

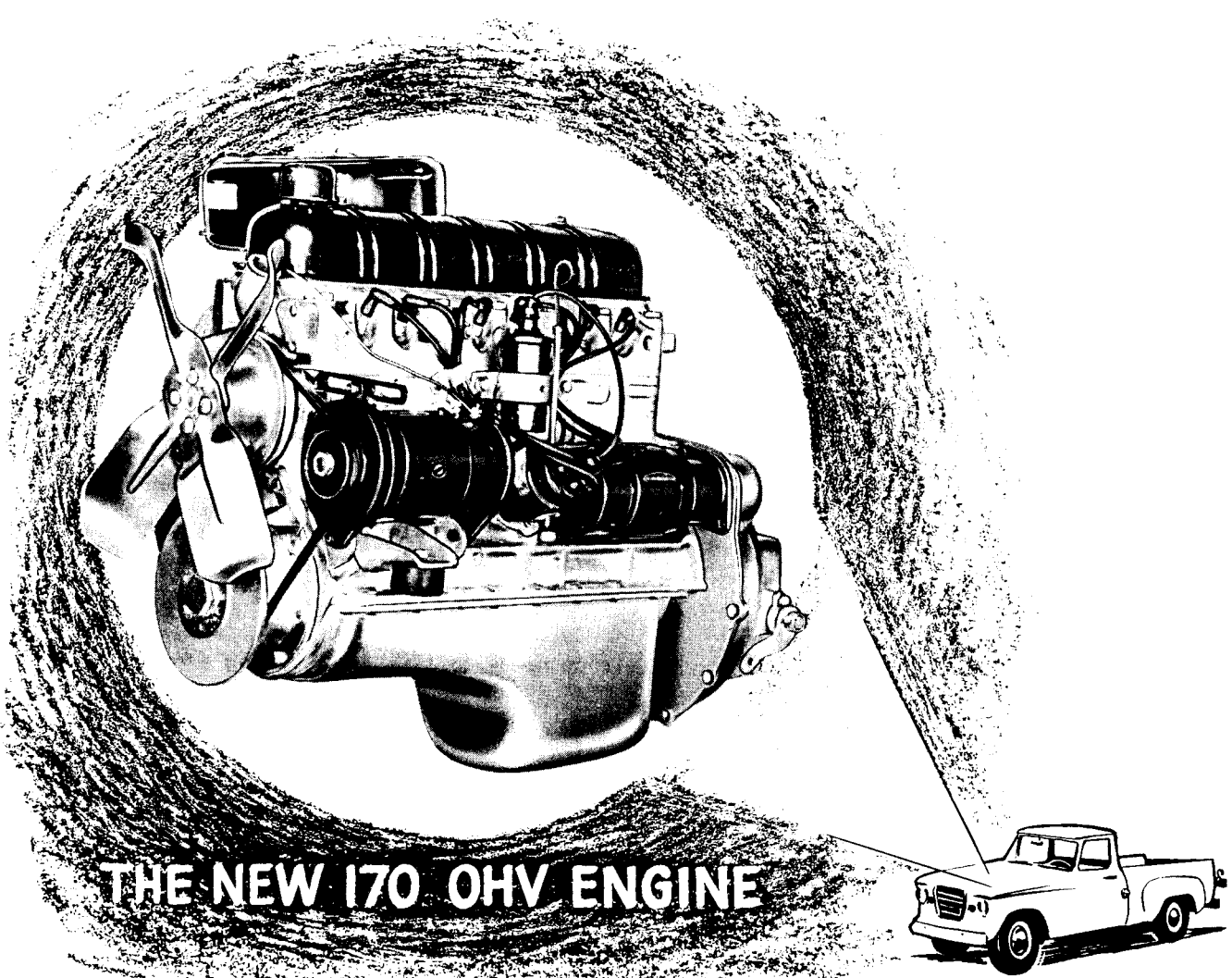
# Service Bulletin

SEPTEMBER

1960

NO. 357

SOUTH BEND 27, INDIANA



## THE NEW 170 OHV ENGINE

### 6E SERIES TRUCKS STARTING SERIAL NUMBERS

6E5	E5-129601	6E13	E13-3601
6E7	E7-13801	6E28	E28-7201
6E10	E10-39001	6E40	E40-4201
6E12	E12-4701		

6E13-D FOUR WHEEL DRIVE MODEL - E13-3601

MODEL INFORMATION

MODEL	WB	RATING (TON)	GVW	PICK-UP BOX LENGTH
6E5	112 & 122	1/2	5000	6 1/2 & 8
6E7	112 & 122	1/2	5200	6 1/2 & 8
6E10	122	3/4	7000	8
6E12	122	3/4	7000	8
6E13D	131	1	10000	
6E13	131	1	10000	
6E28	131-155-171	2	18000	
6E40	131-155-171-195	2 Ton HD	19500 - Note 1	
6E40	131-155-171-195	2 Ton HD	23000 - Note 2	

Note 1 - Model 6E40 - 131" WB GVW is 35000 when used as trailer tractor.  
 Note 2 - When equipped with 7000 lb. front axle and 16000 lb. rear axle.

SERIAL NUMBER PLATE

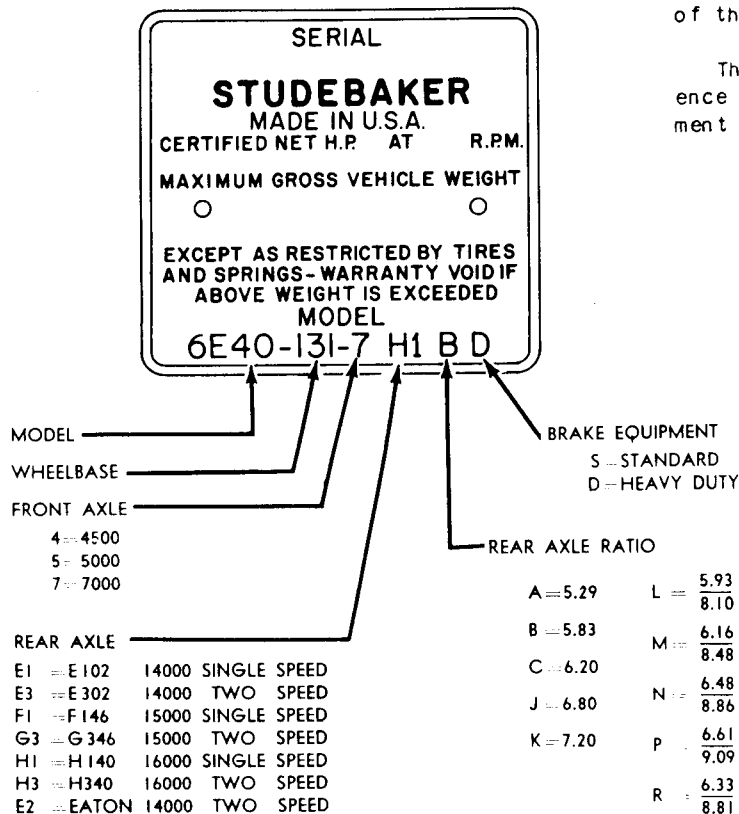
The serial number plate on the 1/2 and 3/4 ton models is located on the body post, below the door striker plate.

The serial number of the 1, 1-1/2 and 2 Ton models, is shown on the caution plate located below the left side of the seat.

The information given on the plate includes a code, which reveals type of front axle, rear axle (including gear ratio) and brake equipment installed at time of production.

The code is explained in the illustration, which in this case indicates the model as a 6E40, 131 inch wheelbase, with a 7000 lb. front axle. Rear axle type is a model H-140 - 16000 lb. single speed with a 5.83 to one ratio and equipped with heavy duty brakes. This information appears only on the CAUTION PLATE of the 1-1/2 and 2 ton trucks.

This information should be used as a reference guide to simplify ordering proper replacement parts.



**BRAKES**

<u>SERVICE BRAKES</u>	<u>FRONT</u>	<u>REAR</u>	(Sq. In.) <u>LINING AREA</u>
6E5, 6E7	11 X 2 X 3/16	11 X 2 X 3/16	177 1/2
6E10, 6E12, 6E13,			
6E13D	12 1/8 X 2 X 1/4	12 1/8 X 2 X 1/4	198
6E28	14 X 2 X 5/16	14 1/8 X 3 X 3/8	293 3/4
6E40	15 X 2 1/4 X 5/16	15 X 4 1/2 X 1/2	444 1/4

<u>PARKING BRAKES</u>	<u>TYPE</u>	<u>LINING AREA (SQ. IN)</u>
6E5, 6E7	Rear Wheels	88 3/4
6E10, 6E12	Rear Wheels	99
6E13D	Band	55 5/8
6E13, 6E28	Band	61 9/16
6E40	Band	67 1/2

**CLUTCH**

Clutch Diameter - With 169.6 Cu. In. Engine - 9 1/4"	Clutch Area - With 9 1/4" - 77.85
- With 259.6 Cu. In. Engine - 10 1/2"	- With 10 1/2" - 106.81
- With 289 Cu. In. Engine - 11"	- With 11" - 123.7

**COOLING**

<u>CAPACITIES</u>	<u>STANDARD</u>	<u>HEAVY DUTY</u>
6E5	11	11
6E10	13 1/2	13 1/2
6E7, 6E12	17	17
6E13, 6E28, 6E13D	20 3/4	21 1/4
6E40	21 1/4	

**ELECTRICAL**

12 VOLT SYSTEM - 6E5, 6E10 - Auto-lite  
 - All others - Delco-Remy

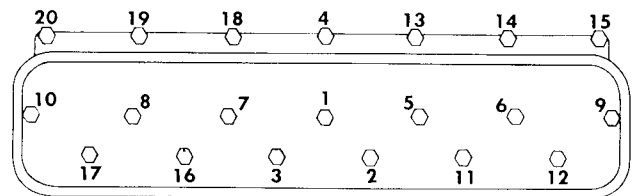
GENERATOR -- 30 Amp. - all models

BATTERY -- Willard - 50 Amp., Standard; Globe - 70 Amp., optional extra cost

**NEW ENGINE 1/2 AND 3/4 TON MODELS**

The 1/2 ton model 6E5 and 3/4 ton model 6E10 features a new Overhead Valve, 170 Cubic In. displacement engine.

In preparation for delivery it is important to tighten the cylinder head capscrews with a torque indicating wrench to 46 to 50 ft. lbs. torque using the sequence shown in the illustration. Tighten the rocker arm bracket support screws to 13 - 17 ft. lbs. An 11/16" - 3/8" drive socket and extension used with a 3/8" X



1/2" adapter may be used with a 1/2" drive ft. lb. torque indicating wrench to tighten the capscrews located on the manifold side of the cylinder head.

With the engine hot and idling, adjust the valve clearances to .023" to .025".

## V8 ENGINE

A 259 cu. in., heavy duty engine, is also available as optional equipment on models 6E7, 6E12, 6E13 and 6E28. This engine contains the same heavy duty equipment as listed for the 289 cu. in. heavy duty engine. This engine will be identified by a 6E prefix to the engine number.

The 289 cu. in. engine used in the 6E40 model will have heavy duty aluminum timing gear, heavy duty intake and exhaust valves, roto caps on exhaust valves, heavy duty valve springs, top chrome piston rings, and heavy duty tri-metal bearings as standard equipment. This engine will be identified by a 6E prefix to the engine serial number and a clover leaf design stamped on the serial number boss.

	6E5 6E10	6E13D, 6E7, 6E12 6E13, 6E28,	6E40
NUMBER OF CYLINDERS	6	8	8
DISPL.	170	259.2	289
BORE & STROKE	3 X 4	3 9/16 X 3 1/4	3 9/16 X 3 5/8
COMP. & RATIO	8-1	7.5-1	7.5-1
H.P. (MAX. NET)	75	141	154
RPM	3600	3800	3800
TORQUE (MAX. NET)	133	225	260
RPM	1600	2400	2400

## FRAMES

	<u>CROSS SECTION</u>	<u>SECTION MODULUS</u>
6E5, 6E7	7 1/32" X 2 17/64" X 9/64"	3.177
6E10, 6E12	7 1/16" X 2 9/32 X 5/32"	3.539
6E13, 6E13D also		
6E28 131" and 155" W.B.	8 1/16" X 2 3/4" X 3/16"	5.719
6E40 also 6E28 171" W.B.	8 5/16" X 2 7/8 X 5/16"	9.770

## REAR AXLE

	<u>STANDARD</u>	<u>OPTIONAL</u>
6E5	4.27	4.55
6E7	4.09	4.27, 4.55, 3.75
6E10	4.88	4.56
6E12	4.10	4.56, 4.88
6E13D	5.14	—
6E13	5.14	4.88
6E28	6.20	5.29 ★
6E40	6.80	6.80, 7.20 ★★

★ 2- speed axle optional at extra cost and available in ratios 5.93/8.10 and 6.48/8.86

★★ 2- speed axle optional at extra cost and available in ratios 6.16/8.48 and 6.61/9.09

## REAR SPRINGS

	<u>STANDARD</u>	<u>OPTIONAL (EXTRA COST)</u>
6E5, 6E7	Single Stage (2" Width)	H. D. 2 Stage
6E10, 6E12	Single Stage	H. D. 2 Stage
6E13, 6E13D	2 Stage	H. D. Main W/Aux.
6E28	Main W/Aux.	H. D. Main W/Aux.
6E40	Main W/Aux.	H. D. Main W/2 Stage Aux.

## STEERING

All models — Variable Ratio — Cam and Twin Lever type.

6E5, 6E7, 6E10, 6E12 — Ross T L-12

6E13, 6E28, 6E13D — Ross TA14

6E40 — Ross TA54

## TIRES

6E5, 6E7 — Five 6.70 X 15 4 P.R. tubeless

6E10, 6E12 — Four 7.00 X 16 6 P.R. tubeless

6E13, 6E13D — Four 8 X 17.5 6 P.R. tubeless

6E28 — Six 8 — 19.5 8 P.R.

6E40 — Six 8.25 X 20 10 P.R.

## TRANSMISSION-STANDARD

6E5, 6E10 — 3 Speed (Warner T-90-B)

6E7, 6E12 — 3 Speed (Warner T-89-C)

6E13, 6E28, 6E13D — 4 Speed (Warner T-98-A)

6E40 — 4 Speed (New Process 420)

### OPTIONAL (Extra Cost)

Warner Automatic — 4 Speed — on Models 6E7 & 6E12

Warner T-98-A optional on models 6E5, 6E7, 6E10, 6E12

New Process Model 540D (5 Speed direct) and Model 540-0D

(5 Speed Overdrive) available as optional equipment, at extra cost 6E13, 6E28, 6E40

Warner (T-98A) 4 Speed — on model 6E28 (required with 289 cu. in. engine)

## CAB

T-4 (Standard Cab equipment) on 6E5, 6E7, 6E10, 6E12.

Includes: Chrome door name plate, inside rear view mirror, adjustable seat, vent window wings, dual electric windshield wipers, one sun visor, ash receiver, all vinyl seat and back trim, vinyl headlining, underslung tire carrier, painted hub covers.

T-6 (Deluxe Cab equipment) on 6E5, 6E7, 6E10, 6E12.

Includes in addition to items listed for T-4 cab.

Chrome grille, chrome parking lamp and air intake grilles, chrome headlight rims, stainless steel fender moldings, stainless steel exterior windshield trim moldings, instrument board upper crash pad, dual sun visors, two arm rests, foam rubber seat cushion pad, sliding rear window glass, stainless steel hub covers, stainless steel gas tank cap, chrome trim vent window wings.

C-2 (Standard Cab equipment) on 6E13, 6E28, 6E40.

Includes: Left arm rest, cab door name plates, instrument panel pad, L.H. outside mirror, (extension type), sliding adjustable seat, left sun visor, sun and rain visors on doors, dual electric windshield wipers, direct reading ammeter and oil pressure gauges and, all vinyl seat cushion and back (tan).

C-4 (Deluxe Cab equipment) on 6E13, 6E28, 6E40.

Includes in addition to items listed for a C-2 cab.

Dual arm rests, foam rubber seat cushion pad, dual sun visors, map light, R.H. outside mirror (extension type).

NOTE — The C-4 deluxe cab is standard on models 6E13D.

## OPTIONAL EQUIPMENT (At Extra Cost)

### OPTIONS FOR MODELS - 6E5, 6E7, 6E10, 6E12

Air cleaner - oil bath 1 qt.	Light - dome
Arm rests - 2 - (T-4)	- dual tail and stop
Axle - Twin Traction Rear	Lighter - Automatic cigarette
Battery 70 amp. H. D.	Locks - dual door
Brake Hydrovac 6 3/4"	Mirrors - outside short
Bumper - rear (painted)	Oil filter - 1 qt.
Climatizer and defroster	Pad - crash - upper inst. board (T-4)
Clutch 11" (V8 only)	Pad - foam rubber - seat (T-4)
Directional signals - Class A & B	Radio
Glass - tinted (windshield only or tinted all around)	Radiator H. D.
Hill Holder - N. A. on Automatic)	Tire carrier - side mount
Horns (dual)	- inside pick up box (no charge)
	Visor - R. H. (T-4)
	Windshield washer
	Window glass - sliding rear (T-4)

### OPTIONS FOR MODELS 6E13, 6E28, 6E40

Battery - HD 70 amp.	Governor (N.A. with power package)
Brake - Hydrovac booster - 6 3/4"	Hill Holder
- Hydrovac booster - 9 1/2" (Std. on 6E40)	Horns (dual)
(Opt. on 6E28)	Lights (dual tail & stop)
Brakes - H.D. rear (15 X 4) 6E28	Light -- map
(Available with 20" wheels only)	Lighter - Cigarette
H.D. Front and rear (heavy duty hydrovac and	Mirror, inside rear view
M/cylinder) 6E40	Oil Filter
Climatizer - fresh air heater with defroster	Paint - two tone
Directional signals - Class "A"	Power Package - 4 bbl. carb.
Door side moldings (Std. with 2 tone paint)	Radio
Frame H.D. (6E28) - 131" and 155" W.B.	Radiator H.D.
Frame reinforcements (6E28-6E40)	Shock absorbers
Fan - heavy duty	Steering - power
Generator - 40 Amp H.D.	Transmission - 5 speed O.D.
- 40 Amp H.D. early cut in	- 5 speed direct
- Leece-Neville 50 Amp. (alternator)	Vacuum reserve tank
Glass - tinted (windshield only or tinted all around)	Windshield washer

NOTE: - Heavy duty engines which contain top chrome piston rings, heavy duty inlet and exhaust valves, exhaust valve roto-caps, heavy duty main and connecting rod bearings, aluminum timing gear, are available on Models 6E7, 6E12, 6E13, 6E28. Heavy duty 289 cu. in. engine is standard on 6E40 model.

PAINT COLORS

P-6150 Black Velvet	P-6155 Apache Red
P-6151 Parchment White	P-6156 Desert Sand
P-6152 Sherwood Green (dark)	P-6157 Suntone
P-6153 Jade Green (light)	P-6158 Omaha Orange
P-6154 Riviera Blue (light)	

TWO TONE \* Above colors used with Parchment white  
uppers (at extra cost)

\*SOLID COLORS ONLY (NO TWO TONE) on Models 6E5, 6E7, 6E10, 6E12.

FORMULATIONS

O'Brien #1145 Desert Sand Baking Enamel - Symbol  
BFS - (their S-1874) Vehicle - Alkyd - Melamine

<u>Pigment</u>	
Non-Chalking Titanium Dioxide	92.2%
Iron Oxide Yellow	5.7%
Iron Oxide Red	2.1%
Lamp Black	Trace
	<u>100.0%</u>

Cook's #1143 Jade Green Baking Enamel - Symbol  
BFP (their 832-G-601)

Non-Chalking T <sub>10</sub>	82.17%
Ferrite Yellow <sup>1 2</sup>	7.82%
Lamp Black	.79%
Phthalo Green	9.22%
	<u>100.00%</u>

O'Brien's #1142 Riviera Blue Baking Enamel -  
Symbol BFO (their S-1875) Vehicle-Alkyd Melamine

<u>Pigment</u>	
Non-Chalking Titanium Dioxide	96.00%
Phthalocyanine Blue	4.0%
Lamp Black	Trace
	<u>100.00%</u>

O'Brien's #1147 Suntone Baking Enamel - Symbol  
BFU (their S-1865) Vehicle - Alkyd - Melamine

<u>Pigment</u>	
Non-Chalking Titanium Dioxide	65.00%
AZO Nickel Yellow	33.6%
Iron Oxide Yellow	1.4%
Phthalocyanine Green	Trace
	<u>100.00%</u>

Niles Chemical Co. #1039 Sherwood Green Baking  
Enamel - Symbol BBN

Chrome Green Extra Dark	7.3%
Titanium Dioxide	2.3%
Resin	32.4%
Thinners	58.0%
	<u>100.0%</u>

Rinshed-Mason #1029 Apache Red Baking Enamel -  
Symbol BBD (their E21R046)

Cadmium Red - Medium Light	55.0%
Cadmium Red - Light	40.0%
Thio Indigo Maroon	5.0%
	(Dry weight of pigment) <u>100.0%</u>

Tints of Titanium Oxide and traces of black will also be required, amounts depending on dispersion factors and individual processing. Exact ratio of the main pigments will also depend slightly upon these same factors.

Rinshed-Mason #1066 Parchment White Baking  
Enamel - Symbol BCP (their E23W014)

T <sub>102</sub> Titanium	99.00%
Ferrite	1.00%
	<u>100.00%</u>

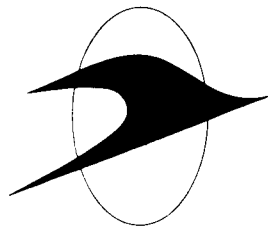
Cook's #1084 Velvet Black Baking Enamel -  
Symbol BDH (their #832-B-600)

Carbon Black	100.0%
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Niles Chemical Co. #1073 Omaha Orange Baking  
Enamel - Symbol BCW

Medium Chrome yellow	33 lbs.
Molybdate Orange	12 lbs.
Soya Resin - 50% solids	278 lbs.
MM 55 Melamine - 50% solids	26 lbs.
Solvent	77 lbs.

The above formulation is for a 50 gallon batch.  
Weight per gallon 8.64. Viscosity 38 seconds  
#4 Ford cup.



**STUDEBAKER-PACKARD CORPORATION**  
**SOUTH BEND 27, INDIANA**

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