60 and 80 models. New ease and fingertip steering control are provided because up to 80 percent of the steering work is done by hydraulic power. Maneuvering a heavily loaded truck in a small space becomes much easier, and straightaway highway travel is less fatiguing. In addition, power steering effectively damps road shock and vibration at the steering wheel.

A constant-flow hydraulic pump provides hydraulic pressure. A higher flow-rate hydraulic pump is used on Series 80 models with the optional 11,000-lb front axle. The control valve mounted on top of the steering gear reacts to movement of the steering wheel and regulates the flow of fluid to the power cylinder.

The control valve directs fluid under pressure to either the left or right side of the piston in the power cylinder, thus providing assistance for both left and right turns. Manual steering, in case the system is inoperative, is always available.



Typical Light-Duty Installation

Light-Duty Power Steering

Chevrolet linkage-type power steering is now available, for light-duty models, as a kit for easy dealer installation. The kit contains the same components as the factory-installed unit and fits all 1963, 1964 and 1965 six- and eight-cylinder models in the 10 through 30 Series (except Forward Control and Four-Wheel Drive Models). The unit cannot be used on previous models as it is not adaptable to trucks equipped with torsion-bar front suspension.

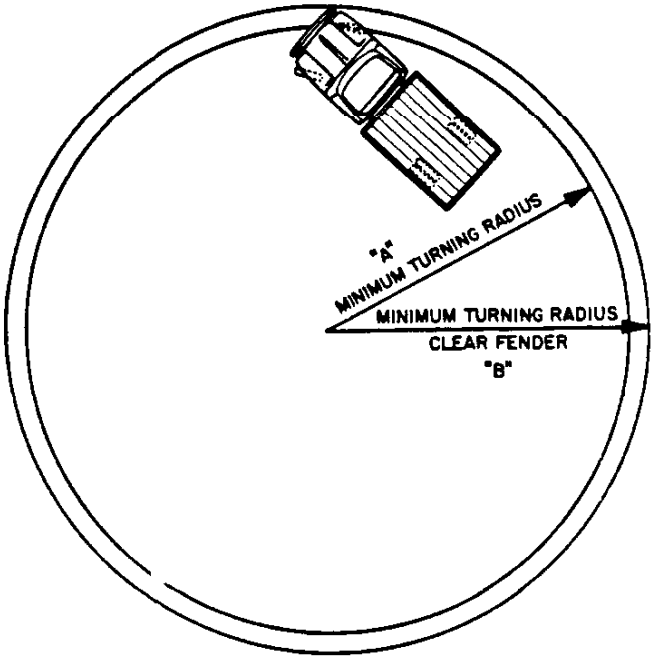
Complete installation materials are provided, including attaching parts and instructions. The relay rod, power cylinder, control valve and hoses are assembled as a single unit. Installation requires only about 3½ hours.

Light-duty power steering helps to combat driver fatigue and allows him to maneuver the truck quite easily in tight spots and on long hauls. Power steering also dampens road shock and vibration at the steering wheel, provides extra comfort and ease of handling the vehicle.

RNING RADIUS

nension A is measured to edge of front tire at outside circle, indicating radius clearance needed at curb ght.

nension B is measured to outer extremity of truck nt bumper or fender), indicating required wall-to-wall rance radius.



TURNING RADIUS

(Multiply radius by 2 to determine turning circle diameter.)

Series	Wheelbase (inches)	Radius A (feet)	Radius B (feet)
;12	90	16.3	17.7
;T52, TY62	97	17.6	19.0
;62, NTU82	97	17.9	19.3
;13	102	19.5	20.9
;23	104	18.3	19.8
;33	104	18.2	21.3
;T53, TY63	109	19.2	20.6
;63, NTU83	109	19.5	20.8
;14	115	21.4	22.9
;14	115	23.9	25.3
;25	125	21.1	22.5
;35	125	21.0	22.4
;15	127	23.2	24.5
;25	127	22.6	24.1
;25	127	25.9	27.2
;36	133	23.0	24.5
;DQ51, L52, NT56, ;DQ61, AL62, NTY66, ;61, L62	133	22.2	23.7
;61, A62	133	20.7	....
;66	133	22.6	....
;26	137	22.7	24.1
;36	137	22.6	24.0
;DQ52, L53, N58, T58, ;DQ62, AL63, TV68, ;62, L63, T68	145	23.8	25.3
;68, N68, W63	145	24.2	25.5
;62, A63	145	22.1	....
;38	157	25.3	26.9
;DQ853, P57, ;DMQSVX63, M83	157	25.4	26.9

Series	Wheelbase (inches)	Radius A (feet)	Radius B (feet)
C83	157	24.4	25.8
V83	157	27.5	....
Q83	157	23.5	....
N87, W85	163	26.5	27.9
N67	163	28.0	....
A64, L65	169	27.0	28.4
CDQ55, L56, NT59, P58, CDMQX65, AL66, NTY69, V65, E66	175	27.7	29.1
A64, L65	169	27.0	28.4
Q85, A86	175	25.7	....
V85	175	30.0	....
N89	175	29.7	....
W88	181	28.0	29.4
A86	187	29.2	....
A88	187	27.1	....
MVX68, M88	193	30.2	31.6
V88	193	32.6	....
Q58, S62, CDQ68, L69, C88	197	30.7	32.1
A67	197	31.9	....
Q88	197	28.3	....
A87	197	32.6	....
Q67, A69	211	32.3	....
Q87	211	28.8	....
A89	211	34.4	....
Q69	223	33.9	....
Q89	223	36.0	....
S64	225½	34.4	35.8
S67	243	36.7	38.1
S69	261½	39.1	40.5

INDEX

TRANSMISSION AVAILABILITY BY TRUCK SERIES

Transmission	Standard	Optional
Chevrolet 3-Speed	133-134-135-13680, G10, CKP10-20	—
Chevrolet 3-Speed Overdrive	—	C10, 133-134-135-13680
Warner 3-Speed Wide-Ratio T89B	—	CP10-30
Chevrolet 4-Speed	CP30, CDLNPQST50, ACLMNQSTV60	— CK10-20, 133-134-135-13680
New Process 435 4-Speed	—	CLNQST50, ACLMNQSTV60
New Process 540C 5-Speed	—	CLMST60
New Process 540GL 5-Speed	—	ANQV60
New Process 540GD 5-Speed Close-Ratio	—	ANQV60
New Process 541GL 5-Speed	ANQV80	—
Clark 2653V 5-Speed	X60	CLMST60
Clark 2622V 5-Speed Close-Ratio	—	CLMSTX60
Clark 264VO 5-Speed Overdrive	DY60	D50
Clark 267V 5-Speed Close-Ratio	—	DY60
Clark 269V 5-Speed Close-Ratio	—	ANQV80
Spicer 3152 5-Speed	CLMT80	CLS60
Spicer 3153 5-Speed Overdrive	—	D60
Spicer 3152A 5-Speed Close-Ratio	—	CDLS60, CLT80
Spicer 5752	W80	—
Spicer 5752C	EU80	—
Spicer 5652B	—	CLMT80
Spicer 5756B Close-Ratio	—	CLT80
Spicer 5831G 3-Speed Auxiliary	—	M80
Spicer 5831B 3-Speed Auxiliary	—	V80
Spicer 6041 4-Speed Auxiliary	—	MV80
Spicer 7041 4-Speed Auxiliary	—	W80
Powerglide	—	CP10-20
Allison Automatic	—	CS60, CEMTUW80
Fuller 8-Speed	—	CELMTU80

. CAMINO TRANSMISSIONS

SYNCHROMESH TRANSMISSIONS

Type	3-Speed	3-Speed	4-Speed
Applications	194 Six 230 Six	283 V8 327 V8*	283 V8 327 V8
Gear Ratios:			
First	2.94	2.58	2.56
Second	1.68	1.48	1.91
Third	1.00	1.00	1.48
Fourth	—	—	1.00
Reverse	2.94	2.58	2.64
Gears:			
Type	Helical		
Material	Forged steel, hardened		
Synchronized Speeds	2nd and 3rd		All forward gears
Gearshift Control:			
Type	Manual remote		Manual direct
Location	Mounted on steering column		Mounted on the floor

*With 250-hp 327 V8 only.

OVERDRIVE TRANSMISSIONS

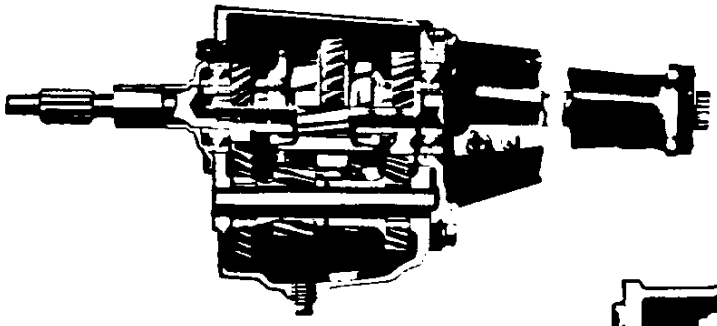
Type	Three-pinion planetary unit integral with 3-speed synchromesh transmission			
Applications	194 Six 230 Six		283 V8	
Ratios:	Overdrive unit locked in	Overdrive unit locked out	Overdrive unit locked in	Overdrive unit locked out
First	2.06	2.94	1.81	2.58
Second	1.18	1.68	1.04	1.48
Third	0.70	1.00	0.70	1.00
Reverse	2.06	2.94	1.81	2.58
Lockout Method	By manual "pull type" control or accelerator kickdown			

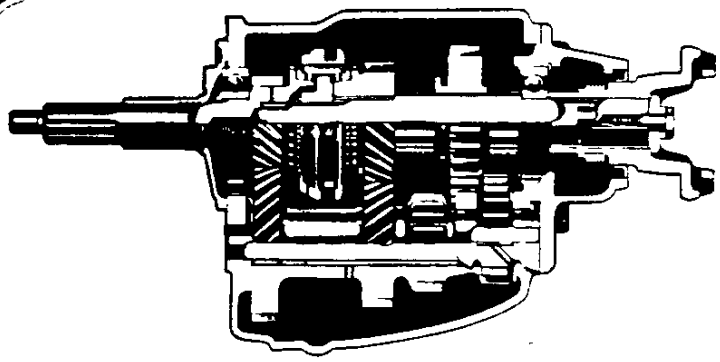
AUTOMATIC TRANSMISSIONS

Type	Chevrolet Powerglide 2-Speed Automatic			
Applications	194 Six		230 Six 283 V8 327 V8	
Ratios:	Converter ratio maximum	Converter ratio 1:1	Converter ratio maximum	Converter ratio 1:1
Drive	2.40	1.00	2.10	1.00
Low	4.37	1.82	3.82	1.82
Reverse	4.37	1.82	3.82	1.82
Cooling	Air		Water*	
Range Selector Lever Location	Mounted on steering column			
Engine Starting	Selector lever in neutral or park			

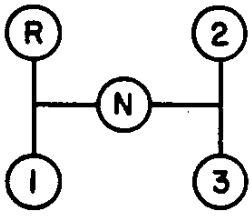
*Transmission for 230-cu-in engine is air cooled.

3-SPEED & POWERGLIDE TRANSMISSIONS





Gearshift Lever Positions



Standard 3-Speed Synchromesh Transmission

Wide-faced helical gears are carburized and shot-peened for long service life. Rounded gear teeth resist chipping. Anti-friction bearings on the clutch shaft, mainshaft and countershaft assure alignment and proper gear meshing. Gearshift lever is conveniently located on the steering column.

Optional 3-Speed Syncromesh Overdrive Transmission

The optional, at extra cost, 3-speed overdrive transmission provides better fuel economy, lower noise level and longer engine life. The overdrive unit may be manually locked out by the driver through the hand control or by fully depressing the accelerator pedal. The transmission is available only in combination with the optional 4.11 rear axle ratio. The gearshift lever is mounted on the steering column.

Optional Wide-Ratio 3-Speed Synchromesh Transmission

The optional, at extra cost, 3-speed wide-ratio transmission is suitable for multi-stop delivery operations with medium or heavy loads. The additional reduction in first gear makes it easier to start out with heavier loads with a minimum amount of clutch slippage. The gearshift lever is mounted on the steering column.

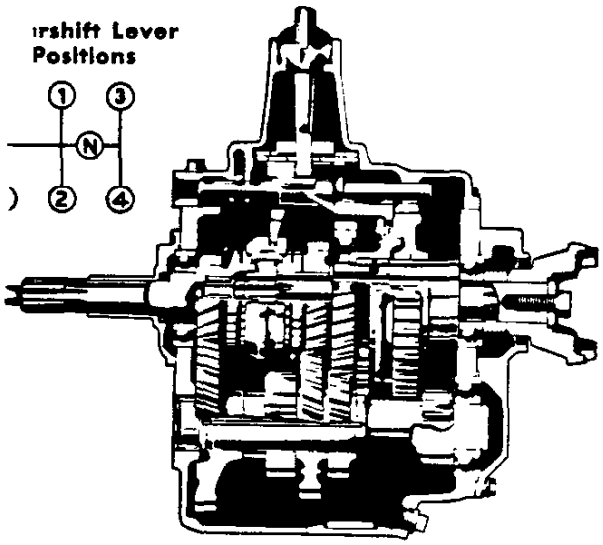
Optional Powerglide Transmission

This automatic transmission combines a 2-speed planetary gearset and a torque converter to provide torque multiplication as high as 4.22 (153 Four and 230 Six) and 3.70 (292 Six and 283 V8) in low and reverse gears. Gear ratios are 1.76 for low and reverse, and 1.00 for drive range. A steering-column-mounted lever selects the 5 operating positions: Park (P), reverse (R), neutral (N), drive (D) and low (L). For safety, the engine can be started only when the control lever is in either park or neutral position.

Specifications

	Chevrolet 3-Speed Synchromesh	Chevrolet 3-Speed Overdrive	Warner T89B 3-Speed
Gear Ratios:			
First	2.94	2.06	3.17
Second	1.68	1.18	1.75
Third	1.00	.70	1.00
Reverse	3.14	2.20	3.76
Gear Types:			
Helical gears	All		2nd
Spur	None		1st, Rev
Bearing Types:			
Clutch gear bearing	Ball		Ball
Mainshaft, front	Roller		Roller
Mainshaft, rear	Ball		Ball
Countershaft, front	Roller		Roller
Countershaft, rear	Roller		Roller
Reverse idler	Bronze Bushing		Bronze Bushing
Lubricants:			
Capacity	2 Pints		2¾ Pints
Type, grade	See Owner's Guide		See Owner's Guide
Brake, Parking	See *Brakes* Section		See *Brakes* Section

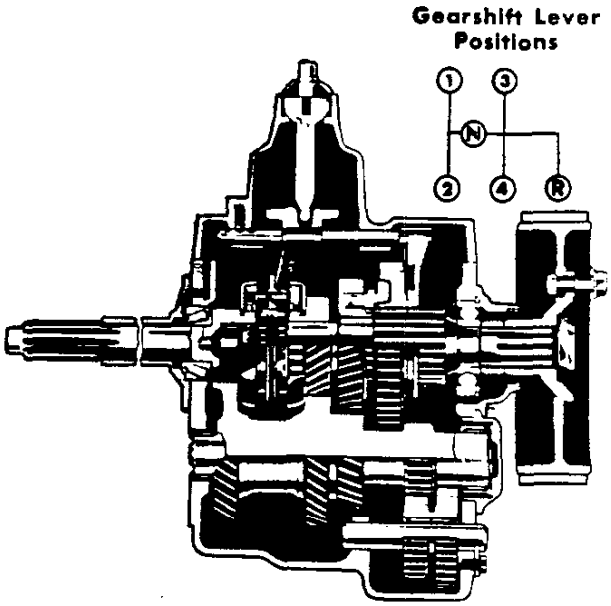
SPEED TRANSMISSION



CHEVROLET 4-SPEED

.e Chevrolet 4-speed transmission provides synchromesh ar engagement in second, third, and fourth speeds for ick, clashless gearshifting. All components are built for pendability and durability. A magnetic chip collector moves metallic impurities from the lubricant, thus reducing ear of moving parts.

A drum and band type parking brake is attached to the nsmission case with installations on Series 20 and 30. rking brake for Series 50 and 60 is drum and dual-shoe e attached to the transmission case. Rear brakes comprise parking brake for Series 10 with 4-speed transmission.



NEW PROCESS 435 4-SPEED

The New Process 435 4-speed transmission features good durability, quiet operation and easy shifting. It has synchromesh gear engagement in 2nd, 3rd and 4th gears.

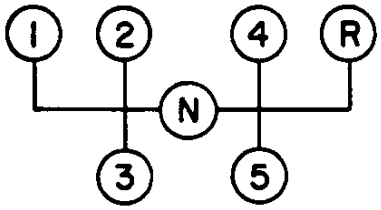
High gear pressure angles combined with generous gear face widths resist pitting and provide greater tooth contact area. The transmission also has heavy-duty bearings and strong rigid shafts for good reliability under extreme operating conditions. Large synchronizer cones with more working surface provide fast and easy shifting. A magnetic chip collector in the bottom of the case helps to reduce transmission wear.

A drum and band parking brake is attached to the transmission case.

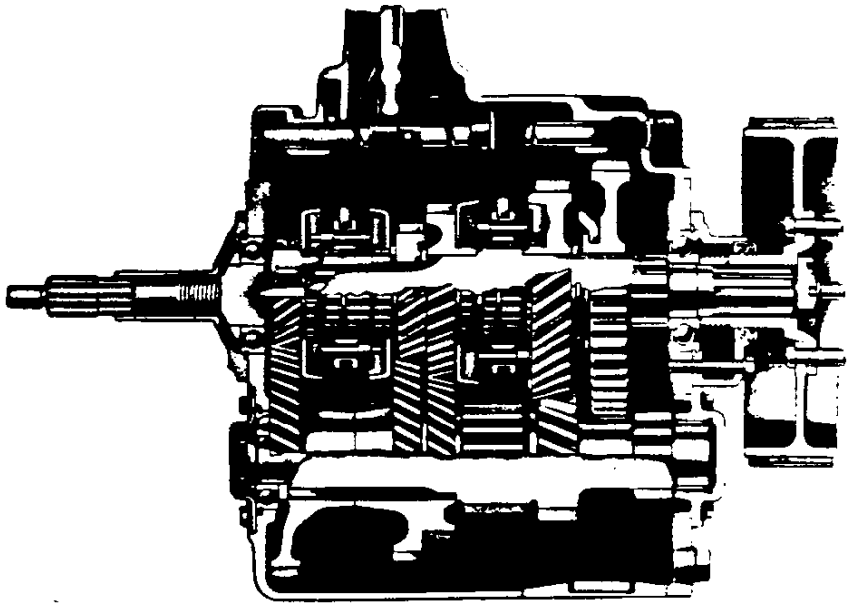
Specifications

	Chevrolet 4-Speed Synchromesh	New Process 435 4-Speed Synchromesh
Gear Ratios:		
First	7.06	6.68
Second	3.58	3.34
Third	1.71	1.66
Fourth	Direct	Direct
Reverse	6.78	8.26
Gear Types:		
Helical	2nd, 3rd, 4th	2nd, 3rd, 4th
Spur	1st, Reverse	1st, Reverse
Bearing Types:		
Mainshaft, front	Roller	Roller
Mainshaft, rear	Ball	Ball
Countershaft, front	Needle Roller	Needle Roller
Countershaft, rear	Ball	Ball
Power Take-Off Data:		
Opening type	SAE Std 6-Bolt	SAE Std 6-Bolt
Location	Left Side	Right Side
Meshing gear teeth	33	35
PTO gear rpm at 1000 engine rpm	425	395
Lubricants:		
Oil capacity	6¼ Pints	7 Pints
Type, grade	See Owner's Guide	See Owner's Guide
Brakes, Parking:	See Brakes Section	See Brakes Section

5-SPEED NEW PROCESS TRANSMISSIONS



Gearshift Lever Positions



The New Process 5-speed synchromesh transmission permits more efficient engine use, lower fuel consumption, and reduced maintenance. The choice of gear ratios allows the engine to operate in the speed range of greatest power output and operating efficiency. High-ratio first and reverse gears provide greater torque multiplication than is available with the 4-speed transmission.

Synchromesh engagement of second, third, fourth, and fifth speeds results in quick, clashless gearshifting. Mainshaft, countershaft, reverse shaft and all gears are machined from alloy steel, carburized and hardened for durability. Gear teeth are shot peened for added resistance to fatigue failure. Compact design results in short, rigid shafts for accurate meshing of gear teeth. Mainshaft and countershaft are mounted on ball and roller bearings for high efficiency and long service life. A magnetic chip collector in the bottom of the case also helps to reduce transmission wear.

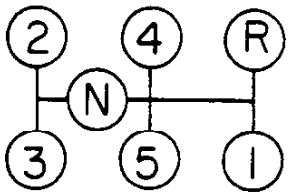
Power take-off openings are provided on both the right and left sides of the transmission case. Drum and band type parking brake is mounted at the rear of the transmission case.

Specifications

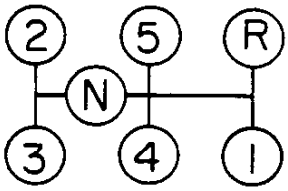
	Std-Ratio 5-Speed	Std-Ratio 5-Speed	Close-Ratio 5-Speed	Std-Ratio 5-Speed
Model	540C	540GL	540GD	541GL
Gear Ratios:				
First	7.41	7.41	6.05	7.25
Second	4.05	4.05	3.31	3.88
Third	2.40	2.40	1.84	2.19
Fourth	1.48	1.48	1.17	1.37
Fifth	1.00	1.00	1.00	1.00
Reverse	7.85	7.85	6.42	7.22
Gear Types:				
Helical	2, 3, 4, 5			
Spur	1, Reverse			
Bearing Types:				
Mainshaft, front	Roller			
Mainshaft, rear	Ball			
Countershaft, front	Ball			
Countershaft, rear	Roller			
Power Take-Off Data:				
Opening type	SAE standard 6-stud			
Location	Right- and left-hand side of transmission			
PTO gear rpm @ 1000 engine rpm	375 left 456 right	373 left 456 right	457 left 558 right	369 left 425 right
Lubricants:				
Oil capacity	9½ Pints	10 Pints	10 Pints	10 Pints
Type, grade	See Owner's Guide			
Brakes, Parking:				
Type	Drum and band			
Drum diameter	9½"			
Lining area	68 sq in	67.5 sq in	67.5 sq in	99.1 sq in

-SPEED CLARK TRANSMISSIONS

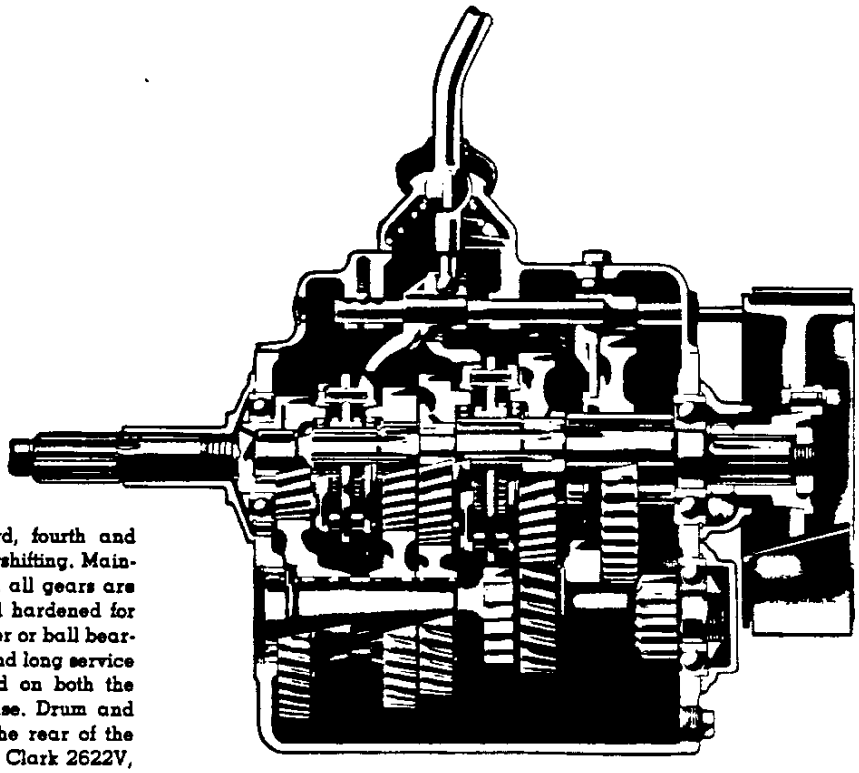
Gearshift Lever Positions



Std- and Close-Ratio



Overdrive



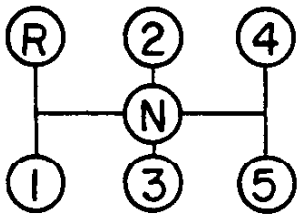
Synchromesh engagement of second, third, fourth and fifth speeds results in quick, clashless gearshifting. Mainshaft, countershaft, reverse idler shaft and all gears are machined from alloy steel, carburized and hardened for durability. Shafts and gears revolve on roller or ball bearings or fluted bushings for high efficiency and long service life. Power take-off openings are provided on both the right and left sides of the transmission case. Drum and band type parking brake is mounted at the rear of the transmission case. Close-ratio design of the Clark 2622V, 267V and 269V transmissions permits effective shifting in conjunction with a two-speed rear axle. Overdrive ratio of Model 264VO is used exclusively on diesel-powered models.

Specifications

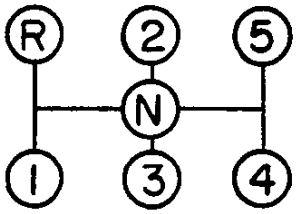
	Std-Ratio 5-Speed	Close-Ratio 5-Speed	Close-Ratio 5-Speed	Close-Ratio 5-Speed	Overdrive 5-Speed
Model	2653V	2622V	267V	269V	264VO
Gear Ratios:					
First	7.08	7.08	6.06	6.06	6.06
Second	4.08	4.08	3.50	3.50	3.50
Third	2.23	2.10	1.80	1.91	1.80
Fourth	1.48	1.17	1.18	1.18	1.00
Fifth	1.00	1.00	1.00	1.00	.80
Reverse	6.73	6.73	6.00	6.00	6.00
Gear Types:					
Helical	2, 3, 4, 5				
Spur	1, Reverse				
Bearing Types:					
Mainshaft, front	Roller				
Mainshaft, rear	Ball				
Countershaft, front	Roller				
Countershaft, rear	Ball				
Power Take-Off Data:					
Opening type	SAE standard 6-stud				
Location	Right- and left-hand side of transmission				
PTO gear rpm @ 1000 engine rpm	357 left 571 right	357 left 571 right	357 left 571 right	357 left 571 right	357 left 571 right
Lubricants:					
Oil capacity	12 Pints				
Type, grade	See Owner's Guide				
Brake, Parking:					
Type	Drum and band				
Drum diameter	9½"				
Lining area	85 sq in				

5-SPEED SPICER TRANSMISSIONS

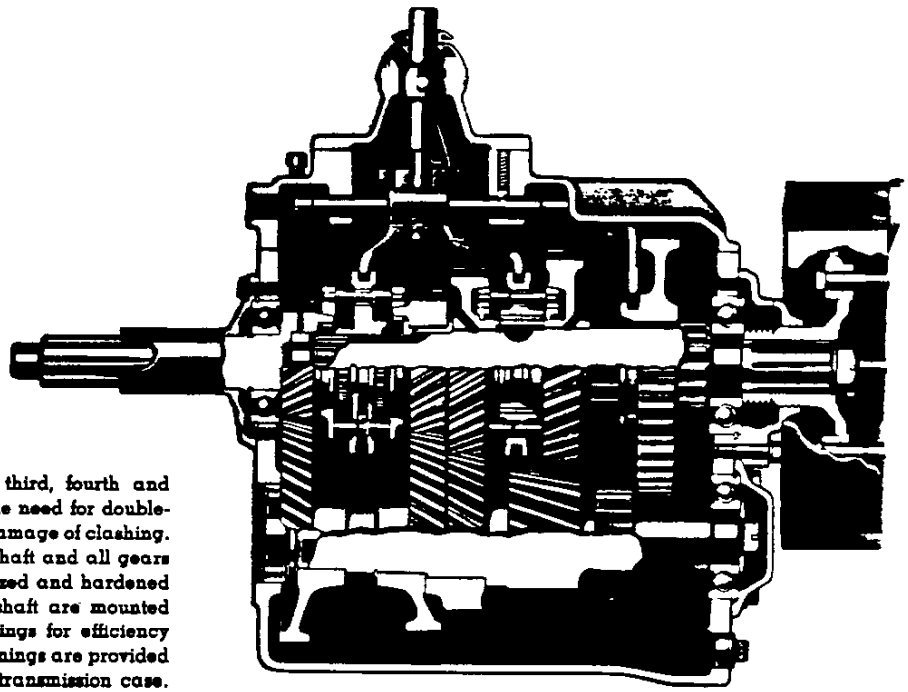
Gearshift Lever Positions



Std and Close Ratio



Overdrive

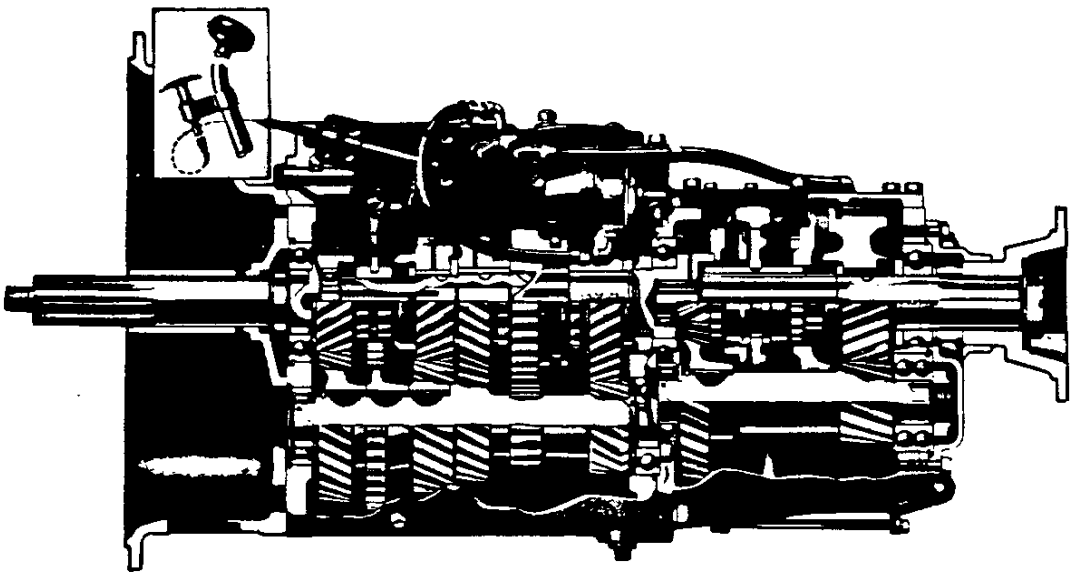


Synchromesh engagement of second, third, fourth and fifth speeds eases shifting, eliminates the need for double-clutching, and protects gears from the damage of clashing. Mainshaft, countershaft, reverse idler shaft and all gears are machined from alloy steel, carburized and hardened for durability. Mainshaft and countershaft are mounted on high-capacity ball and roller bearings for efficiency and long service life. Power take-off openings are provided on both the right and left sides of the transmission case. Drum and band type parking brake is mounted at the rear of the transmission case. Close-ratio design of Models 3152A, 5756B and 5752C permits very effective shifting in conjunction with 2-speed rear axle.

Specifications

	Std-Ratio 5-Speed	Std-Ratio 5-Speed	Std-Ratio 5-Speed	Close-Ratio 5-Speed	Close-Ratio 5-Speed	Close-Ratio 5-Speed	Overdrive 5-Speed
Model	3152	5652B	5752	3152A	5756B	5752C	3153
Gear Ratios:							
First	7.55	7.08	6.10	5.99	6.50	6.10	6.00
Second	4.17	4.37	3.30	3.30	3.52	3.30	3.31
Third	2.45	2.50	2.04	1.94	1.93	1.81	1.94
Fourth	1.45	1.45	1.40	1.15	1.17	1.17	Direct
Fifth	Direct	Direct	Direct	Direct	Direct	Direct	0.79
Reverse	7.44	7.50	6.46	5.90	6.88	6.46	5.90
Gear Types:							
Helical	2nd, 3rd, 4th, 5th						
Spur	1st, Reverse						
Bearing Types:							
Mainshaft, front	Roller						
Mainshaft, rear	Ball						
Countershaft, front	Roller						
Countershaft, rear	Ball						
Power Take-Off Data:							
Opening type	SAE Std 6-Bolt						
Location	Both Sides						
PTO gear rpm at 1000 engine rpm:							
Left side	403	445	445	509	509	509	509
Right side	458	534	534	578	578	578	578
Lubricants:							
Oil capacity	12 Pints	13 Pints	13 Pints	12 Pints	12 Pints	12 Pints	10 Pints
Type, grade	See Owner's Guide	See Owner's Guide	See Owner's Guide	See Owner's Guide	See Owner's Guide	See Owner's Guide	See Owner's Guide
Brake, Parking:							
Type	Drum & Band	Drum & Band	Drum & Band	Drum & Band	Drum & Band	Drum & Band	Drum & Band
Drum diameter	9.5"	10.5"	10.5"	9.5"	10.5"	10.5"	9.5"
Lining area	85 sq in	100 sq in	100 sq in	85 sq in	100 sq in	100 sq in	85 sq in

SPEED FULLER TRANSMISSION



ller R46 Roadranger

e Fuller R46 is essentially a constant-mesh four-speed main nsmission coupled with a synchronized two-speed auxiliary nsmission. The separate cast iron cases of the main and auxil- y are bolted together as a single unit.

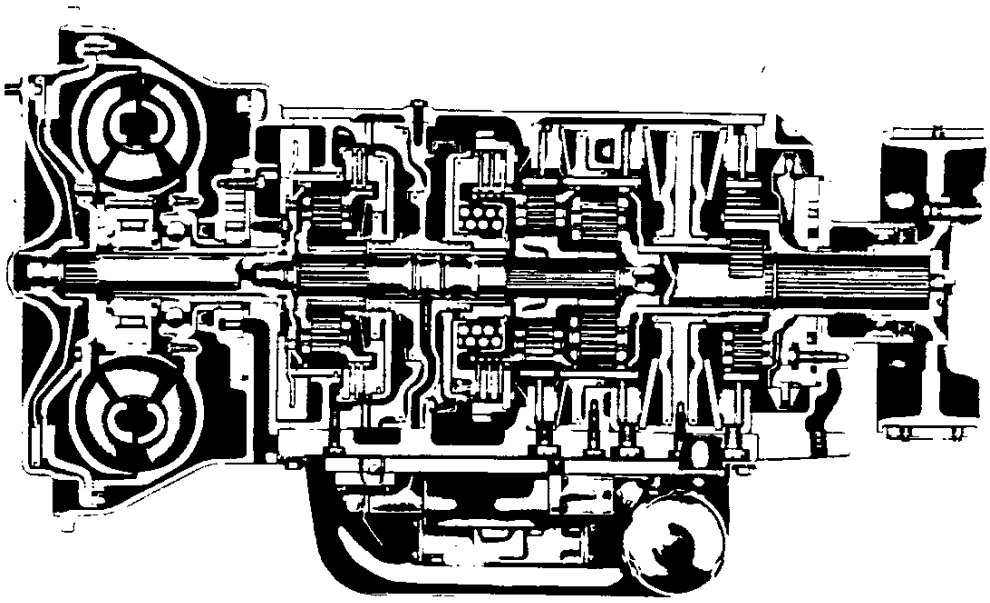
nstant-mesh helical gears in all forward speeds are engaged by ding hubs splined to the mainshaft. Shifting of the main trans- ssion is accomplished by a remote-control mechanism; the xiliary is shifted by an air cylinder controlled by a cable located the transmission shift lever. Synchronizing of the auxiliary unit is means of a multiple clutch plate while the actual shift is made, in the main unit, through a sliding hub splined to the mainshaft.

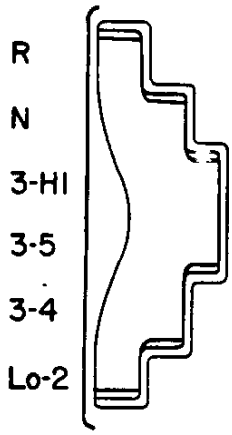
ifting of the Roadranger varies from the conventional trans- ssion with auxiliary transmission or two-speed axle combina- ns in that split-shifting is not employed. Rather, the shifting quence involves 8 progressive steps. With the reduction unit in v-range position (down), shift lever is moved from 1st through positions. Reduction unit switch is then moved to high-range sition (up) and the shift lever is returned to lowest gear position. e main unit may then be upshifted through its sequence again. downshift, the procedure is reversed.

Specifications

	8-Speed Constant-Mesh
Model	R46
Gear Ratios:	
First	9.15
Second	6.53
Third	4.66
Fourth	3.68
Fifth	2.49
Sixth	1.78
Seventh	1.27
Eighth	Direct
Reverse, low range	10.30
Reverse, high range	2.80
Gear Types:	
Helical	1st through 8th
Spur	Reverse
Bearing Types: (Main Section)	
Main drive gear	Ball
Mainshaft pilot	Roller
Mainshaft, rear	Ball
Countershaft, front	Roller
Countershaft, rear	Ball
Reverse idler	Roller
Bearing Types: (Auxiliary section)	
Main drive gear, rear	Ball
Mainshaft pilot	Roller
Mainshaft, rear	Ball
Countershaft, front	Roller
Countershaft, rear	Ball
Power Take-Off Data:	
Opening type	SAE std 6-bolt
Location	Both sides
PTO gear rpm at 1000 engine rpm	710
Lubricants:	
Oil capacity	17 pints
Type, grade	See Owner's Guide
Brake, Parking:	
Type	Internal expanding
Drum diameter	13"
Lining area	83.5 sq in

6-SPEED ALLISON AUTOMATIC TRANSMISSION





Allison Automatic Range Control

Advantages

Shorter trip times possible through power-on shifts and efficient use of engine power by automatic shifting.

Greater payloads possible through shorter trip times, thus permitting more tonnage to be hauled per day.

Fuel economy through power-on shifts and automatic converter lock-up clutch.

Reduced shock-loads to engine and drive line by oil-cushioned shifting.

Longer service brake life through braking assistance of hydraulic retarder.

Reduced maintenance. Engine clutch eliminated. Single-speed rear axle saves first cost, eliminates maintenance of two-speed axle parts.

Increased road safety. Frees driver of clutch and gearshift distractions, cuts fatigue and aids alertness. Hydraulic retarder gives added braking control.

Features

The Allison Automatic is a durable automatic transmission designed and built exclusively for medium- and heavy-duty trucks. It has construction features to meet truckers' demands for economy, performance, operating flexibility, minimum downtime and low maintenance cost.

Torque converter multiplies starting torque as much as 2.8 to 1. Effective ratio of 14.8 to 1 available in Lo—2-range.

Converter lock-up clutch engages automatically when converter is not needed—gives direct engine coupling for high efficiency and fuel economy.

Planetary gears provide six closely spaced forward gear ratios. Durable planetary gears are in constant mesh, engaged automatically by self-adjusting multiple-disc clutches.

Four-range control gives driver full control of forward driving ranges for best performance and flexibility.

Hydraulic retarder assists in braking. Pedal operated, retarder multiplies engine braking up to six times.

Power take-off openings are provided on both sides of transmission case.

Specifications

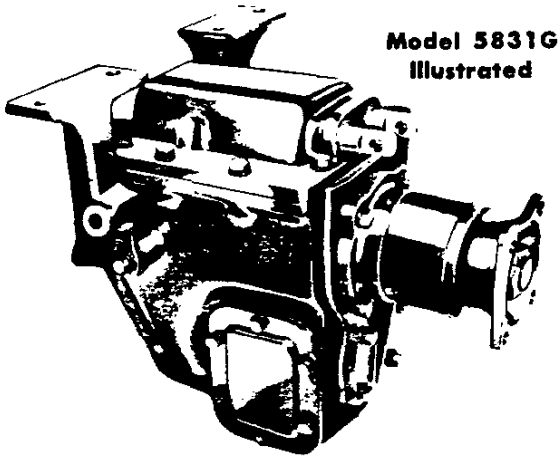
Make, Model & Type	Allison 6-Speed Automatic	
Ranges & Effective Ratios:	**Transmission Gears**	**Reduction Ratio**
Range 3-Hi *(Cruising, level roads)*	Converter & 3rd	7.53 ●
	Lock-up & 3rd	2.69
	Lock-up & 4th	1.94
	Lock-up & 5th	1.39
	Lock-up & 6th	Direct
Range 3-5 *(Traffic or hills)*	Converter & 3rd	7.53 ●
	Lock-up & 3rd	2.69
	Lock-up & 4th	1.94
	Lock-up & 5th	1.39
Range 3-4 *(Slow traffic, steep hills)*	Converter & 3rd	7.53 ●
	Lock-up & 3rd	2.69
	Lock-up & 4th	1.94
Range Lo-2 *(Off-road, extreme hills)*	Converter & 1st	14.8 ●
	Lock-up & 1st	5.29
	Lock-up & 2nd	3.81
Reverse	Converter & Rev	16.9 ●
	Lock-up & Rev	6.04
Torque Converter:		
Element types	Pump, 2 stators, turbine	
Lock-up clutch	Automatic, governor controlled	
Reduction Gears:		
Gear types	Planetary, clutch actuated	
Power Take-Off Data:		
Opening type	SAE std 6-bolt	
Location	Both sides	
PTO gear rpm	See Page 13	
Lubricants:		
Oil capacity	19-qt dry refill 9 qt less converter	
Oil type, grade	See Owner's Guide	
Oil filter type	Full-flow, replaceable	
Brake, Parking:		
Type	Drum & band	
Drum diameter	9.5", 10.5"*	
Lining area	89 sq in, 100 sq in*	

● Maximum ratio at stall speed.
* With 409 V8 or 6V-53 Diesel Engine.

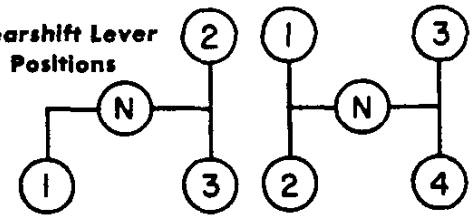
JXILIARY TRANSMISSIONS

Specifications

	2-Speed	3-Speed	4-Speed	4-Speed
Make and Model Number	Spicer 5831G	Spicer 5831B	Spicer 6041	Spicer 7041
Ratios:				
First	2.00	2.35	2.14	2.31
Second	1.31	1.00	1.24	1.21
Third	1.00	.85	1.00	1.00
Fourth			.86	.83
Gear Types	Helical			
Lever Location	Floor mounted			
Power Take-Off Data:				
Type	SAE standard 6-stud			
Number of outlets	2	2	3	3
Lubricants:				
Oil capacity (pints)	4	4	8	11



Model 5831G Illustrated



Spicer 3-speed auxiliary transmissions 5831B and 5831G are the *constant-mesh type*. Engagement of the gears is effected by sliding hubs splined to the mainshaft. All running gears are of helical design. Model 5831G is used only with the 348 V8 engine on the M80 series.

Spicer 4-speed auxiliary transmissions 6041 and 7041 combine *the advantages* of highway and on-off highway use into one transmission. Four-speed auxiliaries are ideal for operations that require reduction for on-off road work but operate under highway conditions much of the time. Spicer 4-speed auxiliaries are the constant-mesh type. Engagement of the gears is effected by sliding hubs splined to the mainshaft. All running gears are of helical design.

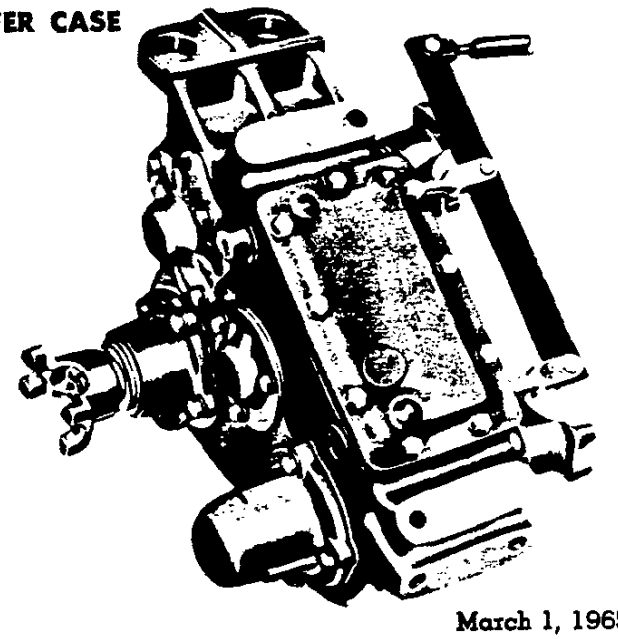
FOUR-WHEEL DRIVE TRANSFER CASE

Timken Model T-221

The four-wheel drive transfer case distributes power to rear axle only for two-wheel drive, or to both front and rear axles for four-wheel drive. In four-wheel drive position, driver has the choice of direct gear or 1.94 to 1 underdrive. Control is through a single lever having four positions. From the rear toward the front of the truck these positions are: four-wheel underdrive; neutral; four-wheel direct drive; and two-wheel direct drive.

All gears and shafts are accurately machined from alloy steel, carburized and hardened for durability. Shafts are mounted on antifriction ball or roller bearings for efficiency and long service life.

A power take-off opening is provided at the rear of the case.



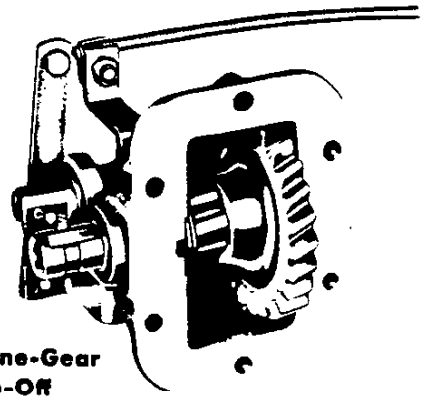
POWER TAKE-OFF EQUIPMENT

Transmission Applications. Side-mounted power take-off may be installed on the left side of the Chevrolet 4-speed transmission, right side of the New Process 435 4-speed, on both sides of the New Process, Clark and Spicer 5-speed transmissions, the Fuller 8-speed, 3- or 4-speed auxiliaries, or the Allison Automatic transmission. Standard SAE 6-bolt power take-off openings are provided to accommodate a variety of single- or multi-speed units. A top-mounted PTO may be mounted on the top of the 4-speed auxiliary transmission.

Power take-offs may be controlled by a shift wire or lever, and may be operated with transmission in neutral, or when truck is in motion. Speed of the power take-off shaft is determined by engine rpm and the gear ratio between transmission PTO drive gear and PTO driven gear. Consult the special equipment distributor to select the power take-off of correct capacity and type to meet operating requirements of each application.

SIDE-MOUNTED POWER TAKE-OFFS For Synchromesh Transmissions

Single-Speed PTO Most truck special equipment power demands can be met with a single-speed power take-off. These units come in medium- or heavy-duty capacities and are of one- or two-gear design. Medium-duty power take-offs are generally rated at about 20 horsepower, and are suitable for operating hydraulic hoists, lift gates or other intermittently driven equipment. Heavy-duty power take-offs are normally rated at about 25 horsepower, and are recommended for continuous or heavy-duty operations, including fluid pumping (gasoline or oil), portable conveyors, wreckers, cranes, garbage packer bodies, hydraulic plows, generators, blowers or compressors. Heavy-duty models are commonly of two-gear design. The output shaft of a one-gear model turns opposite to the transmission PTO gear; the output shaft of a two-gear PTO turns the same way as the transmission PTO gear.

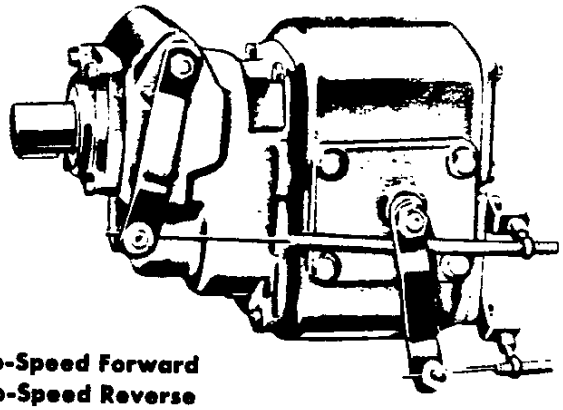


Single-Speed One-Gear Power Take-Off
(Spicer Model AAN)

Multi-Speed PTO Special equipment requiring a reverse speed or a range of forward speeds may be driven by any of the following heavy-duty multi-speed power take-offs:

Two speeds forward, no reverse
One speed forward, one reverse
Two speeds forward, one reverse
Two speeds forward, two reverse

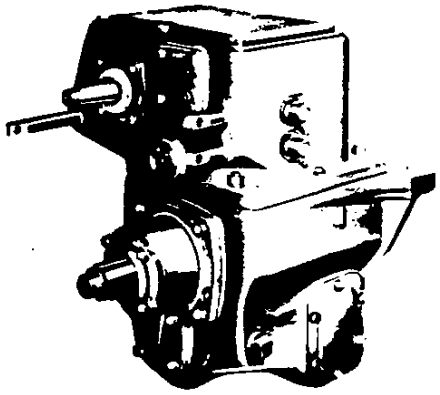
The PTO driven gear is in constant mesh with the transmission PTO drive gear. The PTO is engaged by shifting the desired gear into mesh. The output shaft may be assembled to the front or rear. One output shaft is normally provided, although special types with dual output shafts are available. Rated capacity for continuous operation is about 25 horsepower. Typical applications would be to drive winches, cranes or derricks.



Two-Speed Forward Two-Speed Reverse
(Chelsea Model 56A)

TOP-MOUNTED POWER TAKE-OFF For 4-Speed Auxiliary Transmission

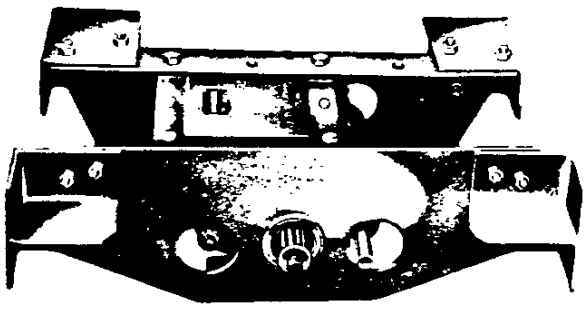
Power Tower A top-mounted power take-off assembly which transmits full torque of the engine (with forward transmission in direct drive) can be mounted on the Spicer 6041 4-speed and Spicer 7041 4-speed auxiliary by removing shifter housing assembly.



One-Speed Forward One-Speed Reverse
(Spicer Model 310535X mounted on 6041 4-spd auxiliary)

)WER TAKE-OFF EQUIPMENT

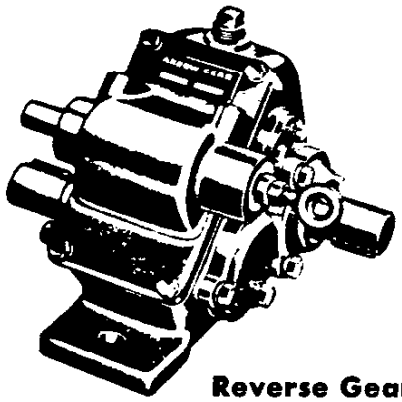
SPECIAL POWER TAKE-OFFS
for Synchromesh or Allison Automatic Transmission



Split-Shaft Power Take-Off

(Gar Wood Model L)

stalled directly in the drive line between transmission and rear le, a split-shaft power take-off may be operated at any of the eeds of the truck transmission. In winch operation, for example, nch only, truck only, or both winch and truck may be operated. lit-shaft units are normally designed to transmit full engine wer, and may therefore be used to drive winches, high-capacity mps, generators or air compressors. Models are available to ovide one speed forward, forward and reverse (permitting all eeds of the truck transmission in reverse), single or dual output afts.



Reverse Gear Box

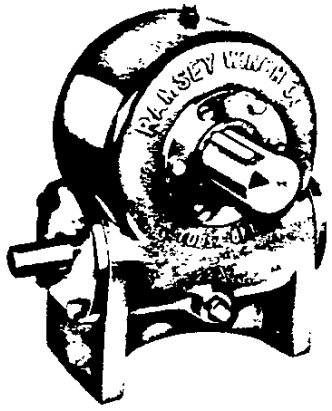
(Arrow Model M)

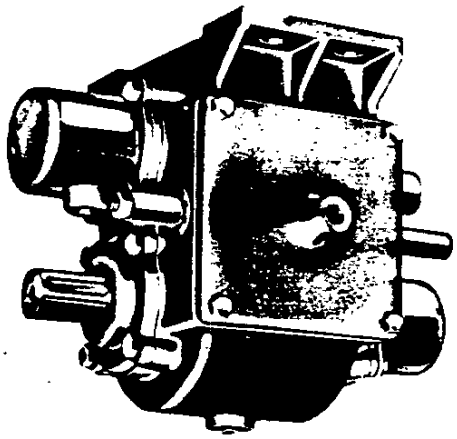
Produces both forward and reverse drives. Forward drive is in 1:1 ratio and reverse drive is in 0.72:1 ratio. Particularly well adapted for use with front-mounted winches.

Speed Reducer

(Ramsey Model 29X)

Extreme gear reduction may be obtained by driving a worm gear speed reducer from a side-mounted power take-off. Suitable for applications requiring slow shaft speeds with relatively high torque, speed reducers have been used successfully to drive cement mixers on Allison Automatic-equipped trucks.

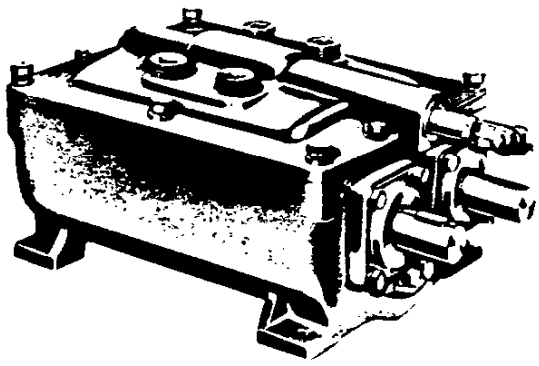




Two-Speed Hanger Bearing

(Tulsa)

iven by either a single-speed or multi-speed side-mounted power ke-off, a two-speed hanger bearing doubles the available shaft eeds. Direction of power take-off shaft rotation is reversed in ıssing through the hanger bearing. Some models provide for stallation of input and output shafts in front or rear positions. ılatively compact size and flexibility of mounting at a convenient cation extend the range of uses for side-mounted power take-offs ith either a synchromesh or Automatic transmission.



Friction-Clutch Gear Box

(Gar Wood Model FC-2)

Driven by a single-speed side-mounted power take-off, a friction-clutch gear box provides forward and reverse positions with direct clutch control of the output shaft. These features make the friction-clutch gear box especially adaptable to Allison Automatic-equipped trucks. Typical applications would be to drive a winch, crane hoist, wrecker or any rigging equipment requiring accurate control.

POWER TAKE-OFF EQUIPMENT

SIDE-MOUNTED POWER TAKE-OFFS
For Allison Automatic Transmission

PTO Applications: The Allison Automatic transmission has an SAE 6-bolt PTO opening on both right and left sides. Side-mounted PTO applications are limited only to the single-speed non-reversing type. The relatively high speed of the large PTO drive gear prohibits use of multi-speed take-offs, as constant mesh of the driven gear would shorten service life. Dual speeds may be obtained by driving through a two-speed hanger bearing or a speed reducer. A gear box may be used in conjunction with the side-mounted PTO to attain both reverse and forward rotation. A friction-clutch gear box is recommended for driving winches, cranes or any equipment requiring accurate control.

PTO Operation. To engage power take-off: With vehicle stopped and engine idling, shift the Allison Automatic into any operating range (this stops PTO drive gear), engage PTO, return the Allison Automatic to Neutral and run engine at required rpm to operate the power take-off. Care should be taken to avoid excessive PTO speeds. Power take-off may also be operated with the Allison Automatic in Reverse, Lo-2 or 3-4 ranges, permitting use with the vehicle in motion. In these ranges, power take-off will be unaffected by transmission shifting, provided the driver does not manually shift from Lo-2 to 3-4 range. *As output loads affect the output rpm of a torque converter, power take-off rpm's are shown below for two available power take-offs.*

Chelsea Model 22L or Spicer Model PG6 Single-Speed PTO
(Allison Automatic in Neutral Range)

ENGINE RPM (Neutral)	PTO Shaft Torque Loads, RPM & Power Output (Installed on Right or Left Side)									
	30 lb-ft Load		65 lb-ft Load		125 lb-ft Load		190 lb-ft Load		250 lb-ft Load	
	RPM	HP	RPM	HP	RPM	HP	RPM	HP	RPM	HP
1100	820	4.7	670	8.3	—	—	—	—	—	—
1200	930	5.3	780	9.6	510	12.1	—	—	—	—
1300	1040	5.9	900	11.1	640	15.2	350	12.7	—	—
1400	1160	6.6	1010	12.5	760	18.1	470	17.0	—	—
1500	1270	7.2	1120	13.9	870	20.7	690	25.0	580	27.6
1600	1380	7.9	1230	15.2	980	23.3	810	29.3	710	33.8
1700	1490	8.5	1340	16.6	1080	25.7	910	32.9	820	39.0
1800	1640	9.4	1440	17.8	1190	28.3	1020	36.9	930	44.3
1900	1730	9.9	1730	21.4	1300	30.9	1130	40.9	1030	49.0
2000	1820	10.4	1820	22.5	1400	33.3	1230	44.5	1140	54.3
2100	1920	11.0	1920	23.8	1500	35.7	1330	48.1	1240	59.0
2200	2010	11.5	2010	24.9	2010	47.8	1440	52.1	1340	63.8
2300	2100	12.0	2100	26.0	2100	50.0	2100	76.0	1440	68.5
2400	2190	12.5	2190	27.1	2190	52.1	2190	79.2	1520	72.4
2500	2280	13.0	2280	28.2						
2600	2370	13.5	2370	29.3						
2700	2460	14.1	2460	30.4						
2800	2560	14.6	2560	31.7						

Note: Power take-offs are extra-heavy-duty units rated at outputs up to 250 lb-ft torque or 50 hp. Output shaft rotation is engine-wise. Shaft rpm is .915 x turbine rpm.

Spicer Model GG6 Single-Speed PTO
(Allison Automatic in Neutral Range)

ENGINE RPM (Neutral)	PTO Shaft Torque Loads, RPM & Power Output (Installed on Right or Left Side)									
	15 lb-ft Load		30 lb-ft Load		55 lb-ft Load		85 lb-ft Load		110 lb-ft Load	
	RPM	HP	RPM	HP	RPM	HP	RPM	HP	RPM	HP
800	**850**	2.4	—	—	—	—	—	—	—	—
900	**1280**	3.6	—	—	—	—	—	—	—	—
1000	**1550**	4.4	**1200**	6.8	—	—	—	—	—	—
1100	1840	5.2	**1480**	8.4	—	—	—	—	—	—
1200	2080	5.9	1760	10.0	**1140**	11.9	—	—	—	—
1300	2360	6.7	2040	11.6	**1440**	15.1	**800**	12.9	—	—
1400	2620	7.5	2280	13.0	1700	17.8	**1280**	20.7	**800**	16.8
1500	2860	8.2	2520	14.4	1950	20.4	**1550**	25.1	**1280**	26.8
1600	3120	8.9	2780	15.9	2200	23.0	1800	29.1	**1560**	32.7
1700	3350	9.6	3010	17.2	2440	25.6	2050	33.2	1810	37.9

Note: Spicer Model GG6 is heavy-duty unit nominally rated at 140 lb-ft torque or 25 hp at 1000 rpm. Output shaft rpm within desired operating range of 800 to 1600 rpm are shown in bold figures. Output shaft rotation is engine-wise; rpm is 2.05 x turbine rpm.

DESIGN AND FEATURES

chkiss drive is featured on all Chevrolet trucks equipped with gle rear axle except C10-20 models. Drive line serves only to ansmit power between transmission and rear axle. Rear springs ushion the driving and braking forces at the rear axle for smooth peration. Hotchkiss drive keeps chassis weight down and provides fficient power transfer in all types of truck service.

C10-20 models utilize radius rods to control braking and acceleration forces. This leaves the coil springs to act as elastic members only.

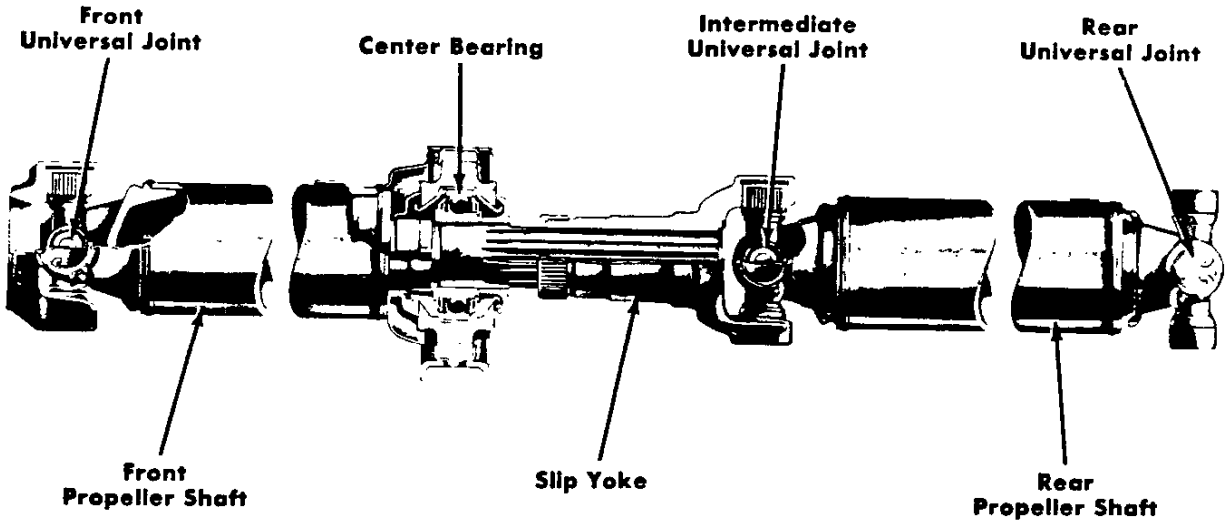
rive lines for Chevrolet trucks are engineered for reserve torque apacity, accurate balance, high rigidity and resistance to ibration.

Propeller shafts are made of smooth-wall steel tube. Length and tube diameters are proportioned for high rigidity to minimize flexing or "whip."

Universal joints are efficient needle bearing type. Trunnions are drop-forged and hardened for wear resistance and long life.

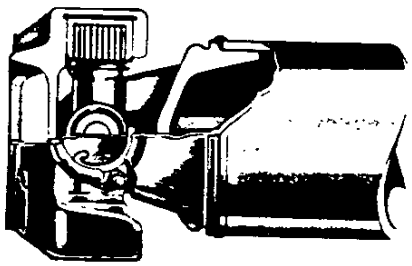
Center bearings, standard on many models, divide drive line into short, rigid propeller shafts. Cushion mounting minimizes transfer of vibrations.

Slip yoke adjusts length of drive line to match normal movement of rear axle over bumps, frees drive line of end stresses.



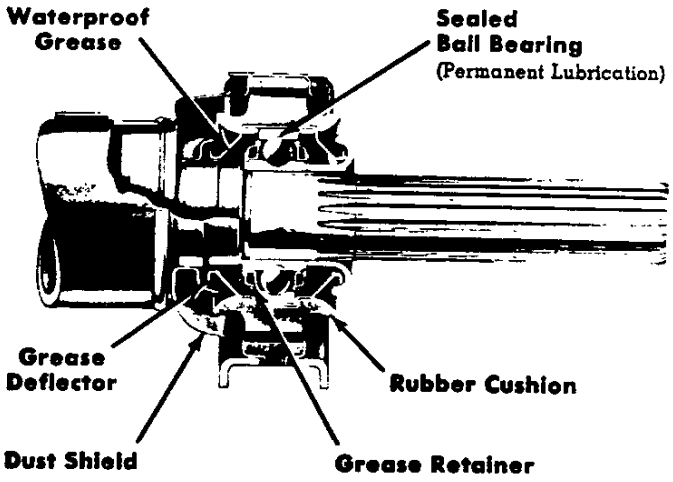
Typical Drive Line for Medium-Duty Series

(2 Propeller Shafts, 3 Universal Joints, Center Bearing)



Universal Joint

ow-friction universal joints provide reserve orque capacity and efficient transfer of riving force to rear axle.



Center Bearing

Rubber-cushioned center bearing isolates propeller shafts, reduces transfer of possible vibrations on all models equipped with multiple propeller shafts.

SPECIFICATIONS

Series	Transmission	Propeller Shafts		Universal Joints
		Quantity	Outside Dia (in)	Quantity
C14, P10	3-spd; Powerglide	1*	3.00	2
	3-spd; 4-spd	1	3.50	2
C15	3-spd	2	3.50	3
	3-spd; 4-spd; Powerglide	2	2.00 a	3
K10	3-spd; 4-spd	3	2.50	6
C20	3-spd	2	3.50	3
	3-spd; 4-spd; Powerglide	2	2.50	3
K20	3-spd; 4-spd	3	2.50	6
P23	3-spd; 4-spd; Powerglide	1	3.50	2
P25	3-spd; 4-spd; Powerglide	2	2.50	3
P26	3-spd; 4-spd; Powerglide	2	2.50 b	3
C30	3-spd; 4-spd	2	2.50	
P33	3-spd; 4-spd	1	3.50	2
P35	3-spd; 4-spd	2	2.50	3
P36	3-spd; 4-spd	2	2.50 b	3
P57	4-spd	2	2.50	3
P58	4-spd	3	2.50	4
CL51-53	4-spd	2	2.50	3
C55, L56	4-spd	3	2.50	4
D51-53	All	2	3.00	3
D55	All	3	3.00	4
Q51-53	All	2	3.00	3
Q55-58	All	3	3.00	4
T62-63	All	1	3.50	2
T55-58	All	2	3.00	3
T59	All	3	3.00	4
A62-63	All	2	3.00	3
A64-68	All	3	3.00	4
A69	All	3	3.00 c	4
C61	4-spd; 5-spd	2	3.00	3
	Allison Automatic	1	3.50	3
C62-63	All	2	3.00	3
C65-68	All	3	3.00	4
D61-63	All	2	3.00	3
D65-68	All	3	3.00	4
L62, T65-68	All	2	3.00	3
L63-65, M63-65	All	2	3.00	3
L66, M68, LT69	All	3	3.00	4
M62-63	All	1	3.00	2
M66-68	All	2	3.00	3
M69	All	3	3.00	4
Q61-63	All	2	3.00	3
Q65-69	All	3	3.00	4

* Two-piece shaft on panel and carryall models
a—Rear 2.50 b—Rear 3.00 c—Rear 3.50

SPECIFICATIONS

Series	Propeller Shafts		Universal Joints
	Quantity	Outside Dia (in)	Quantity
S62....4-spd	3	2.50	4
5-spd; Allison Automatic	3	3.00 c	4
S64....4-spd	4	2.50	5
5-spd; Allison Automatic	4	3.00	5
S67....4-spd; 5-spd	4	3.00	5
S69....4-spd; 5-spd	4	3.00	5
Q81-85....5-spd	2	3.50	3
Q87-89....5-spd	3	3.50	4
C81, CL82-83,			
T86-88....5-spd; Allison Automatic	2	3.50	3
T82-83....5-spd; Allison Automatic	1	3.50	2
A82-86....5-spd	2	3.50	3
A87-89....5-spd	3	3.50	4
N82-83....5-spd	1	3.50	2
N87-89....5-spd	2	3.50	3
M80....5-spd; 8-spd; Allison Automatic	3	3.50	6
W80....5-spd	3	3.50	6
MW80....5-spd w/auxiliaries	3	3.50	6
V80....5-spd	3	3.50	5
EU80....5-spd; 8-spd; Allison Automatic	2	3.50	3

c—Rear 3.50

ODOMETER CORRECTIONS

peedometer drive gears are cut to the nearest full tooth when ey are manufactured. This causes errors in the mileage indicated the odometer in the vehicle when various transmission and rear xle combinations are used. Changing tires from a smaller to a rger tire size also causes errors in the indicated mileage. These rors are reduced by the use of adaptors that are placed on the peedometer gears when optional transmissions, optional rear xles or optional larger rear tires are ordered from the factory. s an example, if a 60 Series truck were equipped with a New rocess 5-speed transmission, a 7.17 rear axle ratio and 9–22.5 rear tires, the speedometer error without an adaptor would be —4.88%. For every 100 miles the vehicle actually traveled, only 96.12 miles would register on the odometer. With an adaptor placed on the speedometer, the error would be reduced to 1.06%. For every 100 actual miles traveled by the vehicle, it would register 101.6 on the odometer.

Odometer adaptor gear information and percent of error in odometer readings for the various transmission, rear axle and tire combinations are available from the Zone Service Manager.

Rim width is determined by rear tire size. Varying tire sizes may be obtained for front and rear application as long as the selected rim width will accommodate both sizes. Rim data is provided on the "Tire & Wheel Combinations" page following each model series in the Yellow-Tab sections.

TIRE CAPACITY AND INFLATION PRESSURES

An important factor to consider when selecting tires is the maximum gross weight the tire will be required to carry. In cases where larger tires are used on the rear to carry the load and the same size is used on the front, it is very important that the actual load for the front be determined and the inflation pressure of the tires be adjusted accordingly. Over-inflated front tires are often responsible for excessive transfer of road shock to the vehicle front end parts, hard riding, unstable control of steering and excessive tire wear.

Some tire sizes (6.50–16, for example) are offered in both passenger car and truck type construction. The truck type tire is a heavier, stronger constructed tire and carries a higher capacity rating.

The following chart showing tire capacities and recommended tire inflation pressures is prepared from the latest Tire & Rim Association data.

PASSENGER CAR TYPE

Tire Size		Ply Rating	Max Capacity (lbs)	Loads and Inflation Pressures (lbs/sq in) For heavy-duty application the pressures listed below may be increased by 6 psi								
Tubeless	Tube-Type			20	22	24	26	28	30	32	34	36
6.50–13		4	840	760	800	840						
7.00–13		8	1060	760	800	840	880	920	960	990	1030	1060
7.35–14		4	1020	920	970	1020						
7.35–14		8	1290	920	970	1020	1070	1120	1160	1210	1250	1290
7.75–14		4	1120	1010	1060	1120						
7.75–14		8	1420	1010	1060	1120	1170	1220	1280	1330	1370	1420
7.75–15	7.75–15	4	1100	990	1040	1100						
7.75–15	7.75–15	8	1390	990	1040	1100	1150	1200	1250	1290	1340	1390
8.15–15	8.15–15	4	1180	1060	1120	1180						
8.15–15		8	1500	1060	1120	1180	1240	1290	1350	1400	1450	1500
6.00–16		6	1065		880	925	975	1020	1065			
6.50–16	6.50–16	6	1380	1105	1165	1225	1280	1330	1380			

TRUCK TYPE

Tire Size		Ply Rating	Max Capacity (lbs)	Loads and Inflation Pressures (lbs/sq in)											
Tube-less	Tube-Type			35	40	45	50	55	60	65	70	75	80	85	90
7.00–13		8	1315	960	1040	1110	1185	1250	1315						
7.00–14		6	1415	990	1070	1145									
7.00–14		8	1365	990	1070	1145	1220	1290	1365						
6.50–16	6.50–16	6	1420	1225	1320	1420									
7–17.5	7.00–15	6	1520	1310	1420	1520									
	7.00–16	6	1580	1365	1475	1580									
	7.50–16	6	1815		1565	1690	1815								
	7.50–16	8	2140	1565	1690	1815	1930	2040	2140						
8–17.5		6	1735		1620	1735									
	7.00–17	6	1740		1620	1740									
8–17.5	7.00–17	8	2060		1620	1740	1850	1960	2060						
8–19.5		6	2090		1830	2060	2090								
	7.00–18	8	2140		1690	1810	1920	2040	2140						
8–19.5	7.50–17	8	2440		1830	1960	2090	2220	2330	2440					
8–19.5	7.50–17	10	2650		1830	1960	2090	2220	2330	2440	2650				
7–22.5		6	1870		1640	1760	1870								
	7.00–20	8	2310		1820	1950	2080	2200	2310						
8–22.5	7.50–20	8	2740		2060	2210	2350	2490	2620	2740					
8–22.5	7.50–20	10	3090		2060	2210	2350	2490	2620	2740	2860	2980	3090		
9–22.5	8.25–20	10	3330		2400	2570	2730	2890	3040	3180	3330				
9–22.5	8.25–20	12	3720		2400	2570	2730	2890	3040	3180	3330	3460	3600	3730	
10–22.5	9.00–20	10	3960			3040	3240	3440	3620	3790	3960				
	9.00–20	12	4480			3040	3240	3440	3620	3790	3960	4120	4280	4480	
11–22.5	10.00–20	12	4580				3600	3820	4020	4220	4410	4580			
	10.00–20	14	5210				3600	3820	4020	4220	4410	4580	4750	4930	5210
12–22.5	11.00–20	12	5150				4060	4300	4520	4740	4950	5150			
	11.00–20	14	5730				4060	4300	4520	4740	4950	5150	5340	5540	5730

TIRE SPECIFICATIONS

TUBELESS TIRES

Passenger Car Type

Size	Ply Rating	Maximum Capacity (lbs)	Inflation Pressure (lbs)	Unloaded Outside Diameter (in)	Loaded Section Width (in)	Loaded Radius (in)	Revolutions Per Mile (loaded)
6.50–13	4	840	24	24.7	6.4	11.8	853
7.00–13	8	1060	36	25.5	6.9	12.2	826
7.35–14	4	1020	24	26.3	7.2	12.2	810
7.35–14	8	1290	36	26.3	7.2	12.2	810
7.75–14	4	1120	24	27.1	7.4	12.5	807
7.75–14	8	1420	36	27.1	7.4	12.5	807
7.75–15	4	1100	24	27.2	7.6	12.6	801
7.75–15	8	1390	36	27.2	7.6	12.6	801
8.15–15	4	1180	24	27.7	8.0	12.8	793
8.15–15	8	1500	36	27.7	8.0	12.8	793
6.00–16	6	1065	30	28.4	6.4	13.7	739
6.50–16	6	1380	30	29.0	6.9	13.8	720

Truck Type

7.00–13	8	1315	60	25.5	7.2	11.8	826
7.00–14	6	1145	45	26.4	7.0	12.3	801
7.00–14	8	1365	60	26.4	7.0	12.3	801
6.50–16	6	1420	45	29.5	7.3	14.0	703
7–17.5	6	1520	45	29.8	7.4	14.3	704
8–17.5	6	1735	45	31.0	7.7	14.9	679
8–17.5	8	2060	60	31.0	7.7	14.9	679
8–19.5	6	2090	50	33.8	7.9	16.4	617
8–19.5	8	2440	65	33.8	7.9	16.4	617
8–19.5	10	2650	75	33.8	7.9	16.4	617
7–22.5	6	1870	50	34.6	7.2	16.8	591
8–22.5	8	2740	65	36.8	7.9	17.9	565
8–22.5	10	3090	80	36.8	7.9	17.9	565
9–22.5	10	3330	70	38.4	8.7	18.5	543
9–22.5	12	3720	85	38.4	8.7	18.5	543
10–22.5	10	3960	70	40.2	9.8	19.4	521
10–22.5	12	4480	85	40.2	9.8	19.4	521
11–22.5	12	4580	75	41.5	10.9	19.9	506
12–22.5	12	5150	75	42.6	11.5	20.4	492

TUBE-TYPE TIRES

Passenger Car Type

Size	Ply Rating	Maximum Capacity (lbs)	Inflation Pressure (lbs)	Unloaded Outside Diameter (in)	Loaded Section Width (in)	Loaded Radius (in)	Revolutions Per Mile (loaded)	Tube Group Size	Flap Size
7.75–15	4	1100	24	27.2	7.6	12.6	801	K–15	
7.75–15	8	1390	36	27.2	7.6	12.6	801	K–15	
8.15–15	4	1180	24	27.7	8.0	12.8	793	K–15	
6.50–16	6	1380	30	29.0	6.9	13.8	720	G–16	

Truck Type

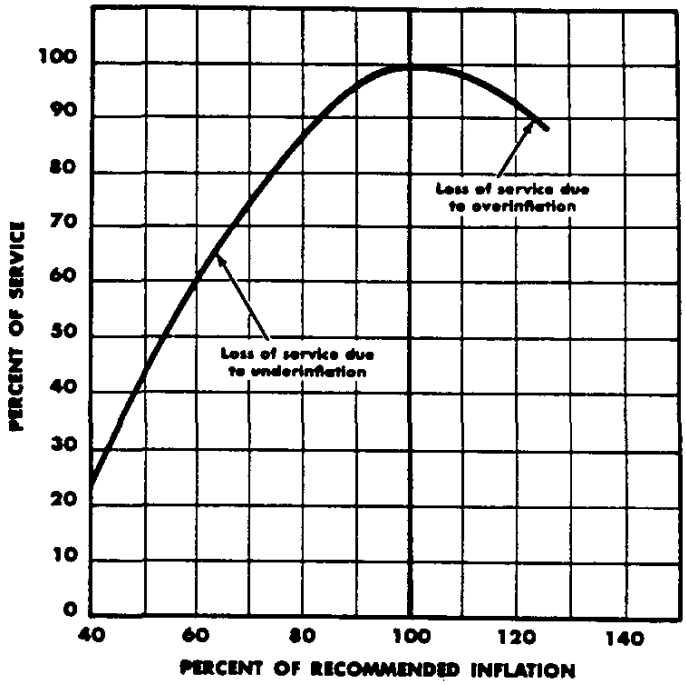
7.00–15	6	1520	45	30.1	7.9	14.4	704	7.00–15	L
6.50–16	6	1420	45	29.5	7.3	14.0	703	6.50–16	L
7.00–16	6	1580	45	30.7	8.5	14.5	682	7.00–16	L
7.50–16	6	1815	50	32.0	9.0	15.2	659	7.50–16	L
7.50–16	8	2140	60	32.0	9.0	15.2	659	7.50–16	L
7.00–17	6	1740	45	32.6	7.6	15.6	638	7.00–17	17M
7.00–17	8	2060	60	32.6	7.6	15.6	638	7.00–17	17M
7.50–17	8	2440	65	33.7	8.1	16.3	617	7.50–17	17M
7.50–17	10	2650	70	33.7	8.1	16.3	617	7.50–17	17M
7.00–18	8	2140	60	33.6	7.6	16.2	622	7.00–18	18M
7.00–20	8	2310	60	35.6	7.6	17.2	591	7.00–20	20M
7.50–20	8	2740	65	36.8	8.5	17.8	565	7.50–20	20M
7.50–20	10	3090	80	36.8	8.5	17.8	565	7.50–20	20M
8.25–20	10	3330	70	38.2	9.0	18.5	543	8.25–20	20M
8.25–20	12	3720	85	38.2	9.0	18.5	543	8.25–20	20M
9.00–20	10	3960	70	40.0	10.0	19.3	521	9.00–20	20N
9.00–20	12	4480	85	40.0	10.0	19.3	521	9.00–20	20N
10.00–20	12	4580	75	41.4	10.7	19.9	506	10.00–20	20R
10.00–20	14	5210	90	41.4	10.7	19.9	504	10.00–20	20R
11.00–20	12	5150	75	42.4	11.3	20.2	492	11.00–20	20R
11.00–20	14	5730	90	42.4	11.3	20.2	492	11.00–20	20R

per inflation pressures for various tire loads are shown in the ie on the preceding page. For maximum tire life these pressure commendations should be followed. Both overinflation and nderinflation can greatly reduce tire life. Likewise, the life of overloaded tires is shortened considerably. Greatest tire economy is achieved by selecting tires large enough to carry maximum loads without overloading, and by adjusting inflation pressures downward when less than maximum loads are carried.

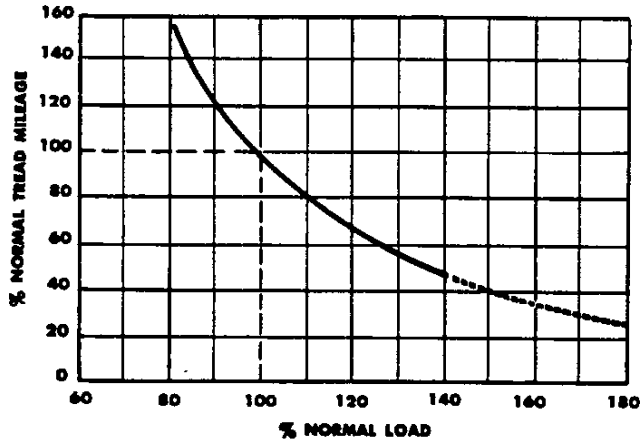
EFFECT OF INFLATION ON TIRE WEAR

Overinflation—This is one of the greatest causes of tire damage. Overinflation does not add strength to a tire, nor does it compensate for overloading. Instead, it weakens the tire and causes more rapid wear. Specifically, overinflation causes (1) rapid wear in center of tread, (2) greater susceptibility to impact breaks, (3) weakening of tread, (4) stresses that lead to tread separation, (5) reduced cushioning, leading to increased truck maintenance costs, 6) reduced traction and skid resistance.

Underinflation—This causes tires to flex excessively, causing heat build-up and increased tire wear. Underinflation leads to (1) excessive wear on shoulder of tread, 2) irregular tread wear, (3) ply separation, . . greater susceptibility to bruising, (5) tread separation.



EFFECT OF OVERLOADING ON TIRE WEAR



Tires that are loaded beyond their maximum rated carrying capacity will have their useful life significantly shortened. As shown by the accompanying curve, tire life decreases rapidly as overloading increases. For example, it is seen that only a 10% overload reduces tire life by about 15%. An overload of 50% reduces tire life by 60%.

The dotted line is a projection of the solid curve, obtained with actual tire experience over a long period of time. The extreme left end of the solid curve shows that running truck tires at less than rated load results in a substantial increase in tread mileage.

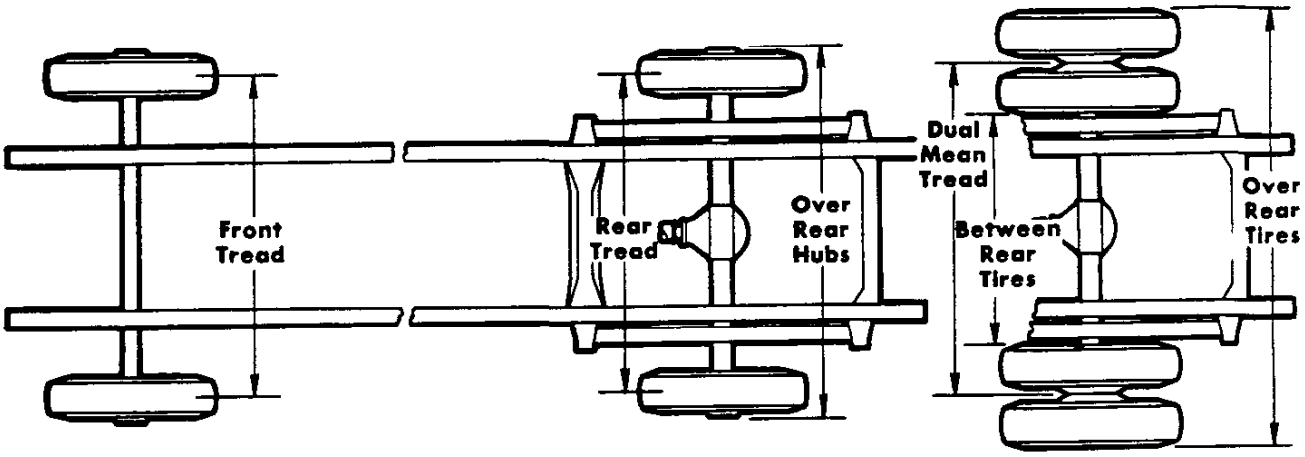
EFFECT OF OVERHEATING ON TIRES

When a tire gets extremely hot by operating a considerable distance in a severely underinflated or flat condition, or with dragging brakes (these are most common causes), the internal frictional heat created may build up to a point where the tire actually bursts into flame. This usually occurs in a dual assembly where one tire is flat and the other tire continues to operate in an overloaded and/or underinflated condition. In such cases, either the completely flat tire or the tire carrying the load could build up a sufficiently high temperature to ignite.

It is extremely difficult to extinguish a tire fire since the internal temperature causes repeated ignition. A fire extinguisher should be used to control the fire until the tire can be removed from the vehicle.

The best protection against a tire fire is to avoid running on flats and to check operating pressures regularly. Operators of trucks carrying combustible or explosive materials should check tires at 50-mile intervals.

TIRE TREADS & GROUND CLEARANCE



TRUCKS WITH SINGLE REAR TIRES

Series	Tire Size	Rim Width (inches)	Front Tread (inches)	Rear Tread (inches)	Over Rear Hubs (inches)	Ground Clearance (inches)	
						Front	Rear
G10	6.50–13	5.50	61.2	61.6	—	6.3	6.0
C10, P10	7.75–15	5.50	63.1	61.0	70.3	9.9	7.6
	8.15–15	5.00	63.1	61.0	70.3	10.1	7.8
	6.00–16	5.00	63.4	61.3	70.3	10.3	8.0
	6.50–16	5.00	63.4	61.3	70.3	10.5	8.2
	7–17.5	5.25	62.6	60.5	70.3	10.9	8.6
	7.00–15	5.50	64.3	62.0	70.3	10.0	7.7
K10	7.75–15	5.50	63.3	61.0	70.3	7.9	7.6
	7.00–15	5.50	64.4	62.1	70.3	7.9	7.7
	8.15–15	5.00	63.3	61.0	70.3	8.0	7.8
	6.00–16	5.00	63.3	61.0	70.3	8.2	8.0
	6.50–16	5.00	63.4	61.3	70.3	8.5	8.2
	7–17.5	5.25	62.5	60.5	70.3	8.9	8.6
C20	7–17.5	5.25	62.0	61.7	72.4	10.9	7.7
	8–17.5	5.25	62.0	61.7	72.4	11.5	8.3
	8–19.5	5.25	62.0	61.7	72.4	13.0	9.8
	7.00–15	5.50	63.2	63.0	72.4	11.0	7.8
	7.00–17	5.00	62.4	62.1	72.4	12.3	9.1
	7.50–17	6.00	62.4	62.1	72.4	12.6	9.4
K20	7–17.5	5.25	68.1	64.7	72.4	8.9	7.7
	8–17.5	5.25	68.1	64.7	72.4	9.5	8.3
	8–19.5	5.25	66.8	64.1	72.4	11.0	9.8
	7.00–15	5.50	68.1	64.7	72.4	9.0	7.8
	7.00–17	5.00	67.5	64.1	72.4	10.3	9.1
	7.50–17	6.00	67.5	64.1	72.4	10.6	9.4
P20	7–17.5	5.25	65.4	62.4	72.4	8.6	7.7
	8–17.5	5.25	65.4	62.4	72.4	9.2	8.3
	7.00–17	5.00	64.8	61.8	72.4	7.1	9.1
	7.50–17	6.00	65.7	62.7	72.4	7.4	9.4
C30	8–17.5	5.25	62.0	61.7	72.4	11.5	8.3
	8–19.5	5.25	62.0	61.7	72.4	13.0	9.8
	7.00–17	5.00	62.4	62.1	72.4	12.3	9.1
	7.50–17	6.00	62.4	62.1	72.4	12.6	9.4
P30	8–19.5	5.25	63.2	64.2	72.4	7.8	9.8
	7.50–17	6.00	64.1	65.1	72.4	7.4	9.4

TIRE TREADS & GROUND CLEARANCE

Trucks with Dual Rear Tires

Series	Tire Size	Rim Width (inches)	Front Tread (inches)	Over Rear Tires (inches)	Dual Mean Tread (inches)	Between Rear Tires (inches)	Ground Clearance (inches)	
							Front	Rear
C20	6.50–16	5.50	62.0	79.2	63.3	47.4	10.3	7.2
C30	7–17.5	5.25	62.0	80.2	63.2	46.2	10.9	7.7
	8–17.5	5.25	62.0	80.5	63.2	45.9	11.4	8.3
	6.50–16	5.50	63.1	79.1	63.2	45.3	10.3	7.2
	7.00–16	5.50	61.6	81.2	63.2	45.8	11.1	8.0
	7.50–16	5.50	61.6	81.6	63.2	46.0	11.6	8.5
	7.00–18	5.00	62.5	79.9	63.2	48.0	12.8	9.6
P30	8–19.5	5.25	63.1	80.8	63.3	45.8	7.8	9.8
	6.50–16	5.50	63.3	80.2	63.3	46.4	5.3	7.2
	7.00–18	5.00	63.6	79.0	63.3	48.6	7.6	9.6
CDLPSQ50	7–22.5	5.25	70.0a 71.5b	83.7d 85.8e	66.9d 69.0e	50.1d 52.2e	10.6a 10.3b	9.2d 8.4e
	8–22.5	5.25	70.0a 71.5b	84.4d 86.5e	66.9d 69.0e	49.4d 51.5e	11.7a 11.4b	10.3d 9.5e
	9–22.5	6.00	68.8a 70.3b	86.4d 88.5e	66.9d 69.0e	47.4d 49.5e	12.3a 12.0b	10.9d 10.1e
	7.00–20	5.00	70.1a 71.6b	84.4d 86.1e	66.9d 69.0e	49.8d 51.9e	11.0a 10.7b	9.6d 8.8e
	7.50–20	6.00	68.6a 70.1b	86.5d 88.6e	66.9d 69.0e	47.3d 49.4e	11.6a 11.3b	10.2d 9.4e
	8.25–20	6.00	68.6a 70.1b	87.0d 89.1e	66.9d 69.0e	46.8d 48.9e	12.3a 12.0b	10.9d 10.1e
	9.00–20 ♦	6.5	— 64.1b	— 91.0e	— 69.0e	— 51.7e	— 12.8b	— 10.9e
	9.00–20 ♦	7.0	— 68.2b	— 93.0e	— 69.0e	— 53.5e	— 12.8b	— 10.9e
NT50	7–22.5	5.25	76.7	83.7	66.9	50.3	10.6	9.2
	8–22.5	5.25	76.7	83.7	66.9	50.3	10.6	9.2
	9–22.5	6.00	75.5	86.4	66.9	46.6	12.3	10.9
	7.00–20	5.00	76.8	84.0	66.9	50.4	11.0	9.6
	7.50–20	6.00	75.3	86.5	66.9	48.3	11.6	10.2
	8.25–20	6.00	75.3	87.0	66.9	47.6	12.3	10.9
S69	8–22.5	6.00	70.0	88.0	69.0	50.0	10.9	9.5
	9–22.5	6.00	70.0	88.5	69.0	49.5	11.5	10.1
	9–22.5	6.75g	69.0	89.8	69.0	48.2	11.5	10.1
	10–22.5	6.75g	69.0	90.6	69.0	47.4	12.4	11.0
	7.50–20	6.00	69.8	88.6	69.0	49.4	11.3	9.4
	8.25–20	6.50g	68.8	90.3	69.0	47.7	11.5	10.1
	9.00–20	6.50g	68.8	91.0	69.0	47.0	12.3	10.9
ACDLMQS60	8–22.5	6.00	70.3	88.0	69.0	50.0	11.4	9.5
	9–22.5	6.00	70.3	88.5	69.0	49.5	12.0	10.1
	9–22.5	6.75g	69.3	89.8	69.0	48.2	12.0	10.1
	10–22.5	6.75g	69.3	90.6	69.0	47.4	12.9	11.0
	7.50–20	6.0	70.3	88.6	69.0	49.4	11.3	9.4
	8.25–20	6.0	70.3	89.1	69.0	48.9	12.0	10.1
	8.25–20	6.5g	69.1	90.3	69.0	47.7	12.0	10.1
	9.00–20	6.5g	69.1	91.0	69.0	47.0	12.8	10.9
ACDLQS60-H	8–22.5	6.00g	72.0	89.3	70.5	51.5	10.9	9.5e 8.6f
	9–22.5	6.00g	72.0	89.8	70.5	51.0	11.5	10.1e 9.2f
	9–22.5	6.75	70.9g 69.7h	91.3g 91.1h	70.5g 70.3h	49.7g 49.5h	11.5	10.1e 9.2f
	10–22.5	6.75	70.9g 69.7h	92.7g 92.5h	70.5g 70.3h	48.9g 48.7h	12.4	11.0e 10.1f
	10–22.5	7.50g	70.3	93.1	70.5	47.4	12.4	11.0e 10.1f
	8.25–20	6.50	70.7g 69.5h	91.8g 91.6h	70.5g 70.3h	49.2g 49.0h	11.5	10.1e 9.2f
	9.00–20	6.50	70.7g 69.5h	92.5g 92.3h	70.5g 70.3h	48.5g 48.3h	12.3	10.9e 10.0f
	9.00–20	7.00g	69.7	94.4	70.5	46.5	12.3	10.9e 10.0f
	10.00–20	7.00g	69.7	94.1	70.5	49.4	12.9	10.6f
	10.00–20	7.50g	69.7g 66.3h	98.6g 98.4h	70.5	49.9g 47.0h	12.9	10.6f

a—With 4000-lb front axle.
b—With 5000-lb front axle.
d—With 11,000-lb rear axle.
e—With 15,000-lb or 17,000-lb Chevrolet rear axles.
f—With 17,000-lb Eaton rear axle.
g—Cast wheels.
h—Disc wheels.
♦—Q50 only.