# DODGE TRUCK B-4 SERIES SHOP MANUAL

MODELS: B-4-B, B-4-C, B-4-D, B-4-PW, B-4-DU, B-4-EU, B-4-F, B-4-G, B-4-GA, B-4-H, B-4-HA, B-4-HM, B-4-HMA, B-4-J, B-4-JA, B-4-JM, B-4-JMA, B-4-K, B-4-KA, B-4-KMA, B-4-R, B-4-RA, B-4-T, B-4-TA, B-4-V, B-4-VA, B-4-Y, B-4-YA, B-4-YX

SECTION 11

**FRAME** 

DODGE DIVISION
CHRYSLER CORPORATION
DETROIT 31, MICHIGAN

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# **FRAME**

### 1. FRAME ALIGNMENT

Figures 2, 3, 4, 5, 6 and 7 provide various dimensions which may be used when checking frame alignment. Each of these dimensions is the true length between two points as measured with a steel tape. However, some are horizontal dimensions and should not be scaled on the surface of the metal.

Figure 1 shows a few of the various diagonal measurements that may be made to check the "squareness" of the frame. Measuring a frame diagonally is a quick method of determining which section of the frame is bent and where force should be applied to restore correct alignment.

However, when using this method to check a frame for alignment, be sure to make the measurements with care and accuracy. This is important!

When the truck body is removed, the frame may be easily checked for alignment by measuring the diagonals (Fig. 1) with trammels or steel tape and by checking the dimensions provided in Figures 2, 3, 4, 5, 6 and 7.

To obtain correct measurements, load the truck to its recommended payload allowance in order to place the frame in its normal position in relationship with the ground. Measurements may be taken without removing the body from the chassis by using a plumb-bob, as follows:

- (1) Place the truck on a level floor and make sure all tires are properly inflated.
- (2) Suspend a plumb-bob from various corresponding points on the frame, such as

indicated by the diagonal lines in Figure 1. Suspend the plumb-bob slightly above the floor. When the plumb-bob stops swinging from side-to-side, mark the floor with chalk directly beneath the plumb-bob. The chalk marks made on the floor will represent the various points of the frame to be checked diagonally.

- (3) Move the truck and measure the distances between the chalk marks on the floor.
- (4) Measure the distance between the points connected by line "A," in Figure 1. This distance should agree within ¼ inch with the distance between the points connected by line "B."
- (5) The distance between the points connected by line "C" should agree within 1/4 inch with the distance between the points connected by line "D."

The diagonals, shown in Figure 1, represent only a few that may be checked. Many others may be measured in the same manner. However, when measuring diagonals, make sure that any two diagonals compared represent exactly corresponding points on each side of the frame.

Improper frame alignment can usually be corrected, when necessary, by straightening bent frame parts. But, in most cases, it is more economical to replace badly distorted frame parts than it is to repair them.

When assembling the body to the frame, align the body correctly so that the frame and the body will fit together without forcing body bolts into place.

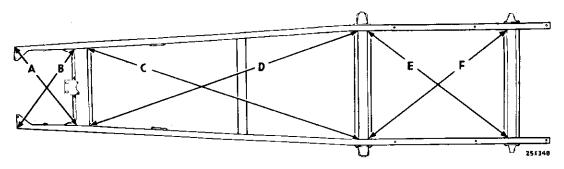


Fig. 1--Frame Diagonal Alignment

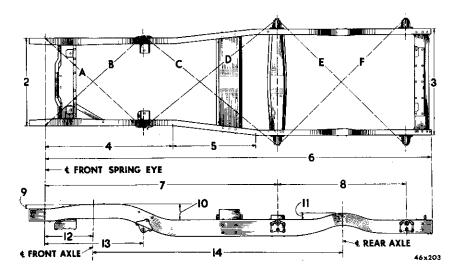


Fig. 2—Frame Alignment (B-4-PW) (Dimensions given in inches)

FRAME DIMENSIONS CHART
B-4-PW 126" W.B. (Refer to Fig. 2)
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$
$4 - 50 \frac{5}{16}$ "
$5 - 33\frac{1}{2}$ " $6 - 185$ "
$7 - 118^{15}/_{16}$ " $8 - 50^{27}/_{32}$ "
9 — 1 7/16"
$\begin{array}{ c c c c c }\hline 10 - 6'' \\ 11 - 27_{16}'' \\ \hline \end{array}$
$12 - 18^{21}/_{32}$ " $13 - 38^{3}/_{8}$ "
14 — 126"

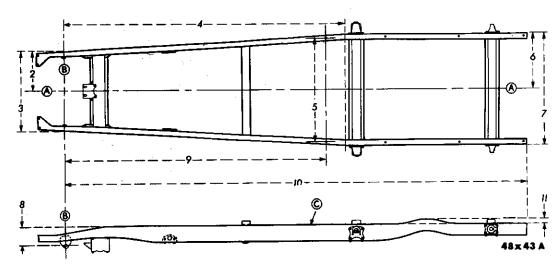


Fig. 3—Frame Alignment (B-4-B, B-4-C, B-4-D) (Dimensions given in inches)

MODEL DESIGNATION AND WHEELBASE (Refer to Fig. 3)	B-4-B 108" W.B.	B-4-B, B-4-C 116" W.B.	B-4-D 116" W.B.	B-4-D 126" W.B.
A — Center line of frame		_	_	
B — Center of front spring front eye	_		_	_
C — Top of frame		· —		—
2 — Center line of front spring eye to side of frame	1517/64"	15%2"	155/16"	155/16"
3 — Across frame at center line of front spring eye	3017/32"	30%6"	305/8″	305/8"

(Chart continued on next page)

MODEL DESIGNATION AND WHEELBASE  (Refer to Fig. 3) (Cont'd from page 4)	B-4-B 108" W.B.	B-4-B, B-4-C 116" W.B.	B-4-D 116" W.B.	B-4-D 126" W.B.
4 — Center of front spring front eye to bend	96¾″	96¾″	96¾″	96¾″
5 — Center-to-center of first body bolt holes	38"	38"	38"	38"
6 — Center line to side of frame,	201/64"	201/32"	201/16"	201/16"
7 — Across flat sides at rear of frame	401/32"	*40½″	401/8"	401/8"
8 — Center of front spring front eye to top of frame	723/32"	73/4″	713/16"	713/16"
9 — Center of front spring front eye to center of first body bolt hole	9323/32"	**93 <sup>23</sup> /32"	932%2"	932%2"
10 — Center of front spring front eye to rear end of frame	1651/32"	17715/32"	177 <sup>15</sup> / <sub>32</sub> "	1 <b>91</b> ½2″
11 — Top of frame to top of rise	111/16"	111/16"	111/16"	111/16"

\*B-4-B— $40\frac{1}{32}$ "
\*\*B-4-B— $177\frac{11}{32}$ "

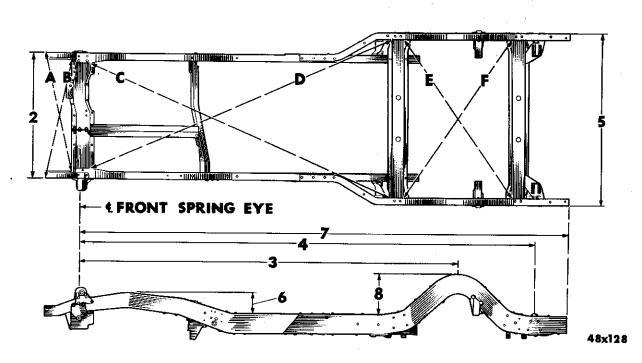


Fig. 4—Frame Alignment (B-4-DU and B-4-EU) (Dimensions given in inches)(Refer to Frame Dimensions Chart, page 6)

B-4-DU 102" W.B.	B-4-DU 117" W.B.	B-4-EU 142" W.B.
392%2"	3931/32"	40"
1247/16"	1397/16"	164¾ <sub>6</sub> ″
1495⁄8″	1645⁄8″	1895/8″
5413/16"	54 <sup>15</sup> / <sub>16</sub> "	55"
61/2"	6½″	6½"
16011/16"	19011/16"	226 <sup>1</sup> / <sub>16</sub> "
131/8"	131/8"	131/8″
	102" W.B. 392%2" 1247/6" 1495/8" 5413/16" 61/2" 16011/16"	102" W.B. 117" W.B.  392%2" 3931/32"  1247/16" 1397/16"  1495/8" 1645/8"  5413/16" 5415/16"  61/2" 61/2"  16011/16" 19011/16"

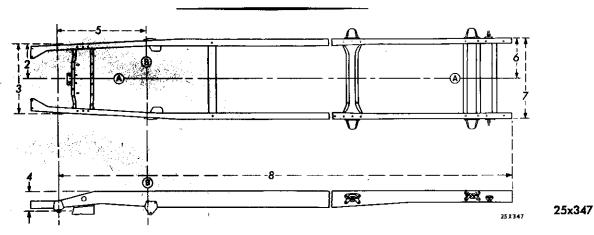


Fig. 5—Frame Alignment (B-4-F, B-4-G, B-4-HL, B-4-H, B-4-HM, B-4-J, B-4-JM, B-4-K, B-4-KMA) (Dimensions given in inches)

### FRAME DIMENSIONS CHART

MODEL DESIGNATION AND WHEELBASE-(Refer to Fig. 5)	→B-4-F   128" W.B.	B-4-F 152" W.B.	B-4-G 128" W.B.	B-4-G 152" W.B.	B-4-G 170" W.B.
A — Center line of frame				_	_
B — Front of dash line		_	_	_	_
C — Center line of front spring front eyes	<u> </u>			_	_
2 — Center line to side of frame at front spring eyes		15 <sup>3</sup> % <sub>4</sub> "	15 <sup>3</sup> ½4″	15 <sup>3</sup> % <sub>4</sub> "	$15^{35}\!\!/_{\!64}{''}$
3 — Across frame at center line of front spring eye	1	31½ <sub>2</sub> ″	30 <sup>3</sup> 1⁄ <sub>32</sub> "	311/32"	31¾ <sub>32</sub> ″

(Chart continued on next page)

MODEL DESIGNATION AND WHEELBASE- (Refer to Fig. 5) (Cont'd from page 6)	→ B-4-F 128" W.B.	B-4-F 152" W.B.	B-4-G 128" W.B.	B-4-G 152" W.B.	B-4-G 170" W.B.
4 — Center of front shackle bolt hole to top of frame	95/16"	93/8″	93⁄8″	97/16"	91/2″
5 — Center of front shackle bolt hole to front of dash	321/16"	32½″	32½ <sub>6</sub> ″	32½ <sub>6</sub> ″	32½″
6 — Center line to side of frame (rear)	1631/32"	17"	17"	17½2″	171/16"
7 — Across frame sides at rear of frame.	34"	34"	34"	34½ <sub>6</sub> ″	341/8"
8 — Center at front shackle bolt hole to rear end of frame	1922%2"	217 <sup>1</sup> % <sub>2</sub> "	192 <sup>2</sup> % <sub>32</sub> "	2171%2"	25311/32"

### FRAME DIMENSIONS CHART

MODEL DESIGNATION AND WHEELBASE-(Refer to Fig. 5)	►B-4-HL, B-4-H 128" W.B.	B-4-HL, B-4-H 152" W.B.	B-4-HL, B-4-H 170* W.B.	B-4-HL, B-4-H 192" W.B.	B-4-HM, B-4-JM, B-4-KMA 107" W.B.
A — Center line of frame			/ -	/ '-	. +
B — Front of dash line		<del></del>		. <del></del>	_
C — Center line of front spring front eyes	_		<b>-</b>		
2 — Center line to side of frame at front spring eyes	1531/64"	153%4"	15 <sup>35</sup> /84"	15 <sup>37</sup> / <sub>64</sub> "	15 <sup>3</sup> ½4″
3 — Across frame at center line of front spring eye	3031/32"	31½ <sub>2</sub> ″	31%2″	315/32"	3031/32"
4 — Center of front shackle bolt hole to top of frame	93/8″	97/16"	9½″	9% <sub>6</sub> ″	93/8″
5 — Center of front shackle bolt hole to front of dash	321/16"	32½ <sub>6</sub> ″	32½ <sub>6</sub> ″	32½ <sub>16</sub> ″	11½6″
6 — Center line to side of frame (rear)	17"	171/32"	161/16"	173/32"	17"
7 — Across frame sides at rear of frame.	34"	341/16"	341/8"	34¾6″	34"
8 — Center of front shackle bolt hole to rear end of frame	19223/32"		253 <sup>1</sup> / <sub>32</sub> " for B-4-JM,		*1712%2"

### FRAME DIMENSIONS CHART

MODEL DESIGNATION AND WHEELBASE (Refer to Fig. 5)	B-4- <b>HM</b> 131" W.B.	B-4-HM 161" W.B.	B-4-JM, B-4-KMA 161" W.B.
A — Center line of frame(Chart continued on next page)			

MODEL DESIGNATION AND WHEELBASE  (Refer to Fig. 5) (Cont'd from page 7)	B-4-HM 131" W.B.	B-4-HM 161" W.B.	B-4-JM, B-4-KMA 161" W.B.
B — Front of dash line		_	
C — Center line of front spring front eyes	<u> </u>		_
2 — Center line to side of frame at front spring eyes	1533/64"	1535/64"	1537/64"
3 — Across frame at center line of front spring eyes	311/32"	313/32"	315/32"
4 — Center of front shackle bolt hole to top of frame	97/16"	91/2"	9%6"
5 — Center of front shackle bolt hole to front of dash	111/16"	111/16"	111/16"
6 — Center line to side of frame (rear)	171/32"	171/16"	173/32"
7 — Across frame sides at rear of frame	341/16"	341/8"	343/16"
8 — Center of front shackle bolt hole to rear end of frame	1952%2"	26015/16"	26015/16"

# FRAME DIMENSIONS CHART

MODEL DESIGNATION AND WHEELBASE (Refer to Fig. 5)	B-4-J, B-4-K 128" W.B.	B-4-K, 140" W.B., B-4-J, B-4-K, 152" W.B.	B-4-J, B-4-K 170" W.B.	B-4-JS 212" W.B.
A — Center line of frame	_			_
B — Front of dash line	_			
C — Center line of front spring front eyes	_	_		
2 — Center line to side of frame at front spring eyes	1531/64"	(3) 15 <sup>35</sup> / <sub>64</sub> "	1535/64"	1537/64"
3 — Across frame at center line of front spring eye	3031/32"	(2) 31¾2"	313/32"	315⁄ <sub>32</sub> ″
4 — Center of front shackle bolt hole to top of frame	93%"	9½"	9½″	9%6″
5 — Center of front shackle bolt hole to front of dash	32½6″	32½″	32½ <sub>6</sub> ″	32½ <sub>6</sub> ″
6 — Center line to side of frame (rear)	17"	(5) 171/16"	171/16"	173/32"
7 — Across flat sides at rear of frame	34"	(4) 341/8"	341/8"	343/16"
8 — Center of front shackle bolt hole to rear end of frame	1947/16"	(1) 223 <sup>2</sup> 3/32"	25323/32"	33411/32"
(1)— $235^2\frac{3}{3}$ 2"for 152" W.B. (2)— $31\frac{1}{3}$ 2"—	-140″ W.B.	(3)—1533/64"	—140″ W.I	В.

<sup>(4)—</sup> $34\frac{1}{16}$ "—140" W.B. (5)— $17\frac{1}{32}$ "—140" W.B.

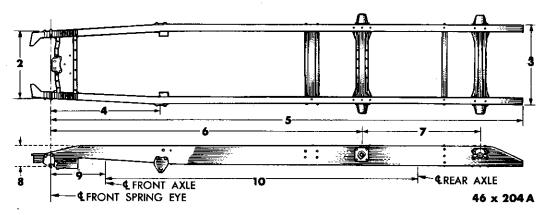


Fig. 6—Frame Alignment (B-4-R, B-4-T, B-4-V and B-4-Y) (Dimensions given in inches)

MODEL DESIGNATION AND WHEELBASE- (Refer to Fig. 6)	→B-4-R 130" W.B.	B-4-R 142" W.B.	B-4-R 154" W.B.	B-4-R 172" W.B.	B-4-RS 229" W.B.
2 — Across frame sides at front of frame at center line of front spring eyes	31%2"	31%2"	31% <sub>2</sub> ″	31%2"	31%2"
3 — Across frame sides at rear of frame	34"	34"	34"	34"	34"
4 — Center line of front spring eye to bend	497/8"	497⁄8″	497/8"	497/8″	497/8″
5 — Center of front spring eye to rear of frame	197 <sup>25</sup> / <sub>32</sub> "	20925/82"	2375⁄16″	2555/16"	364 <sup>13</sup> / <sub>32</sub> "
6 — Center line of front spring eye to frame rear spring front bracket.	128%6″	140¾ <sub>16</sub> ″	152¾ <sub>6</sub> ″	170¾ <sub>6</sub> ″	227%16"
7 — Center to center rear spring rear bracket to rear spring front bracket		51 <sup>5</sup> / <sub>32</sub> "	51 <sup>5</sup> / <sub>32</sub> "	515% <sub>2</sub> "	51 <sup>5</sup> / <sub>32</sub> "
8 — Center front spring front eye to top of frame	825/32"	825/32"	8 <sup>25</sup> /32"	825/32"	825/32"
9 — Center front spring front eye to center line of front axle	2325/32"	2325/32"	23 <sup>25</sup> /32″	2325/32"	2325/32"
10 — Center line of front axle to center line of rear axle	130″	142"	154"	172″	229″

# FRAME DIMENSIONS CHART

MODEL DESIGNATION AND WHEELBASE- (Refer to Fig. 6)	B-4-T, →B-4-V  130" W.B.	B-4-T, B-4-V 142" W.B.	B-4-T, B-4-V 154" W.B.	B-4-T, B-4-V 172" W.B.	B-4-T, B-4-V 190" W.B.
<ul> <li>2 — Across frame sides at front of frame</li> <li>3 — Across frame sides at rear of frame</li> </ul>	, , ,	31¾″ 34¼ <sub>6</sub> ″	31¾″ 34½″	31¾″ 34¼ <sub>6</sub> ″	31 <sup>3</sup> / <sub>8</sub> " 34 <sup>1</sup> / <sub>16</sub> "

(Chart continued on next page)

MODEL DESIGNATION AND WHEELBASE-		B-4-T, B-4-V	B-4-T, B-4-V	B-4-T, B-4-V	B-4-T, B-4-V
(Refer to Fig. 6) (Cont'd from page 9)	130" W.B.	142" W.B.	154" W.B.	172" W.B.	190" W.B.
4 — Center line of front spring eye to bend	491%2"	491%2"	491% <sub>32</sub> "	491%2"	491%2"
5 — Center of front spring eye to rear of frame	197½″	209½″	2371/32"	255½ <sub>32</sub> ″	273½ <sub>2</sub> "
6 — Center line of front spring eye to frame rear spring front bracket.	12727/32"	13927/32"	151 <sup>2</sup> 7⁄ <sub>32</sub> "	16927/32"	18727/32"
7 — Center - to - center rear spring rear bracket to rear spring front bracket	51¾ <sub>6</sub> ″	51¾ <sub>6</sub> ″	51¾ <sub>6</sub> ″	51¾ <sub>6</sub> ″	51¾ <sub>6</sub> ″
8 — Center front spring front eye to top of frame	861/64"	8 <sup>6</sup> 1/ <sub>64</sub> "	8 <sup>6</sup> 1/ <sub>64</sub> "	8 <sup>6</sup> 1/ <sub>64</sub> "	8 <sup>6</sup> 1/ <sub>64</sub> "
9 — Center of front spring front eye to center line of front axle	23½″	23½″	23½″	23½″	23½"
10 — Center line of front axle to center line of rear axle	130"	142″	154"	172″	190″

### FRAME DIMENSIONS CHART

MODEL DESIGNATION AND WHEELBASE- (Refer to Fig. 6)	→B-4-Y   1\$0" W.B.	B-4-Y 142" W.B.	B-4-Y 154" W.B.	B-4-Y 172" W.B.	B-4-Y 190" W.B.	
2 — Across frame sides at front of frame	31½″	31½"	31½″	31½"	31½"	
3 — Across frame sides at rear of frame	343/16"	34¾ <sub>16</sub> ″	34¾6″	343/16"	343/16"	
4 — Center line of front spring eye to bend	491%2"	491%2"	49 <sup>1</sup> % <sub>2</sub> "	49 <sup>1</sup> % <sub>2</sub> "	491%2"	
5 — Center of front spring eye to rear of frame	197½″	209½″	237½ <sub>32</sub> ″	255½ <sub>32</sub> "	2731/32"	
6 — Center line of front spring to frame rear spring front bracket	127 <sup>2</sup> 7⁄ <sub>32</sub> "	13927/32"	15127/32"	16927/32"	18727/32"	
7 — Center - to - center rear spring rear bracket to rear spring front bracket	513/16"	51¾ <sub>6</sub> ″	51¾ <sub>6</sub> ″	51¾ <sub>6</sub> ″	51¾ <sub>6</sub> ″	
8 — Center to front spring front eye to top of frame	107/32"	107/32"	107/32"	107/32"	107/32"	
9 — Center of front spring front eye to center line of front axle	23½"	$231\!/\!_2$ "	23½″	23½″	23½″	
10 — Center line of front axle to center line of rear axle	130"	142"	154"	172″	190″	

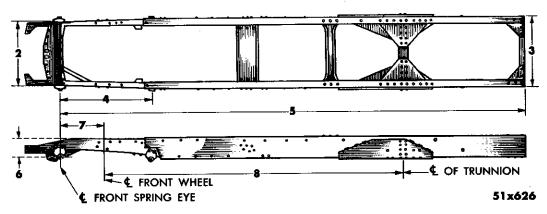


Fig. 7—Frame Alignment (B-4-YX) (Dimensions given in inches)

MODEL DESIGNATION AND WHEELBASE (Refer to Fig. 7)	B-4-YX 154" W.B.	B-4-YX 172" W.B.	B-4-YX 190" W.B.
2 — Across flat sides at center line of spring eye	313/8″	31½″	31½"
3 — Across frame sides at rear of frame	3411/16"	3411/16"	3411/16"
4 — Center line of front spring eye to bend	491%2"	491%2"	491%2"
5 — Center of front spring eye to rear of frame	240"	264"	288"
6 — Center of front spring front eye to top of frame	107/32"	10%2"	101/32"
7 — Center of front spring front eye to center line of front axle.	231/2"	23½"	23½″
8 — Center line of front wheel to center line of trunnion	154"	172"	190″

# **NOTES**

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