

# Dodge Trucks

MODELS 100 THROUGH 800  
CONVENTIONAL  
FORWARD CONTROL  
4X4

## Service Manual

*This Manual is to be used for Dodge Trucks built with serial numbers which last seven digits start with XXX 1668000 and higher.*

1796811

### FOREWORD

This Service Manual provides the Service Technician with complete information for servicing Dodge Vehicles.

The information is grouped according to the type of work being performed, such as diagnosis and testing, adjustments and overhaul. Special tools and specifications are also included in this manual.

All information, illustrations and product descriptions contained in this manual are correct at publication time. We do, however, reserve the right to make changes at any time without prior notice or obligation.



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Extra copies of this Manual, Part Number 81-370-7350 are available for \$5.00 each, plus any local taxes. Order from Dodge Division, P.O. Box 1259, Detroit, Michigan 48231.

Product improvement changes requiring service information will be covered by a bulletin with effective point by serial number. This policy will permit your fleet to have a higher degree of standardization than has been possible in the past.



SERVICE DEPARTMENT  
DETROIT, MICHIGAN 48231

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## MODEL DATA

Truck Model	Engine (Std.)	Engine (Extra)	Front Axle Cap. Lbs. (Std.)	Front Axle Cap. Lbs. (Extra)	Rear Axle Cap. Lbs. (Std.)	Rear Axle Cap. Lbs. (Extra)	GVW (Max.)	GCW (Max.)
<b>CONVENTIONAL MODELS</b>								
<b>Gasoline</b>								
D100	225-1	LA 318-1 383-1	2,500		3,600		5,200	
D200	225-1	LA 318-1 383-1	2,800	3,800	5,500		7,500	
D300	225-1	LA 318-1 383-1	3,800		7,500		10,000	
D400	225-2	318-3	4,000	5,000	11,500		18,500	25,000
D500	225-2	318-3 361-2	5,000	7,000	15,000	17,000	23,000	34,000
D600	318-3	361-2	5,000	7,000	17,000		24,000	36,000
D700	361-3	361-4	5,000	7,000 9,000	17,000	18,500	25,000	50,000
D800	361-4	413-2	7,000	9,000	18,500	22,000	29,000	55,000
<b>CREW CAB—4 x 2</b>								
<b>Gasoline</b>								
D200	225-1	LA 318-1 383-1	3,800		5,500		7,500	
D400	225-2	318-3	4,000	5,000	11,500	15,000	18,500	25,000
D500	225-2	318-3 361-2	5,000	7,000	15,000	17,000	23,000	34,000
D600	318-3	361-2	5,000	7,000	17,000		24,000	36,000
D700	361-3	361-4	5,000	7,000 9,000	17,000	18,500	25,500	50,000
<b>DIESEL-PERKINS</b>								
PD500	354-2		5,000	7,000	15,000		20,000	34,000
PD600	354-2		5,000	7,000	17,000		24,000	36,000
<b>FORWARD CONTROL</b>								
P200	225-1		2,800		5,000		7,500	
P300	225-1		3,800		7,500		10,000	
P400	225-2		4,000	5,000	11,500		16,000	
<b>SCHOOL BUS</b>								
S400	225-2	318-3	4,000	5,000	11,500	15,000	16,000	
S500	225-2	318-3 361-2	5,000	7,000	15,000	17,000	22,000	
S600	361-2		7,000		17,000		23,000	
<b>MODELS 4 x 4</b>								
W100	225-1	LA 318-1 383-1	3,000		4,500		6,000	
W200	225-1	LA 318-1 383-1	3,000	3,500	5,500		8,000	
W300	225-2	318-3	4,500		7,500		10,000	
W500	225-2	318-3	7,500		17,000		20,000	
WM300	251-3		3,750		6,500		9,500	
<b>CREW CAB—4 x 4</b>								
W200	225-1	LA 318-1 383-1	3,500		5,500		8,000	
W500	225-2	318-3	7,500		17,000		20,000	

FRONT DRIVE  
AXLES

# SPECIFICATIONS

## FRONT AXLE

*FRONT WHEEL DRIVE*

Truck Model Designation Standard	W100 W200	W300	WM300	W500
Type .....	Hypoid	Hypoid	Hypoid	Hypoid
Model .....	44F	70F	F-375	FDS750
Capacity (Lbs.) .....	3000 W2-3500	4500	3750	7500
Caster No Load .....	3°	3½°	½°	2½°
Camber .....	1½°	1½°	1½°	¾°
King Pin Inclination .....	7½°	8°	8°	8°
Toe-In (At Hub Height) .....	0-1/8"	0-1/8"	0-1/8"	0-1/8"
Ratios .....	4.09, 4.89	4.88, 5.87	5.83	6.8
Clearance to Bushing .....	.0005 to .005	.0005 to .005	.0005 to .005	.0005 to .005
Turning Angle .....	29°	29°	30°	29°
Lubrication Capacity (Pts.) .....	3	6	6	7
(Imp. Meas.)	2-1/2	5	5	5-3/4

Truck Model Designation Standard	D100	D200 P200	D200 Crew Cab D300 P300	D400 P400 S400
Type .....	Rev. Elliott	Rev. Elliott	Elliott	Elliott
Model—Own .....	FA 25	FA 28	FA 38	FA 40
Capacity .....	2500	2800	3800	4000
Camber .....	1½°	1½°	2°	2°
King Pin Inclination .....	4°	4°	7°	7°
Turning Angle (2) (Base Tire) left & right ..	37° 37°	37° 37°	39° 39°	37° 39°
King Pin (Diameter inches) .....	.872	.872	.936	.936
Clearance to Bushing .....	.0005-.0025	.0005-.0025	.002	.002
Toe-in (at Hub Height inches) .....	0-1/8"	0-1/8"	0-1/8"	0-1/8"

Truck Model Designation Standard	D500, S500, D600, D700, PD500, PD600	S500 S600	D800	S400 P400 D400	D600 D700	PD500 PD600	D700 D800
<b>EXTRA EQUIPMENT</b>							
Type .....	Elliott	Rev. Elliott	Rev. Elliott	Rev. Elliott	Rev. Elliott	Rev. Elliott	Rev. Elliott
Model—Timken-Rockwell .....		FC 901	FC 901	FC 901	FC 901	FC 901	FD 901
*Own .....	*FA 50						
Capacity .....	5000	7000	7000	7000	9000		
Camber .....	2°	1°	1°	1°	1°		
King Pin Incilnation .....	7°	5½°	5½°	5½°	5½°		
Turning Angle (2) (Base Tire) left & right ..	37° 39°	37° 37°	39°	39°	39°		
King Pin (Diameter inches) .....	1.12	1.23	1.23	1.23	1.43		
Clearance to Bushing .....	.002	.002	.0005-.0035	.0005-.0035	.003-.006		
Toe-in (at Hub Height inches) .....	0-1/8"	0-1/8"	0-1/8"	0-1/8"	0-1/8"		

**Caster\***

Model	D100	D200	P200	P300	P400	P400	D500	D600	D600 D700	D800
Capacity Lbs. ....	2500	2800	3800	4000	5000	5000	5000	5000	7000	7000
Loaded .....	3½ to 4°	3¾°	3°	3°	2½°	2°	2°	2½°	1½°	1½°
Unloaded .....	1½ to 2½°	1½°	1½°	1½ to 2½°	½ to 1½°	½ to 2°	1 to 2°	1 to 2°	0 to 1°	0 to 1°

\*Caster varies with front and rear spring loads (frame slope) and therefore should be checked when the vehicle is loaded. If caster cannot be checked when vehicle is loaded, the no load caster is approximately 1 to 2° for manual and 5 to 6° for power. If vehicle wanders caster should be increased. If steering effort is very high, especially when taking corners, caster should be decreased.

## 2—SPECIFICATIONS

### REAR AXLE

Truck Model Designation	W200		P300 D300	D400 P400 S400	PD500 D400 S500	D500, S500 Ex. Equip. PD600			D800 Extra Equip.		
	D100	W100 D200				WM300	W300	W500 D700	D600 S600	D700	D700
<b>SINGLE SPEED</b>											
Type .....	SFH	FFH	FFH	FFH	FFH	FFH	FFH	FFH	FFH	FFB	FFH
Capacity .....	3600	W1-4500 Others 5500	6500	7500	11500	15000	17000	16000	18500	18500	22000
Model .....	Own RA36	Own 60	Own R65	70	Own RA115	F147	H141	1614	L145	17120	Q145
Number of Differential											
Pinions .....	2	2	4	4	2	4	4	4	4	4	4
Drive Gear Pitch Diameter	8.75	9.75	9.625	10.5	12.5	13.25	14.25	14.25	14.625	16.00	15.25
Number of Teeth											
Drive Gear .....	43	41	35	39	45	31	34	39	36	43	43
Pinion .....	11	10	6	8	5	5	5	6	5	6	6
Ratio to 1 .....	3.91*	4.1*	5.83	4.88*	5.625	6.2	6.8	6.5	7.2	7.17	7.17
Number of Teeth											
Drive Gear .....	42	39		47	44	34		43			
Pinion .....	13	8		8	7	5		6			
Ratio to 1 .....	3.23*	4.88		5.87▲	6.285	6.8		7.17			
Number of Teeth											
Drive Gear .....	39	46		41	41						
Pinion .....	11	13		10	6						
Ratio to 1 .....	3.55*	3.54		4.10	6.833						
Lubricant Capacity (Pints)	3-3/4	5-1/2	6	6	11	16	20	17	24	22	24
(Imp. Meas.)	3	4-1/2	5	5	9-1/4	13-1/4	16-3/4	14-1/4	20	18-1/4	20

### EXTRA EQUIPMENT

Truck Model Designation	D400 S400		D500 S500	D500, D600 S500, S600		D700	D700	D700	D800
	PD500	PD600		D700	D700				
<b>TWO-SPEED PLANETARY</b>									
Type .....	FFB	FFB	FFB	FFB	FFH	FFH	FFH	FFH	FFH
Capacity .....	15000	16000	18500	17000	18500	22000			
Model .....	13802	16802	17220	H341	L345	Q345			
Type of Shift .....	Electric	Electric	Electric	Electric	Electric	Electric			
Number of Differential									
Pinions .....	4	4	4	4	4	4			
Drive Gear Pitch Diameter	13.25	14.875	16.00	9.0	10.00	10.25			
Number of Teeth									
Drive Gear .....	35	43	39	29	29	29			
Pinion .....	6	7	6	10	9	6			
Ratio to 1 .....	5.83/8.11	6.14/8.54	6.50/8.87	6.163/7.664	6.65/8.43	6.65/8.43			
Number of Teeth									
Drive Gear .....	38	39	43	28	31	32			
Pinion .....	6	7	6	9	9	9			
Ratio to 1 .....	6.33/8.81	5.57/7.75	7.17/9.77	6.61/8.222	7.10/9.01	7.33/9.30			
Lubricant Capacity (Pints)	13	20	22	22	23	33			
(Imp. Meas.)	10-3/4	16-3/4	18-1/4	18-1/4	19-1/4	27-1/4			

SFH—Semi-Floating Hypoid.

•Ratios for Diesel Models only.

FFH—Full-Floating Hypoid.

\*Anti-slip Differential available except on vehicles with Express and Dual Wheels.

FFB—Full-Floating Spiral Bevel.

▲Not available with Dual Wheels.



**PARKING BRAKE**

Truck Model Designation	D100, D200, P200 W200	LoadFlite Transmission D300, P300	Transfer Case W100, W200 W300, WM300 W500	Transfer Case W500
Type .....	Rear Wheel Expanding Internal	Internal Expanding	External Contracting	Internal Expanding
Location .....	Rear Wheels	On Transmission	On Transfer Case	On Transfer Case
Location of Control Lever .....	Under Instrument Panel to Left of Driver	Under Instrument Panel to Left of Driver	Under Instrument Panel to Left of Driver (Except WM300)	Frame Mounted to Right of Driver
Drum—Material .....	Composite	Cast Iron	Composite	Steel
Diameter .....	11" (D-1) 12-1/8" (D2, P2, W2)	7 in.	7.81 in.	10 in.
Lining—Material .....	Extruded Cycle Weld	Woven Asbestos Fabric	Woven Asbestos Fabric	Molded Asbestos Fabric
Attaching Method .....	Bonded	Rivets	Rivets	Rivets
Width .....	2 in.	2 in.	2 in.	1.5 in.
Length .....	—	6.53 in. per Piece, 13.06 in Total	24 in.	10.4 in.
Thickness .....	—	.156 in.	.25 in.	per Shoe .25 in.
Clearance Between Lining and Drum .....	—	.015-.030 in.	.015-.030 in.	.015-.030 in.
<p><b>Truck Model Designation</b>      <b>T87E, NP435 Transmission D300, P300, P400</b>      <b>NP435, NP540 Transmission D400, D500, D600 S400, S500, S600 PD500, PD600</b>      <b>541-5652A Transmission D700, D800</b>      <b>D600, D700, D800 PD600 (Extra Equip.)</b></p>				
Type .....	External Contracting	External Contracting	External Contracting	Air Actuated Spring Type
Location .....	On Transmission	On Transmission	On Transmission	With Service Brake
Location of Control Lever .....	Under Instrument Panel to Left of Driver	Under Instrument Panel to Left of Driver	Under Instrument Panel to Left of Driver	On Instrument Panel
Drum—Material .....	Cast Iron	Cast Iron	Cast Iron	Same as Service Brake
Diameter .....	8 in.	9.5 in.	10.5 in.	Same as Service Brake
Lining—Material .....	Woven Asbestos Fabric	Woven Asbestos Fabric	Woven Asbestos Fabric	Same as Service Brake
Attaching Method .....	Rivets	Rivets	Rivets	Same as Service Brake
Width .....	2-1/2 in.	2.5 in.	3 in.	Same as Service Brake
Length .....	24.62 in.	27 in.	27 in.	Same as Service Brake
Thickness .....	.156 in.	.187 in.	.187	Same as Service Brake
Clearance Between Lining and Drum .....	.015-.030 in.	.015-.030 in.	.015-.030 in.	Same as Service Brake

## 4—SPECIFICATIONS

### SERVICE BRAKES

Truck Model Designation	D100	W200, P200 D200, W100	D300, P300	W300	WM300
Type—Front	Duo-Servo	Duo-Servo	Uni-Servo	Lockheed	Lockheed
Rear	Duo-Servo	Duo-Servo	Duo-Servo	Duo-Servo	Lockheed
Size—Front	11 x 2-1/4	12-1/8 x 2	12-1/8 x 2	14-1/8 x 1-3/4	14-1/8 x 1-3/4
Rear	11 x 2	12-1/8 x 2	13 x 2-1/2	13 x 2-1/2	14-1/8 x 1-3/4
Attaching Method—Front	Bonded	Riveted	Riveted	Bonded	Bonded
Rear	Bonded	Riveted	Riveted	Riveted	Bonded
Thickness—Front	.175-.230	.238	.238	.260	.260
Rear	.175-.230	.238	.238	.238	.260
Arc per Shoe—Front (degrees)	111-124	123°-44'	124	122	122
Rear	111-124	123°-44'	112-123	112-123	122
Master Cylinder—(Bore Diam. x Stroke)	1.00 x 1.102	1.125 x 1.316	1.125 x 1.316	1.125 x 1.316	1.125 x 1.316
No. of Wheel Cylinders—Front	1	1	1	1	1
Rear	1	1	1	1	1
Wheel Cylinder (Diam.)—Front	1.125	1.125	1.125	1.375	1.375-1.25
Rear	.937	1.125	1.250	1.0	1.375-1.25
Pedal Free Travel (Inches)	1/4-3/8	1/4-3/8	1/4-3/8	1/4-3/8	1/4-3/8

Truck Model Designation	W500	D400, P400 and S400	D500, S500 PD500	D600, S600 PD600, D700	D800
Type—Front	Timken	Lockheed	Lockheed	Lockheed	Lockheed
Rear	Wagner	Bendix	Bendix	Wagner	Wagner
Size—Front	15 x 2-1/4	14-1/8 x 2	16 x 2-1/2	16 x 2-1/2	16 x 2-1/2
Rear .. (Std. equip.)	15 x 5	15 x 4	15 x 4	15 x 5	16 x 5
(Extra equip.)			15 x 5	16 x 5-D700	16 x 6
Attaching Method—Front	Riveted	Bonded	Bonded	Bonded	Bonded
Rear	Riveted	Riveted	Riveted	Riveted	Riveted
Thickness—Front	.253	.260	.260	.260	.260
Rear	.505	.363	.363*	.505**	.365
Arc per Shoe—Front (degrees)	121-90	121	129	129	129
Rear	121	117	117*	121	121
Master Cylinder—(Bore Diam. x Stroke)	1.50 x 1.44	1.50 x 1.44	1.50 x 1.44	1.50 x 1.44	1.75 x 1.44
No. of Wheel Cylinders—Front	1	1	1	1	1
Rear	2	2	2	2	2
Wheel Cylinder (Diam.)—Front	1.5	1.50	1.50	1.50	1.50
Rear	1.625	1.50	1.50*	1.625	1.75
Pedal Free Travel (Inches)	1/4-3/8	1/4-3/8	1/4-3/8	1/4-3/8	1/4-3/8

\* 15 x 4 Brake    \*\* 15 x 5 Brake

### CLUTCH

#### CLUTCH PRESSURE SPRING TEST

Truck Model Designation	D100, P200 6 Cyl.	W100, W200, D100, D200, P200, P300, W300, D400, D500, S500, W500, D600	WM300, D300, P400, S400, S600	D500, D600 D700	D800
Spring Should Compress to	1-1/2 in.	1-1/2 in.	1-11/16 in.	1-11/16 in.	1-13/16 in.
With Pounds Pressure if Color is:					
Lavender		145-155 lbs.			
White		239-251 lbs.			
Pink				209-225 lbs.	
Dark Blue				183-197 lbs.	
Black	223-237 lbs.				150-160 lbs.
Yellow and No Color	189-201 lbs.				
Green			109-115 lbs.		
Purple			131-141 lbs.		

**CLUTCH-PLATE AND DISC**

Model Designation	S400, S500, S600 D400, D500, D600, (Std. Equip. W/318-3)			
	D100, D200, P200, 6-Cyl.	W100, W200, WM300, D100, D200, D300, P300, P200, P400	D400, S400, D500, D400, D500, S400, S500, D600, S500, W300, W500, W500, W300 (Extra Equip. W/225-2)	
Model Number—Disc (B & B).....	13322	12472—6 Cyl. 12994—8 Cyl.	12559	13363
(Spicer).....	100415			
Model Number—Pressure Plate (B & B).....	1519	1433	1433	1575
(Spicer).....	100416			
Actuation .....	Hydraulic	Hydraulic (except WM300)	Hydraulic	Hydraulic
Type .....	10 in. one plate	11 in. one plate	11 in. one plate	12 in. one plate
Facing—Thickness .....	.125 in.	.140 in.	.140 in.	.140 in.
Inside Diameter .....	6.5 in.	6.5 in.	6.5 in.	6.75 in.
Outside Diameter .....	10 in.	11 in.	11 in.	11.87 in.
Clutch Pedal Free Play at Pedal ....	1-3/4 in.*	1-3/4 in.*	1-3/4 in.*	1-3/4 in.*
Number of Pressure Springs (B & B) (Spicer).....	9 6	9	9	12
Number of Colors .....	3 Black, 6 Plain	6 White, 3 Lavender	6 White 3 Lavender	6 Yellow 6 Plain
Total Pressure (Lbs.) B & B)..... (Spicer).....	1875 1775	1965	1965	2052
Facing Material .....	Woven Asbestos	Woven Asbestos	Woven Asbestos	Woven Asbestos
Release Bearing (Type) .....	Permanently Lubricated Ball Oilite Bushing	Permanently Lubricated Ball Oilite Bushing	Permanently Lubricated Ball Oilite Bushing	Permanently Lubricated Ball Oilite Bushing
Pilot Bearing (Type) .....				
Hub Spline Diameter (10 splines) ..	1.00 in.	1.00 in.	1.38 in.	1.38 in.
Master Cylinder Bore .....	1.125 in.	1.25 in.	1.125 in.	1.125 in.
Slave Piston Bore .....	1 in.	1 in.	1 in.	1 in.

Model Designation	D400, D500, D600, S400, S500, S600, W300, W500, (Extra Equip. W/318-3)			
	D100, D200, D300, W100, W200 (Std. Equip. W/383-1)	PD500, PD600 (Std. Equip.)	D500, D600 S500, S600, D700 (Std. Equip.)	D700 W/361-3 D800 (W/361-4 & 413-2)
Model Number—Disc (B & B) .....	13821	12942	12942(361-2) 12824(361-3)	12774 (B & B)
Model Number—Pressure Plate (B & B).....	1737	13734	1237	CL-10444 (R)
Actuation .....	Hydraulic	Hydraulic	Hydraulic	Hydraulic
Type .....	12 in. one plate	13 in. one plate	13 in. one plate	14 in. one plate
Facing—Thickness .....	.140 in.	.150	.150 in.	.187 in.
Inside Diameter .....	6.75 in.	7.25	7.25 in.	8.38 in.
Outside Diameter .....	11.87 in.	12.88 in.	12.88 in.	13.88 in.
Clutch Pedal Free Play at Pedal ....	1-3/4 in.*	1-1/2 in.*	1-1/2 in.*	1-3/4 in.*
No. of Pressure Springs .....	12	12	12	15
Number and Color .....	6 Yellow, 6 Plain	8 Pink, 4 Dark Blue	8 Pink, 4 Dark Blue	15 Black
Total Pressure (Lbs.) .....	2428	2496	2496	2520
Facing Material .....	Woven Asbestos	Woven Asbestos	Woven Asbestos	Woven Asbestos
Release Bearing (Type) .....	Permanently Lubricated Ball Oilite Bushing	Permanently Lubricated Ball Oilite Bushing	Permanently Lubricated Ball Oilite Bushing	Permanently Lubricated Ball Lubricated Ball
Pilot Bearing (Type) .....				
Hub Spline Diameter (10 Splines) ..	1.00 in.	1.38 in.	1.38 in.	1.50 in.
Master Cylinder Bore (Inches) .....	1.125 in.	1.125 in.	1.125 in.	1.125
Slave Piston Bore .....	1 in.	1 in.	1 in.	.928 or 1.125 in.

\*Approximate

# 6—SPECIFICATIONS

## COOLING SYSTEM

Truck Model Designation	D100-D200	PD500 PD600	W100 W200	W300	WM300	D400-P400-D500
	D300-P200 P300					S400-D600-S500 D700-S600-D800 W500
<b>Capacity (U. S. Qts.)</b>						
225 Cu. In. ....	12		12	12		12
251 Cu. In. ....					23	
318 Cu. In. ....	16		16	16		18
361 Cu. In. ....						23
383 Cu. In. ....	15					
413 Cu. In. ....						24
Perkins Diesel .....		16.5				
<b>Fan</b>						
Dia./No. Blades/Blade Width						
225 Cu. In. Std. ....	17.75/4/1.43		18/6/1.87	17.75/4/1.87	18/6/1.87	17.75/4/1.43 18/6/1.87 (3; 18/4/2.0 (4)
Extra (1) .....	18/4/2.0			18/4/2.0		
Extra (2) .....	18/6/1.87					
318 Cu. In. Std. ....	18/4/1.75		18/6/1.87	18/6/1.87		18/7/2.25
Extra .....	18/6/1.87		18/7/2			
361 Cu. In. Std. ....						19/6/1.75
383 Cu. In. Std. ....	18/7/2.0		18/7/2			
Extra .....	19/6/1.75		19/6/1.75			
413 Cu. In. Std. ....						19/6/2.0
Perkins Diesel .....		18/6/1.70				
<b>Pulley Diameter Inches</b>						
6 Cylinder .....	6.31		6.31	6.31	6.71	6.31
8 Cylinder .....	6.31		6.31	6.31		7.36*
<b>Water Pump</b>						
Type of Bearing—225-251 Cu. In.			Sealed Ball—All			
318-383 Cu. In.			Sealed Ball—All			
361-413 Cu. In.					Ball	
Perkins Diesel			Ball			
Shaft End Play .....			.012"-.019"			.004"-.008"
Pressure Cap		7 psi.	7 psi.	7 psi.	7 psi.	7 psi.
<b>Thermostat</b>						
Type—6 Cylinder .....			Pellet—Reversed Poppet			
8 Cylinder .....			Pellet—Reversed Poppet			
Starts to Open .....		177-184°	177-184°	177-184°	177-184°	177-184°
Full Open .....		200°	200°	200°	200°	200°

### CONVERSION TABLE

U. S. Quart	12	15	16	16.5	18	23	24
Imperial Quart	10	12-1/2	13-1/4	13-3/4	15	19-1/4	20

- (1) Manual Transmission
- (2) Automatic Transmission
- (3) P400 only
- (4) Standard on W500

\* 361-413 Cu. In.  
 \*\* 7 psi. D600-D700-D800

## ELECTRICAL

### BATTERY

Capacity (Ampere Hours) .....	53	59	140 (2-70 amp.)
Voltage .....	12	12	12
Number of Plates .....	9	11	13
Ground Terminal .....	Negative	Negative	Negative
Part Number (Wet) .....	2642208	2444562	2642969

### STARTERS

Part Number .....	2095150	2095296	1889100 2642692	2098879
Make .....	Chrysler Built	Prestolite	Chrysler Built	Delco
Model .....		MDU-7013		1113651
Voltage .....	12	12	12	12
No. of Fields .....	4(3 Series, 1 Shunt)	3	4(3 Series 1 Shunt)	4
No. of Poles .....	4	4	4	4
Brushes .....	4	4	4	4
Spring Tension .....	32 to 36 Ounces	32 to 48 Ounces	32 to 36 Ounces	80 Ounces Min.
Drive .....	Overrunning Clutch Reduction Gear	Folo-Thru	Solenoid Shift Overrunning Clutch	
End Play .....	.010" to .045"	.005" Minimum	.005" Minimum	
Cranking Amperage Draw Test	165 to 185 Amps.	165 to 185 Amps.*	180 to 220 Amps.*	
Free-Running Test				
Voltage .....	11	11	11	11.6
Amperage Draw .....	90	50 Amps. Maximum	78 Amps. Maximum	95**
Minimum Speed RPM .....	1925 to 2400	5500 RPM	3800 RPM	8000
Locked-Resistance Test				
Voltage .....	4	4	4	2.2
Amperage Draw .....	400 to 450 Amps.	280	310 to 445	600
Solenoid				
Pull-In Coil .....	14.4 to 16.0 Amps. @ 6.0 Volts		20.0 to 22.2 Amps. @ 6.0 Volts	70.5 to 77.8 Amps. @ 10 Volts
Hold-In Coil .....	11.5 to 12.6 Amps. @ 6.0 Volts		11.2 to 12.4 Amps. @ 6.0 Volts	18 to 20 Amps. @ 10 Volts
Pinion to Housing Clearance		.052" to .204"	1/8" plus or minus 1/32" Between Pinion Stop and end of Pinion	23/64" plus or minus 1/32"

\*Engine should be up to operating temperature. Extremely heavy oil or tight engine will increase starter amperage draw.

\*\*Includes Solenoid Switch.

### ALTERNATOR

ALTERNATORS	
Rotation .....	Clockwise at Drive End
Voltage .....	12 Volt System
Current Output .....	Design Controlled
Voltage Output .....	Limited by Voltage Regulator
Brushes .....	2
Condenser Capacity .....	.50 Microfarad plus or minus 20
Field Current Draw—@ 12 Volts .....	2.38 to 2.75 Maximum amperes
Current Output—	
37 Ampere Alternator .....	34.5 plus or minus 3 amperes*
46 Ampere Alternator .....	44 plus or minus 3 amperes*
60 Ampere Alternator .....	51 plus or minus 3 amperes*

\*Plus or minus three ampere tolerance is provided to allow for temperature variation. Current output is measured at 1250 engine RPM and 15 volts at the alternator. If measured at the battery, current output will be approximately 5 amperes lower than above values. Voltage is controlled by variable load (carbon pile) across the battery.



## 8—SPECIFICATIONS

### ALTERNATOR VOLTAGE REGULATOR

Regulator Part Number .....	2444980
Volts .....	12
Ground Polarity .....	Negative
Point Gap .....	.014 inch plus or minus .004 inch
Air Gap .....	.032 to .042 inch**

\*\*Measure gap with gauge back of stop.

Temperature in Degrees	47°F.	70°F.	93°F.	117°F.	140°F.	163°F.
Minimum Setting .....	13.6	13.5	13.4	13.3	13.2	13.1
Maximum Setting .....	14.6	14.5	14.4	14.3	14.2	14.1

### IGNITION SYSTEM

#### WITHOUT CLEANER AIR PACKAGE (251-3 Engine)

Engine Application	
Engine Displacement .....	251 Cu. In.
Distributor Part No. Chrysler .....	2095957
Distributor Part No. Prestolite .....	1BR-4002-B
Advance-Centrifugal Distributor	
Degrees at Distributor RPM .....	0° @ 260 to 440 0 to 2° @ 440 4 to 6° @ 800 7 to 9° @ 1550
Advance-Vacuum (Distributor)	
Degrees at Inches of Mercury) .....	0° @ 4.1 to 5.3" 5 to 7° @ 10" 10 to 12° @ 16"
Contact Gap .....	.017" to .023"
Dwell Angle .....	36°-42°
Contact Arm Spring Tension .....	17-21-1/2 ounces
Condenser Capacity .....	.25-285 mfd.
Shaft Side Play (New or Rebuilt) .....	.000" to .003"***
Shaft End Play (After Assembly) .....	.003 to .010"
Rotation .....	Clockwise
Timing .....	5° BTC*
Spark Plug Type .....	J7 Champion
Size .....	P-3-5S Mopar (With Gasket)
Gap .....	14 MM—3/8 Reach .035 inch
Firing Order .....	1-5-3-6-2-4
Coil .....	Chrysler-Prestolite — or — Chrysler-Essex
Primary Resistance @ 70-80°F. ....	2444242                      2444241
Secondary Resistance @ 70-80°F. ....	1.65-1.79 Ohms            1.41-1.55 Ohms
	9400-11700 Ohms           9200-10600 Ohms
Ballast Resistor .....	Chrysler
Resistance @ 70-80°F. ....	2095501
	0.5-0.6 Ohms
Current Draw (Coil and Ballast resistor in circuit)	
Engine Stopped .....	3.0 Amperes
Engine Idling .....	1.9 Amperes

\* Service wear tolerance should not exceed .006 inch.

\*\* At idle speed.

WITH CLEANER AIR PACKAGE

WITHOUT CLEANER AIR PACKAGE

Engine Application	WITH CLEANER AIR PACKAGE		WITHOUT CLEANER AIR PACKAGE	
	(225-1 Engine) Manual Transmission	(225-1 Engine) Automatic Transmission	(225-2 Engine) Manual or Auto. Trans.	(225-1 Engine) Manual or Auto. Trans.
Engine Displacement .....	225 Cu. In. 2642792	225 Cu. In. 2642795	225 Cu. In. 2642752	225 Cu. In. 2444648
Distributor Part No. Chrysler .....				
Advance-Centrifugal Distributor Degrees at Distributor RPM .....	0° @ 350 to 500 0° to 3° @ 500 9° to 11° @ 925 12.5° to 14.5° @ 2400	0° @ 325 to 475 0° to 45° @ 475 8° to 10° @ 750 12.5° to 14.5° @ 2400	0° @ 325 to 475 0° to 2° @ 475 4.25° to 6.25° @ 820 8.5° to 10.5° @ 2250	0° @ 325 to 475 0° to 2.5° @ 475 7.5 to 9.5° @ 960 10.5 to 12.5° @ 2200
Advance-Vacuum (Distributor Degrees at Inches of Mercury) ..	0° @ 6.9" to 9.1" 3° to 5° @ 12.5" 6.5° to 8.5° @ 16.2" .017"-.023" 40°-45° 17-20 ounces .25-.285 mfd. .000"-.003"* .003"-.017" Clockwise TDC** N11-Y-Champion (No Gasket)	0° @ 5" to 7.1" 3° to 6° @ 8.5" 6 to 8.5° @ 10" .017"-.023" 40°-45° 17-20 ounces .25-.285 mfd. .000"-.003"* .003"-.017" Clockwise 5° BTC** N6-Champion (No Gasket) P-6-4S MoPar 14MM-3/4" Reach .035 inch 1-5-3-6-2-4	0° @ 4.9" to 7.1" 3 to 5° @ 10.5" 5.25 to 7.5° @ 13" .017"-.023" 40°-45° 17-20 ounces .25-.285 mfd. .000"-.003"* .003"-.017" Clockwise 5° BTC** N11-Y-Champion (No Gasket) 14MM-3/4" Reach .035 inch 1-5-3-6-2-4	0° @ 4.9" to 7.1" 3 to 5° @ 10.5" 5.25 to 7.5° @ 13" .017"-.023" 40°-45° 17-20 ounces .25-.285 mfd. .000"-.003"* .003"-.017" Clockwise 5° BTC** N11-Y-Champion (No Gasket) 14MM-3/4" Reach .035 inch 1-5-3-6-2-4
Contact Gap .....				
Dwell Angle .....				
Contact Arm Spring Tension .....				
Condenser Capacity .....				
Shaft Side Play (New or Rebuilt) ...				
Shaft End Play (After Assembly) ...				
Rotation .....				
Timing .....				
Spark Plug Type .....				
Size .....				
Gap .....				
Firing Order .....				
Coil .....	Chrysler—Prestolite — or — 2444242	Chrysler—Essex 2444241	Chrysler—Essex 2444241	Chrysler—Prestolite — or — 2444242
Part Number .....				
Primary Resistance @ 70-80°F. .:	1.65 to 1.79 Ohms	1.41 to 1.55 Ohms	1.41-1.55 Ohms	1.65-1.79 Ohms
Secondary Resistance @ 70-80°F.:	9400-11700 Ohms	9200-10600 Ohms	9200-10600 Ohms	9400-11700 Ohms
Ballast Resistor .....	2095501	2095501	2095501	2095501
Resistance @ 70-80°F. ....	0.5 to 0.6 Ohms	0.5-0.6 Ohms	0.5 to 0.6 Ohms	0.5 to 0.6 Ohms
Current Draw (coil and ballast resistor in circuit) .....				
Engine Stopped .....	3.0 amperes	3.0 amperes	3.0 amperes	3.0 amperes
Engine Idling .....	1.9 amperes	1.9 amperes	1.9 amperes	1.9 amperes

\*Service wear tolerance should not exceed .006 inch.

\*\*At idle speed.

WITH CLEANER AIR PACKAGE

WITHOUT CLEANER AIR PACKAGE

(LA-318-1 Engine)  
Manual and Auto. Trans.

(LA-318-1 Engine)  
Automatic Transmission

(LA-318-1 Engine)  
Manual Transmission

Engine Application	(LA-318-1 Engine) Manual Transmission	(LA-318-1 Engine) Automatic Transmission	(LA-318-1 Engine) Manual and Auto. Trans.
Engine Displacement Distributor Part No.—(Chrysler Built) . . . . .	318 Cu. In. 2642721	318 Cu. In. 2642718	318 Cu. In. 2642724
Advance—Centrifugal (Distributor Degrees at Distributor RPM) . . . . .	0° @ 325 to 475 0° to 2° @ 475 3.75 to 5.75° @ 780 12.5° to 14.5° @ 2250	0° @ 375 to 525 0° to 2.25° @ 525 .75° to 2.75° @ 575 10.5° to 12.5° @ 2350	0° @ 325 to 475 0° to 5° @ 475 7.75° to 9.75° @ 18° to 20° @ 2350
Advance—Vacuum (Distributor Degrees at Inches of Mercury) . . . . .	0° @ 7" to 9" 6° to 9° @ 12" 10.5° to 13.5° @ 15"	0° @ 7" to 9" 6° to 9° @ 12" 10.5° to 13.5° @ 15"	0° @ 7.5" to 10.5" 7° to 10° @ 14" 10.5° to 13.5° @ 16"
Contact Cap . . . . .	.014" to .019"	.014" to .019"	.014" to .019"
Dwell Angle . . . . .	28° to 32°	28° to 32°	28° to 32°
Contact Arm Spring Tension . . . . .	17 to 20 oz.	17 to 20 oz.	17 to 20 oz.
Condenser Capacity . . . . .	.25 to .285 mfd.	.25 to .285 mfd.	.25 to .285 mfd.
Shaft Side Play (New or Rebuilt) . . . . .	.000" to .003"	.000" to .003"	.000" to .003"
Shaft End Play (After Assembly) . . . . .	.003" to .017"	.003" to .017"	.003" to .017"
Rotation . . . . .	Clockwise	Clockwise	Clockwise
Timing . . . . .	5° BTC**	10° BTC**	5° ATC**
Spark Plug Type . . . . .	N11Y Champion (No Gasket)	N11Y Champion (No Gasket)	N11-Y Champion (No Gasket)
Size . . . . .	14MM-3/4" Reach	14MM-3/4" Reach	14MM-3/4" Reach
Gap . . . . .	.035"	.035"	.035"
Firing Order . . . . .	1-8-4-3-6-5-7-2	1-8-4-3-6-5-7-2	1-8-4-3-6-5-7-2
Coil . . . . .	Chrysler—Prestolite — or — 2444242	Chrysler—Essex 2444241	Chrysler—Prestolite — or — 2444242
Part No. . . . .	1.65 to 1.79 Ohms	1.4 to 1.55 Ohms	1.65 to 1.79 Ohms
Primary Resistance @ 70-80°F . . . . .	9400 to 11700 Ohms	9200 to 10600 Ohms	9400 to 11700 Ohms
Secondary Resistance @ 70-80°F . . . . .			9200 to 10600 Ohms
Ballast Resistor - Part No. - Chrysler Built Resistance @ 70-80°F . . . . .	2095501 0.5 to 0.6 Ohms	2095501 0.5 to 0.6 Ohms	2095501 0.5 to 0.6 Ohms
Current Draw (Coil and ballast resistor in circuit) Engine Stopped . . . . .	3.0 amperes	3.0 amperes	3.0 amperes
Engine Idling . . . . .	1.9 amperes	1.9 amperes	1.9 amperes

\* Service wear tolerance should not exceed .006 inch.

\*\* At idle speed.

WITHOUT CLEANER AIR PACKAGE

WITHOUT CLEANER AIR PACKAGE

(318-3 Engine)

(318-1 Engine)

Automatic and Manual Transmission

Automatic and Manual Transmission

Engine Application	(318-3 Engine)	(318-1 Engine)
Engine Displacement	318 Cu. In.	318 Cu. In.
Distributor Part No.—Chrysler Built	2444291	2444258
Advance—Automatic Distributor	0° @ 250 to 450	0° @ 320 to 480
Degrees at Distributor RPM	0° to 2° @ 450	0° to 2° @ 480
	1.5° to 3.5° @ 600	4.5° to 6.5° @ 850
	5° to 7° @ 2000	10.5° to 12.5° @ 2300
Advance—Vacuum (Distributor)	0° @ 5" to 7.1"	0° @ 8" to 10"
Degrees at Inches of Mercury	4° to 7° @ 9.2"	5° to 8° @ 13"
	8.5° to 11.5° @ 12"	9° to 12° @ 16"
Contact Gap	.014" to .019"	.014" to .019"
Dwell Angle	28° to 32°	28° to 32°
Contact Arm Spring Tension	17 to 20 oz.	17 to 20 oz.
Condenser Capacity	.25 to .285 mfd.	.25 to .285 mfd.
Shift Side Play (New or Rebuilt)	.000" to .003"	.000" to .003"
Shaft End Play (After Assembly)	.003" to .017"	.003" to .017"
Rotation	Clockwise	Clockwise
Timing	12-1/2° BTC	5° BTC**
Spark Plug Type	F10 Champion (MOPAR P-7-3S)	J14Y Champion or P-3-6P Mopar
	Without Gasket	(With Gasket)
Size	18MM-3/8" Reach	14MM-3/8" Reach
Gap		.035"
Firing Order	1-8-4-3-6-5-7-2	1-8-4-3-6-5-7-2
Coil	Chrysler—Prestolite	Chrysler—Prestolite
Identification Number	2444242	2444242
Primary Resistance @ 70-80°F	1.65 to 1.79 Ohms	1.41 to 1.55 Ohms
Secondary Resistance @ 70-80°F	9400 to 11700 Ohms	9200 to 10600 Ohms
Ballast Resistor-Part No.—Chrysler Built	2095501	2095501
Resistance @ 70-80°F	0.5 to 0.6 Ohms	0.5 to 0.6 Ohms
Current Draw (Coil and Ballast resistor in circuit) Engine Stopped	3.0 amperes	3.0 amperes
Engine Idling	1.9 amperes	1.9 amperes

\* Service wear tolerance should not exceed .006 inch.

\*\* At idle speed.

Engine Application	WITHOUT CLEANER AIR PACKAGE		WITH CLEANER AIR PACKAGE	
	(383 Engine) Manual or Automatic Transmission	(383 Engine) Automatic Transmission	(383 Engine) Automatic Transmission	(383 Engine) Manual Transmission
Engine Displacement	383 Cu. In.	383 Cu. In.	383 Cu. In.	383 Cu. In.
Distributor Part No.—(Chrysler Built)	2642727	2642810	2642810	2642949
Advance—Centrifugal—(Distributor Degrees at Distributor RPM)	0° @ 250 to 450 0° to 2° @ 450 2.5° to 4.5° @ 700 10.5° to 12.5° @ 2150	0° @ 400 to 550 0° to 4° @ 550 5.5° to 7.5° @ 750 14.5° to 16.5° @ 2200	0° @ 375 to 525 0° to 6.5° @ 525 7.8° to 9.8° @ 710 14.5° to 16.5° @ 2300	
Advance—Vacuum (Distributor Degrees at Inches of Mercury)	0° @ 5" to 8" 5° to 8° @ 10" 10.5° to 13.5° .014" to .019" 28° to 32° 17 to 20 oz.	0° @ 4.5" to 8" 6° to 9° @ 12" 11.5° to 14.5° @ 16.5" .014" to .019" 28° to 32° 17 to 20 oz.	0° @ 4.5" to 8" 6° to 9° @ 12" 11.5° to 14.5° @ 16.5" .014" to .019" 28° to 32° 17 to 20 oz.	0° @ 4.5" to 8" 6° to 9° @ 12" 11.5° to 14.5° @ 16.5° .014" to .019" 28° to 32° 17 to 20 oz.
Contact Gap	.25 to .285 mfd. .000" to .003** .003" to .017"	.25 to .285 mfd. .000" to .003** .003" to .017"	.25 to .285 mfd. .000" to .003** .003" to .017"	.25 to .285 mfd. .000" to .003** .003" to .017"
Dwell Angle	Counter Clockwise 12.5° BTC**	Counterclockwise 5° BTC**	Counterclockwise 5° BTC**	Counterclockwise TDC**
Contact Arm Spring Tension	J-13Y Champion or P-3-5P Mopar (With Gasket)	J-13Y Champion or P-3-5P Mopar (With Gasket)	J-13Y Champion or P-3-5P Mopar (With Gasket)	J-13Y Champion or P-3-5P Mopar (With Gasket)
Condenser Capacity	14MM - 3/8" Reach .035"	14MM - 3/8" Reach .035"	14MM - 3/8" Reach .035"	14MM - 3/8" Reach .035"
Shaft Side Play (New or Rebuilt)	1-8-4-3-6-5-7-2	1-8-4-3-6-5-7-2	1-8-4-3-6-5-7-2	1-8-4-3-6-5-7-2
Shaft End Play (After Assembly)	Chrysler-Prestolite — or — 2444242 1.65 to 1.79 Ohms 9400 to 11700 Ohms	Chrysler-Essex 2444241 1.41 to 1.55 Ohms 9200 to 10600 Ohms	Chrysler-Essex 2444242 1.65 to 1.79 Ohms 9400 to 11700 Ohms	Chrysler-Essex 2444241 1.41 to 1.55 Ohms 9200 to 10600 Ohms
Rotation	2095501 0.5 to 0.6 Ohms	2095501 0.5 to 0.6 Ohms	2095501 0.5 to 0.6 Ohms	2095501 0.5 to 0.6 Ohms
Timing	Ballast Resistor—Part No.—(Chrysler B) Resistance @ 70-80° F	Ballast Resistor—Part No.—(Chrysler B) Resistance @ 70-80° F	Ballast Resistor—Part No.—(Chrysler B) Resistance @ 70-80° F	Ballast Resistor—Part No.—(Chrysler B) Resistance @ 70-80° F
Spark Plug Type	Current Draw (Coil and ballast resistor in circuit) Engine Stopped	Current Draw (Coil and ballast resistor in circuit) Engine Stopped	Current Draw (Coil and ballast resistor in circuit) Engine Stopped	Current Draw (Coil and ballast resistor in circuit) Engine Stopped
Size	3.0 amperes	3.0 amperes	3.0 amperes	3.0 amperes
Gap	1.9 amperes	1.9 amperes	1.9 amperes	1.9 amperes
Firing Order				
Coil				
Identification Number				
Primary Resistance @ 70-80° F				
Secondary Resistance @ 70-80° F				

\* Service wear tolerance should not exceed .006 inch.

\*\* At idle speed.



WITHOUT CLEANER AIR PACKAGE

Engine Application	(361-3, 361-4 and 413-2 Engines) Manual Transmission	(361-2 Engine) Manual Transmission
Engine Displacement .....	361-or-413 Cu. In.	361 Cu. In.
Distributor Part No.—Chrysler Built .....	2444275*	2444292
Advance—Automatic (Distributor Degrees at Distributor RPM) .....	0° @ 275 to 425 0° to 4.5° @ 425 7.5 to 9.5° @ 680 11 to 13° @ 1600	0° @ 275 to 425 0° to 4° @ 425 8° to 10° @ 730 12.5° to 14.5° @ 1750
Advance Vacuum (Degrees and Inches) .....	0° @ 5 to 7.1" 4 to 7° @ 9.2" 8.5 to 11.5° @ 12"	0° @ 5 to 7.1" 4 to 7° @ 9.2" 8.5 to 11.5° @ 12"
Contact Gap .....	.014"-.019"	.014"-.019"
Dwell Angle .....	28°-32°	28°-32°
Contact Arm Spring Tension .....	17-20 ounces	17-20 ounces
Condenser Capacity .....	.25-.285 mfd.	.25-.285 mfd.
Shaft Side Play (New or Rebuilt) .....	.000-.003"*	.000-.003"*
Shaft End Play (After Assembly) .....	.003-.017"	.003"-.017"
Timing .....	5° BTC**	5° BTC**
Rotation .....	Counter-Clockwise	Counterclockwise
Spark Plug Type .....	N6 Champion	N6 Champion
Size .....	Mopar P-6-4S (Loose Gasket)	Mopar P-6-4S (Loose Gasket)
Gap .....	14MM-3/4" Reach	14MM-3/4" Reach
Firing Order .....	.035 inch	.035 inch
Coil .....	1-8-4-3-6-5-7-2	1-8-4-3-6-5-7-2
Primary Resistance @ 70-80° F .....	Chrysler-Prestolite — or — Chrysler-Essex	Chrysler-Essex
Secondary Resistance @ 70-80° F .....	2444242	2444241
	1.65-1.79 ohms	1.41-1.55 ohms
	9400-11700 ohms	9200-10600 ohms
Ballast Resistor .....		Chrysler-2095501
Resistance @ 70-80° F .....		0.5-0.6 ohms
Current Draw (Coil and Ballast Resistor in Circuit) Engine Stopped .....		3.0 amperes
Engine Idling .....		1.9 amperes

\* Service Wear tolerance should not exceed .006 inch.  
\*\* At idle speed.

**BULBS, FUSES AND CIRCUIT BREAKERS**

**BULBS**

Lamp	Conventional & 4x4 Models	Forward Control	Power Wagon
<b>Front</b>			
Clearance .....	67	—	—
Headlamps Single 2 Filament ...	6012	6012	6012
Identification .....	67	—	—
Parking and Turn Signal .....	1034	—	1034
Parking Lamp .....	67	67	—
Turn Signal .....	1073	—	—
<b>Rear</b>			
Backup Lamp .....	1073	1073	1073
License .....	67	—	—
Stop, Tail and Turn Signal .....	1034	1034	1034
<b>Instrument Group</b>			
Instruments .....	57	57	57
Speedometer .....	—	—	57
Tachometer .....	67	—	—
Vacuum or Air Gauge .....	57	—	—

## 14—SPECIFICATIONS

### Indicators

Brake Sentinel .....	57	57	57
High Beam .....	57	57	57
Low Oil Pressure .....	57	57	—
Radio Dial .....	57	—	—
Transmission .....	57	57	—
Turn Signal .....	57	57	57

### FUSES

Circuit	Conventional & 4x4 Models		Forward Control		Power Wagon	
	Amperage Location		Amperage Location		Amperage Location	
Alternator Regulator .....	6 AGC	IP	6 AGC	IP	—	—
Auxiliary Lamps .....	* 9 SFE	IP	—	—	—	—
Buzzer .....	* 2 AGA	IP	—	—	—	—
Cigar Lighter .....	15 AGC	IP	15 AGC	IP	—	—
Directional Signal .....	*14 SFE	IP	—	—	—	—
	15 AGC	IP	15 AGC	IP	—	—
Dome Lamp .....	*14 SFE	—	—	—	—	—
	15 AGC	IP	15 AGC	IP	—	—
Emergency Flasher .....	*14 SFE	IF	15 AGC	IP	14 SFE	IF
	15 AGC	IP	—	—	—	—
Heater .....	20 AGC	IP	20 AGC	IP	—	—
	*20 SFE	IP	—	—	—	—
Horn .....	30 AGC	IP	30 AGC	IP	—	—
Instruments .....	2 AGC	IP	2 AGC	IP	—	—
Parking Lamps .....	15 AGC	IP	15 AGC	IP	—	—
Radio .....	* 6 SFE	IF	—	—	—	—
	6 AGC	IP	—	—	—	—
Stop Lamps .....	15 AGC	IP	15 AGC	IP	—	—
Tail Lamps .....	15 AGC	IP	15 AGC	IP	—	—

\*Conventional D7-8 Models

KEY: IF—In Fuse Holder Behind Instrument Panel  
IP—In Fuse Block Under Instrument Panel

### CIRCUIT BREAKERS

Circuit	Conventional & 4x4 Models		Forward Control		Power Wagon	
	Amperage Location		Amperage Location		Amperage Location	
Back-up Lamp .....	6	WS	—	—	6	IC
Dome Lamp .....	*12	IH	—	—	12	IH
Headlamp .....	18	IH	18	IH	18	IH
Instruments .....	*12	IH	—	—	12	IH
Parking Lamps .....	*12	IH	—	—	12	IH
Stop Lamps .....	*12	IH	—	—	12	IH
Tail Lamps .....	*12	IH	—	—	12	IH
Two-Speed Axle Switch ...	* 8	IC	—	—	—	—
Windshield Wiper .....	6	WS	—	—	—	—

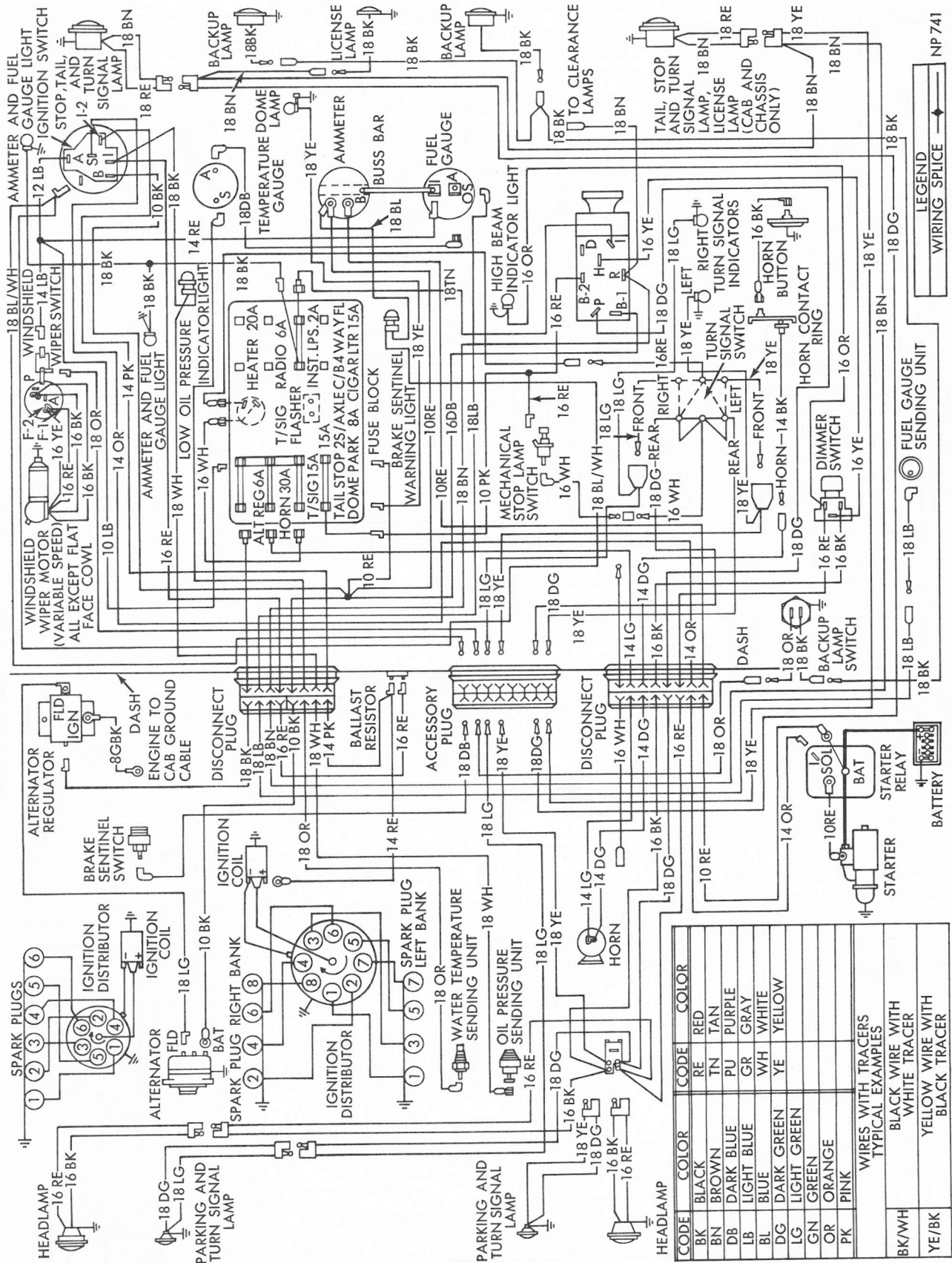
\*Conventional D7-8 Models

KEY: IC—In Clip on Back of Instrument Panel  
IH—Integral with Headlamp Switch  
WS—On Windshield Wiper Switch

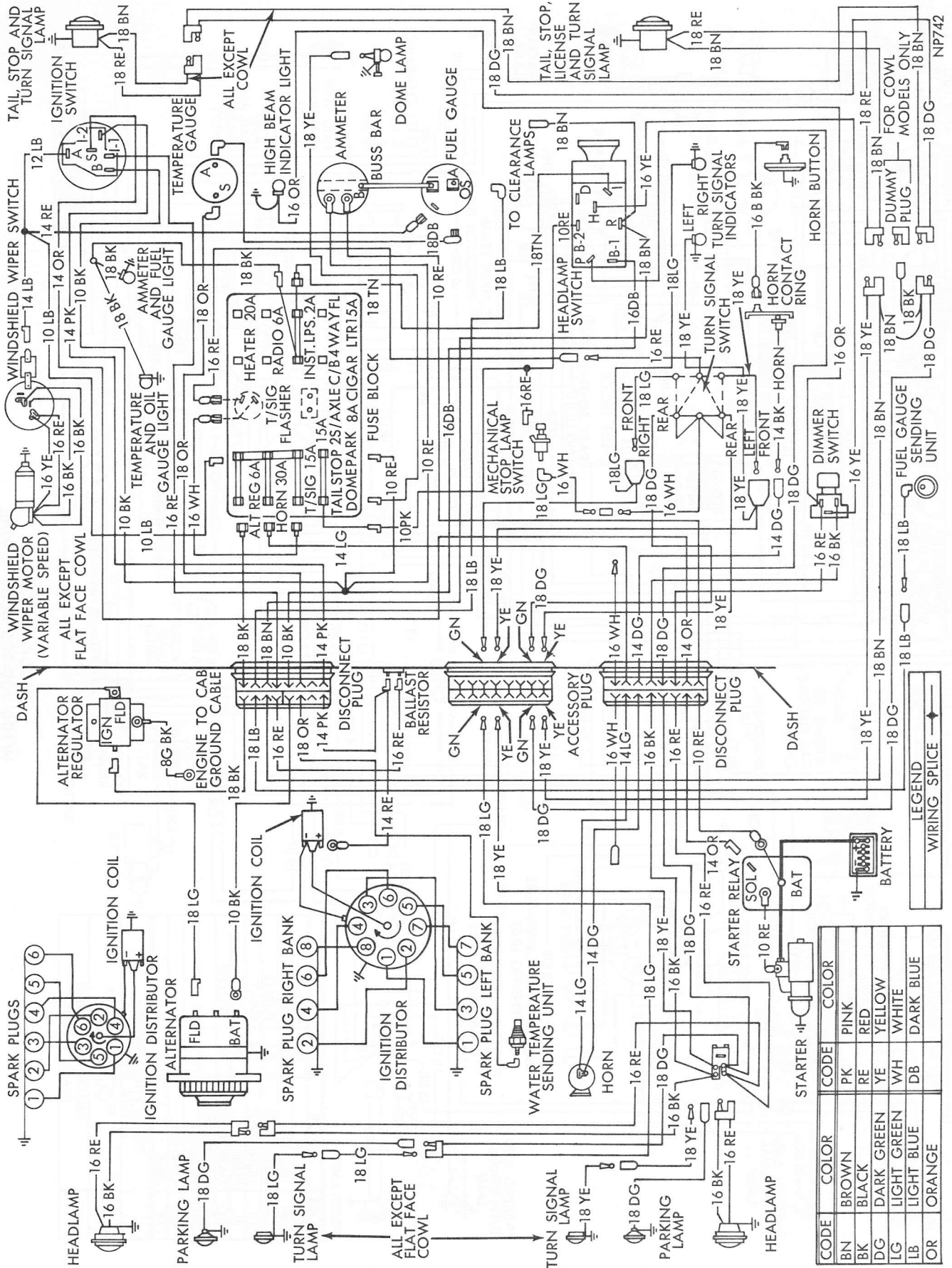
### WIRING DIAGRAMS

#### INDEX

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D400-500-600; W500 Body Wiring .....	16	Air Stop Lamp Switch with Spring Brake .....	21
D700 and 800 Body Wiring .....	17	Emergency Flasher and Spring Brake Stop Lamp .	21
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P200-300 and 400 Body Wiring .....	19		



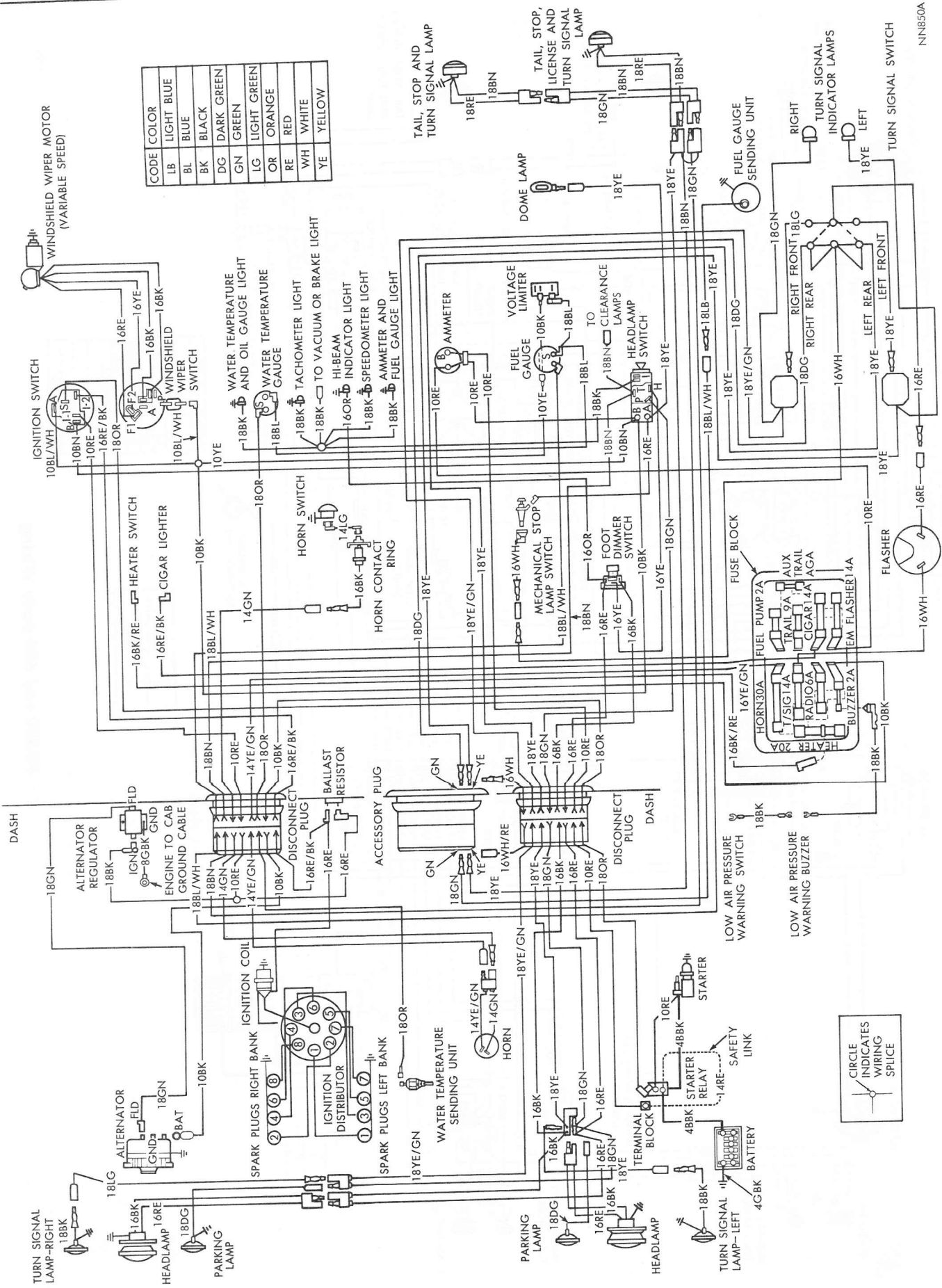
D100-200-300;  
W100-200-300 Body Wiring



D400-500-600; W500 Body Wiring



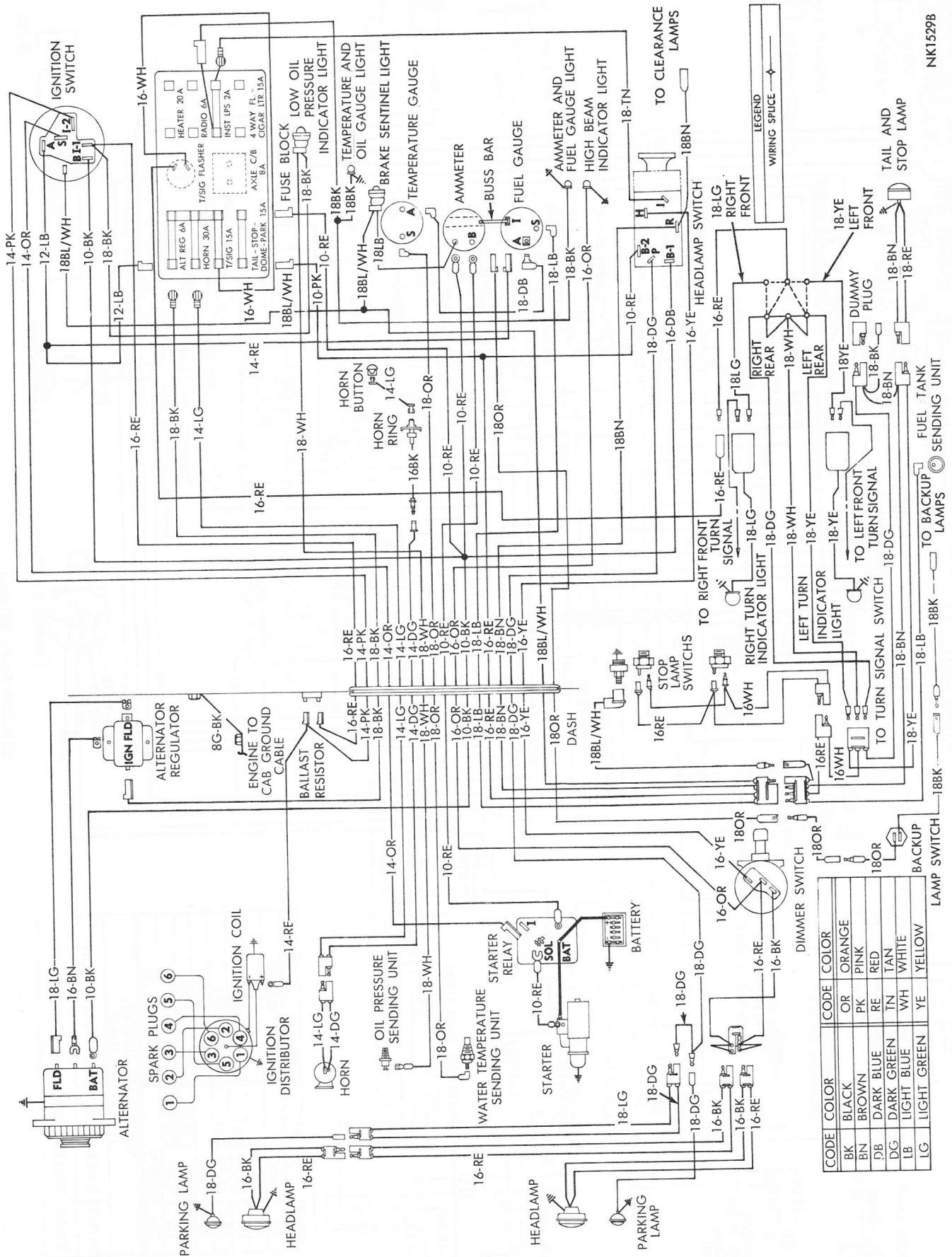
NP850A



D700 and 800 Body Wiring





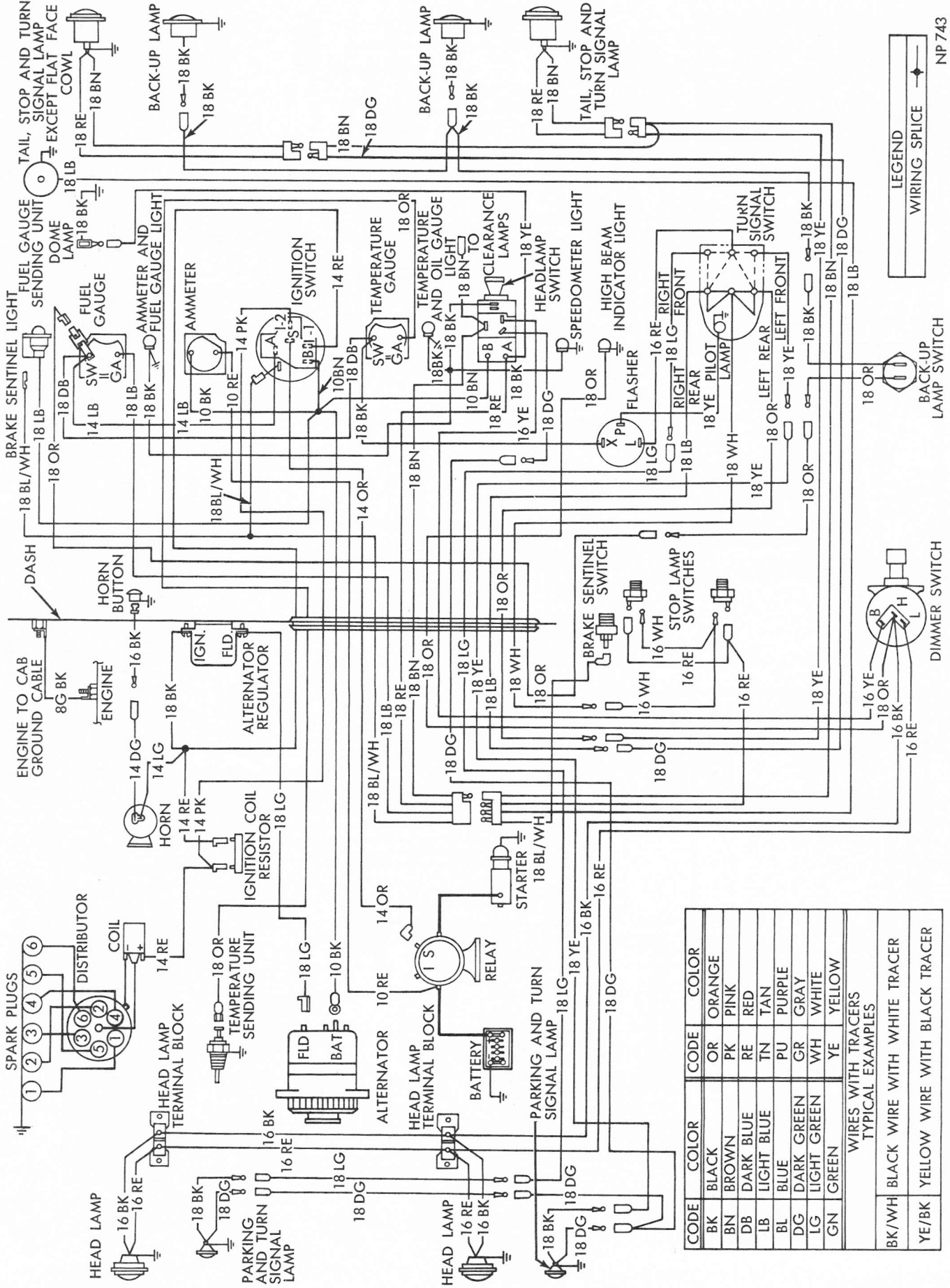


CODE	COLOR	CODE	COLOR
BK	BLACK	OR	ORANGE
BN	BROWN	PK	PINK
DB	DARK BLUE	RE	RED
DG	DARK GREEN	TN	TAN
LG	LIGHT GREEN	WH	WHITE
		YE	YELLOW

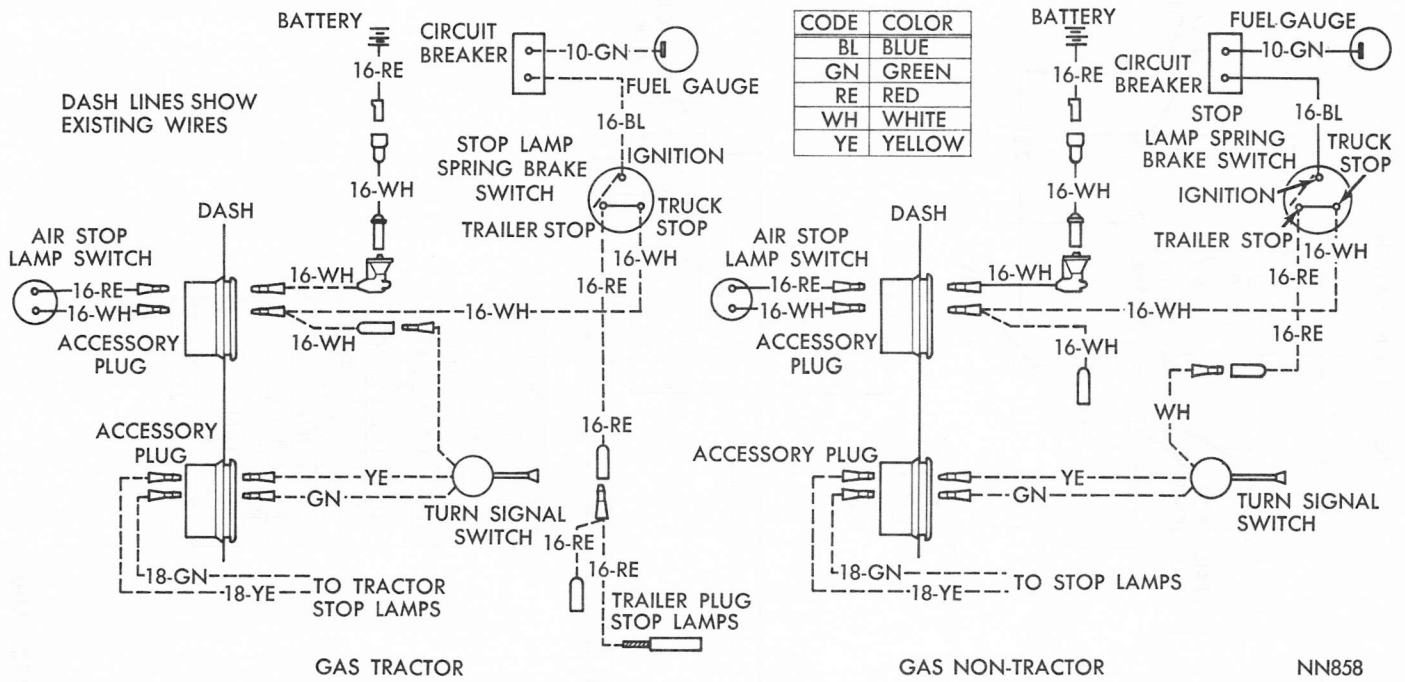
P200-300 and 400 Body Wiring

NK1529B

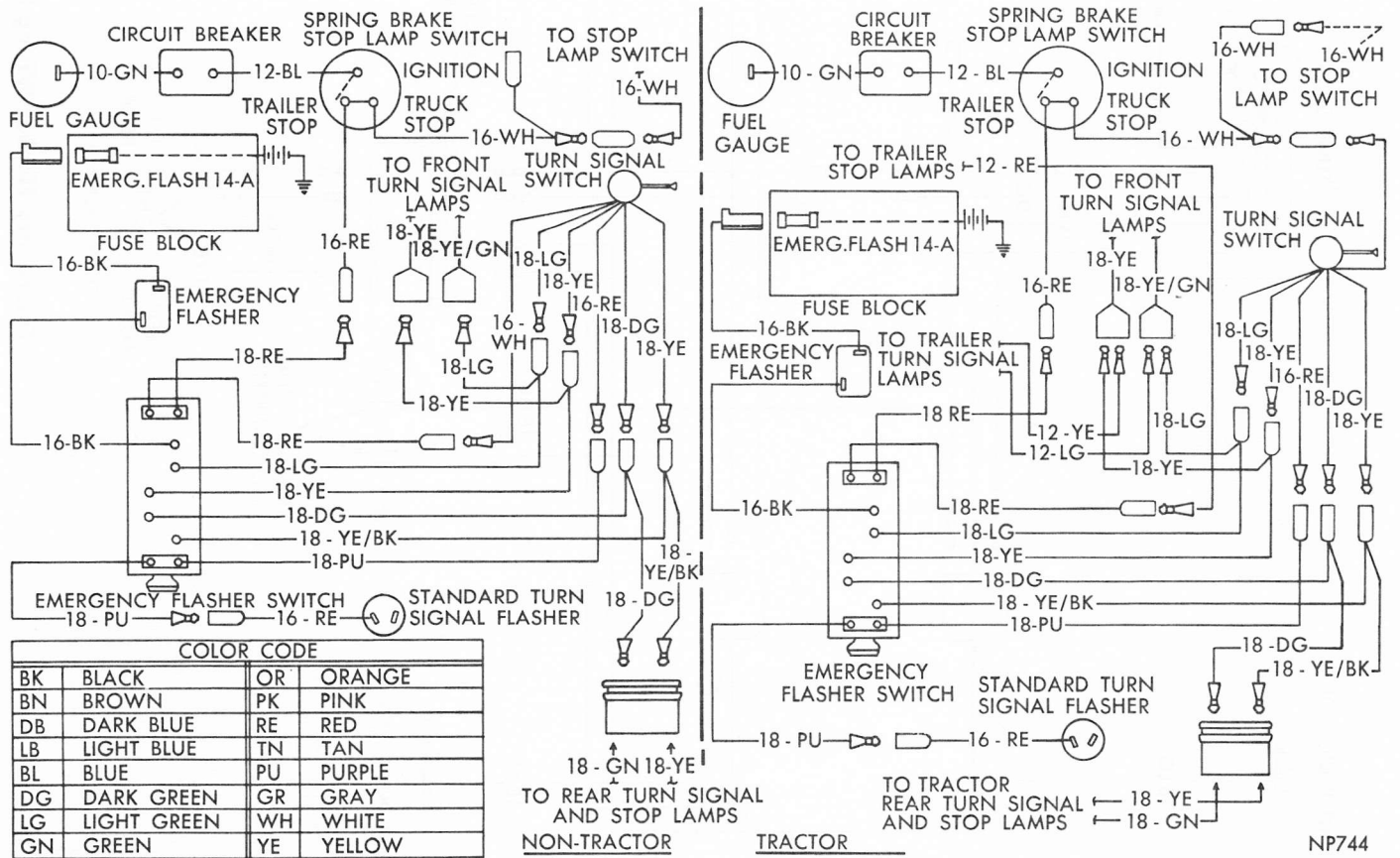
# 20 SPECIFICATIONS



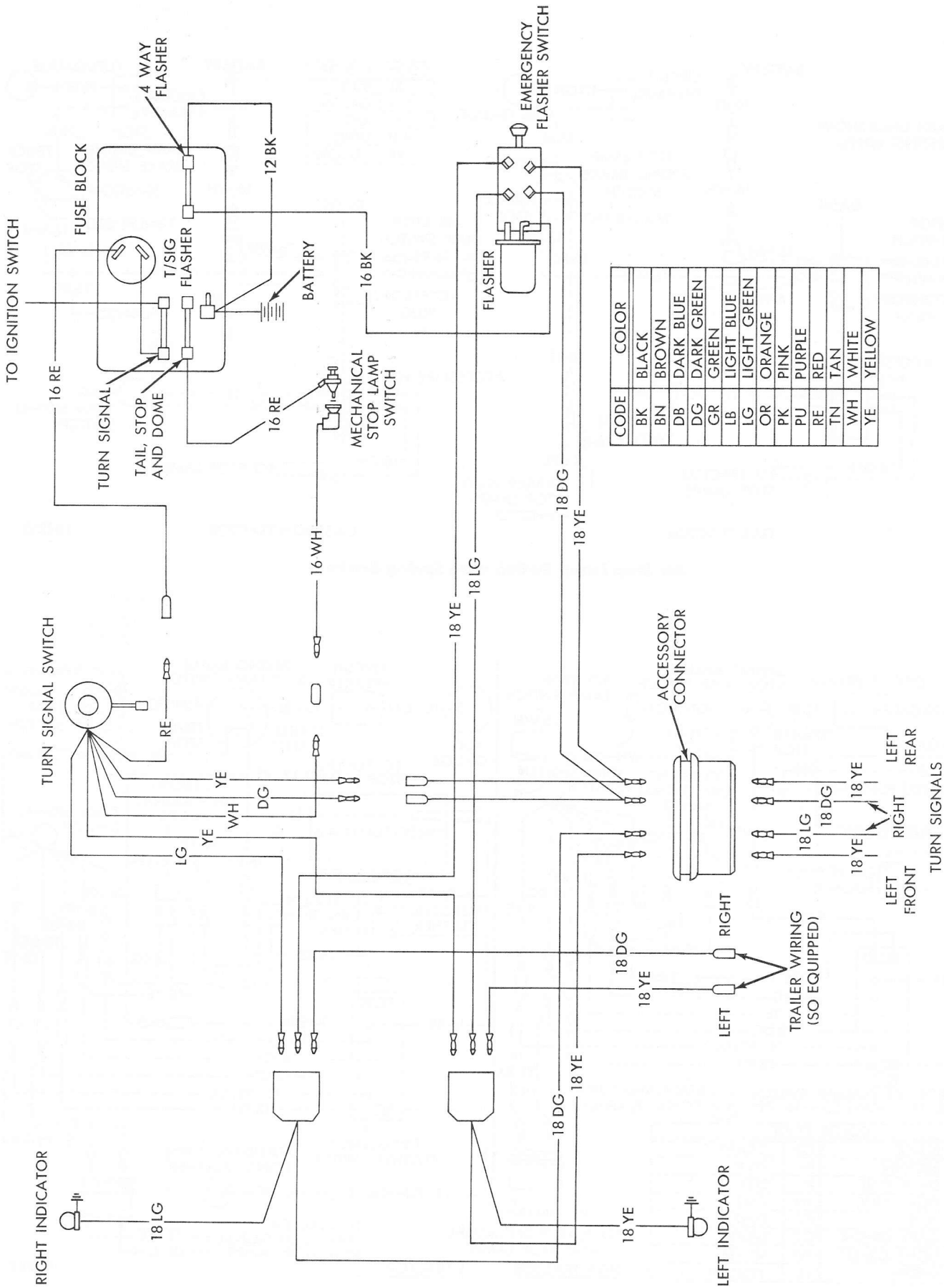
**WM300 Body Wiring**



**Air Stop Lamp Switch with Spring Brake**



**Emergency Flasher and Spring Brake Stop Lamp**



**Emergency Flasher Wiring D100-600; W100-500**



**ENGINE**

**ENGINE USAGE  
UNITED STATES**

Models	Std.	Extra	Extra
D100, 200, 300, W100, 200 .....	225-1	LA318-1	383
D400, W300, 500 .....	225-2	318-3	
D500, S400, 500 .....	225-2	318-3	361-2
D600, S600 .....	318-3	361-2	
D700 .....	361-3	361-4	413-2
D800 .....	361-4	413-2	
PD500, 600 .....	6-354-2		
WM300 .....	251-3		
WT500 .....	318-3		
P200, 300 .....	225-1		
P400 .....	225-2		

**CANADIAN**

Models	Std.	Extra
D100, 200, 300, W100, 200 .....	225-1	318-1
D400, W300 .....	225-2	318-3
D500-6 Cylinder .....	225-2	
D500, 600, W500-8 Cylinder .....	318-3	
D700 .....	361-3	413-2
PD600 .....	6-354-2	
P100, 200, 300 .....	225-1	318-1

**ENGINE CODE**

6 Cylinder		8 Cylinder	
225-1	Standard OHV	LA318-1	Standard 90° V (U.S. only)
225-2	Premium OHV	318-1	Standard 90° V (Canada only)
251-3	Premium—In Line (U.S. only)	318-3	Premium 90° V
6-354-2	Perkins Diesel	361-2	Premium 90°V
		361-3	Premium Modified Torque 90° V
		361-4	Premium Full Torque 90° V
		383	Standard 90° V (U.S. only)
		413-2	2 Throat Carburetor 90° V

**6 CYLINDER ENGINES**

TRUCK ENGINE DESIGNATION	225-1, 2	251-3
Type .....	In-Line OHV	L-Head
Bore .....	3.40 in.	3.437 in.
Stroke—225 cu. in. Engine .....	4.125 in.	4.50 in.
Displacement (Cu. In.) .....	225	250.6
Compression Ratio .....	8.4:1	7.0:1
*STD. Minimum cranking speed .....	150 rpm	150 rpm
TRANS. Compression pressure .....	130-160 psi*	115-145 psi*
Max. variation between cyls. ....	15 psi	15 psi
*AUTO. Minimum cranking speed .....	130 rpm	150 rpm
TRANS. Compression pressure .....	110-140 psi*	115-145 psi*
Max. variation between cyls. ....	20 psi	15 psi
Firing Order .....	1-5-3-6-2-4	1-5-3-6-2-4
Basic Timing .....	5° B.T.D.C.**	5° B.T.D.C.
Recommended Governed Speed Full Load ...	3500 rpm	3200 rpm

\*Compression pressure taken with engine warm, all spark plugs removed, throttle wide-open, at a minimum cranking speed indicated above.  
 \*\*Cleaner Air Package TDC.

## 24—SPECIFICATIONS

TRUCK ENGINE DESIGNATION	225-1, 2	251-3
Camshaft—		
Bearing Clearance .....	.001 in., .003 in.	.002 in., .004 in.
End Play .....	—	.002 in., .006 in.
Bearing Diameter (1) .....	2.0015 in.	2 in.
(2) .....	1.9845 in.	1.96 in.
(3) .....	1.9695 in.	1.93 in.
(4) .....	1.9535 in.	1.25 in.
Camshaft Drive .....	225-1 225-2	Tooth Chain Tooth Chain
Connecting Rods—		
Standard Bearing Clearance .....	.0005 in.-.0015 in.	.0005 in.-.0015 in.
Maximum Allowable .....	.0025 in.	.0025 in.
Side Play (End) .....	.006 in.-.012 in.	.006 in.-.011 in.
Journal Diameter .....	2.1865 in.-2.1875 in.	2.12 in.
Width .....	1.015 in.	1.08 in.
Bearing Material (Con. Rod.) .....	225-1 225-2	Steel-Backed Babbitt Steel-Backed Babbitt
Crankshaft—		
Bearing Clearance .....	.0005 in.-.0015 in.	.0005 in.-.0015 in.
End Play .....	.0035 in.-.0085 in.	.003 in.-.007 in.
Bearing Diameter .....	2.750 in.	2.50 in.
Bearing Material (Main) .....	Steel-Backed Babbitt	Steel-Backed Babbitt
Cylinders—		
Maximum Allowable Taper .....	.010 in.	.010 in.
Maximum Allowable Out-of-Round .....	.005 in.	.005 in.
Reconditioning Working Limits .....	.001 in.	.001 in.
Pistons		
Clearance Top Land .....	.025-.030 in.	.0305 in.
Skirt (Top) .....	.0005-.0015 in.	.0002-.0012 in.
Piston Pins—		
Diameter .....	.9008 in.	.859 in.
Length .....	2.965 in.	2.87 in.
Clearance in Piston .....	.00045-.00075 in.	.000-.0005 in.
Clearance in Rod .....	.0007-.0012 in.	.0001-.0004 in.
Interference .....		
Service Fit—		
Thumb Push at Degrees F. ....	Pressed-in @ 70°	Pressed-in @ 70°
Piston Rings—		
Oil Ring Width .....	.1860-.1865 in.	.186 in.
Gap Width .....	.015-.025 in.	.010-.020 in.
Side Clearance .....	.001-.003 in.	.0015-.0030 in.
Compression Ring Width .....	.0076-.0780 in.	.0775 in.
Gap Width .....	.010-.020 in.	.010-.020 in.
Side Clearance .....	.0015-.0030 in.	.0020-.0035 in.
Valve (stem type)—		
Intake .....	Solid	Solid
Exhaust .....	225-1 225-2	Solid
Stellite .....		
Face Angle—Intake .....	45°	45°
Exhaust .....	43°	45°
Seat Angle .....	45°	45°
Lift—Intake .....	.397 in.	.379 in.
Exhaust .....	.392 in.	.379 in.
Positive Rotators Exhaust .....	225-1 225-2	No
Yes .....		
Stem Diameter—Intake .....	.372-.373 in.	.3405-.3415 in.
Exhaust .....	.371-.372 in.	.3395-.3405 in.
Head Diameter—Intake .....	1.620 in.	1.718 in.
Exhaust .....	1.360 in.	1.501 in.
Hardened Inserts .....	None	Special Alloy-Steel (Exhaust Only)
Guides (Removable) .....	No	Yes
Length—Intake .....	2.44 in.	2.812 in.
Exhaust .....	2.40 in.	2.812 in.
Top of Guide to Top of Block—Intake .....	1.19 in.	.875 in.
Exhaust .....	1.19 in.	.875 in.

TRUCK ENGINE DESIGNATION	225-1, 2	251-3
Clearance (Stem to Guide) Intake .....	.001 in.-.003 in.	.001 in.-.003 in.
Exhaust .....	.002 in.-.004 in.	.002 in.-.004 in.
Valve Springs—Free Length—Intake .....	1-59/64 in.	2 in.
Exhaust .....	1-59/64 in.	1-7/8 in.
Valve Spring Pressure		
Intake—Valve Closed .....	49-57 lbs. @ 1-11/16 in.	40-45 lbs. @ 1-3/4 in.
Valve Open .....	137-150 lbs. @ 1-5/16 in.	110-120 lbs. @ 1-3/8 in.
Exhaust—Valve Closed .....	49-57 lbs. @ 1-11/16 in.	40-45 lbs. @ 1-19/32 in.
225-1	80-90 lbs. @ 1-9/16 in.	
225-2	137-150 lbs. @ 1-5/16 in.	100-110 lbs. @ 1-7/32 in.
Valve Open .....	178-192 lbs. @ 1-5/32 in.	
225-2		
Valve Timing—Intake—Opens .....	BTC 10°	BTC 12°
Closes .....	ABC 50°	ABC 44°
Exhaust—Opens .....	BBC 50°	BBC 50°
Closes .....	TDC 6°	ATC 6°
Tappets—Type .....	Mechanical	Mechanical
Adjusting Screw .....	Self-Locking	Self-Locking
Tappet Clearance (Hot)—Intake .....	.012 in.	.010 in.
Exhaust .....	.024 in.	.014 in.

**354D-6 CYLINDER PERKINS DIESEL ENGINE**

<b>General</b>	Connecting Rod Journal (Crankpin) Width .....	1.5885 to 1.5900 in.
Bore .....	3.875 in.	
Stroke .....	5.00 in.	
Compression Ratio .....	16 to 1	
Compression Pressure .....	430 p.s.i.	
Firing Order .....	1, 5, 3, 6, 2, 4.	
Intake Valve Opens .....	13 Degrees B.T.D.C.	
Exhaust Valve Closes .....	10 Degrees A.T.D.C.	
Tappet Clearance .....	.010 in. (Hot)	
Cam Lift .....	.3035 in.	
Valve Seat and Face Angle .....	45°	
Fuel Injection Timing—Static (Engine Stopped) .....	24 Degrees B.T.D.C.	
Injector Setting Pressure .....	2572 p.s.i.	
Engine Oil Pressure (Min.) .....	25 p.s.i.	
Engine Oil Capacity—U.S. Measure (Less Filter—14.5 qts. (Add 1 quart for filter))		
Timing Gears—Backlash .....	.003 to .006 in.	
<b>Cylinder Block</b>	Connecting Rod Width (at Bearing) .....	1.577 to 1.579 in.
Cylinder Bores—(Finished Dia.) ...	3.876 to 3.877 in.	
Parent Bores—Dia. before installing Liners) .....	4.0615 to 4.0625 in.	
Cylinder Liner—(Outside Dia.) ..	4.0655 to 4.0665 in.	
<b>Camshaft</b>	Connecting Rod Bearing Clearance .....	.0015 to .003 in.
Journal Diameters	Connecting Rod End Clearance .....	.0095 to .013 in.
No. 1 .....	1.9965 to 1.9975 in.	
2 .....	1.9865 to 1.9875 in.	
3 .....	1.9765 to 1.9775 in.	
4 .....	1.9665 to 1.9675 in.	
Bore Diameters in Block	Connecting Rod Maximum Misalignment .....	.001 in.
No. 1 .....	2.000 to 2.001 in.	
2 .....	1.990 to 1.992 in.	
3 .....	1.980 to 1.982 in.	
4 .....	1.970 to 1.972 in.	
Camshaft Bearing Clearance	Main Bearing Bore Diameter (In Block) .....	3.166 to 3.167 in.
No. 1 .....	.0025 to .0045 in.	
2 .....	.0025 to .0055 in.	
3 .....	.0025 to .0055 in.	
4 .....	.0025 to .0055 in.	
Cam Lift .....	.3005 to .3035 in.	
<b>Crankshaft and Connecting Rods</b>	Main Bearing (Inside Diameter) 3.0015 to 3.003 in.	
Connecting Rod Bore Dia. ....	2.646 to 2.6465 in.	
Connecting Rod Bearing Bore Dia. ....	2.501 to 2.502 in.	
Connecting Rod Journal (Crankpin) Diameter .....	2.4990 to 2.4995 in.	
	Crankshaft Main Journals (Dia.) 2.9985 to 2.999 in.	
	Main Bearing Clearance .....	.0025 to .0045 in.
	Main Bearing Std. Thrust Washers (Thickness) .....	.089 to .091 in.
	Main Bearing Oversize Thrust Washers .....	.0965 to .0985 in.
	Crankshaft End Clearance ....	.006 to .014 in.
	Crankshaft No. 4 Journal (Width) .....	1.738 to 1.740 in.
	<b>Pistons, Pins &amp; Rings</b>	
	Piston Height (Above top face of cylinder block—T.D.C.) ....	.003 to .0095 in.
	Compression Rings—Side clearance .....	.002 to .004 in.
	Oil Rings—Side Clearance ....	.0025 to .0045 in.
	Top Compression Ring—Gap ..	.015 to .019 in.
	2nd & 3rd Compression Rings— Gap .....	.011 to .016 in.
	Oil Rings—Gap .....	.011 to .016 in.
	Piston Pin (Diameter) .....	1.3748 to 1.375 in.
	Piston Pin Bushing (Inside Dia.)	1.3757 to 1.3765 in.
	Piston Pin to Bushing Clearance	.0007 to .0017 in.
	<b>Cylinder Head and Valve Assembly</b>	
	Rocker Arm Bore Dia. ....	.7505 to .7520 in.
	Rocker Shaft Dia. ....	.7485 to .7495 in.
	Rocker Arm Bore Clearance ...	.001 to .0035 in.
	Valve Guides—(Outside Diameter)	.626 to .6265 in.
	Valve Guides— (Inside Diameter) .....	.375 to .376 in.
	Intake Valve Stem (Dia.) .....	.373 to .374 in.
	Exhaust Valve Stem (Dia.) ....	.372 to .373 in.
	Intake Valve Stem Clearance ..	.001 to .003 in.
	Exhaust Valve Stem Clearance .	.002 to .004 in.
	Tappet Clearance (Hot) .....	.010 in.

8 CYLINDER ENGINES

LA318-1  
318-1  
318-3

361-2, 3, 4

383

413-2-3

General Data—

Type .....  
Number of Cylinders .....  
Bore .....  
Stroke .....  
Piston Displacement .....  
Compression Ratio ..... LA318-1  
318-1  
318-3

90° "V"  
8  
3.91 in.  
3.312 in.  
318 cubic in.  
8.5:1  
8.25:1  
7.5:1

90° "V"  
8  
4.125 in.  
3.375 in.  
361 cubic in.  
7.5:1

90° "V"  
8  
4.25 in.  
3.375 in.  
383 cubic in.  
9.2:1

90° "V"  
8  
4.188 in.  
3.75 in.  
413 cubic in.  
7.5:1

\*STD. Minimum cranking speed .....  
TRANS. Compression  
Pressure .... LA318-1, 318-1  
318-3

100 rpm  
120-160 psi.  
90-130 psi.  
120 rpm

150 rpm  
100-140 psi.  
125-155 psi.

150 rpm

\*AUTO. Minimum cranking speed .....  
TRANS. Compression  
Pressure .... LA318-1, 318-1  
Max. variation between cyls. ...

110-140 psi.  
20 psi.  
1-8-4-3-6-5-7-2  
10°BTC\* Automatic  
5°BTC\* Manual  
5°BTC  
12-1/2°BTC

20 psi.  
1-8-4-3-6-5-7-2  
12-1/2 BTC\*\*

20 psi.  
1-8-4-3-6-5-7-2  
5° BTC

Recommended Governed Speed—  
No load ..... LA318-1, 318-1  
318-3

3900 rpm  
3800 rpm

3600 rpm

Cylinder Numbering (from driver's  
seat, front to rear)—

Left Bank .....  
Right Bank .....  
Camshaft—

1-3-5-7  
2-4-6-8

1-3-5-7  
2-4-6-8

1-3-5-7  
2-4-6-8

Drive ..... LA318-1, 318-1  
318-3

Silent Chain  
Roller Chain  
Thrust Plate  
.002-.006 in.  
5  
.001-.003 in.

Gear

Silent Chain

Gear

Thrust Taken by .....  
End Play .....  
Camshaft Bearings (No. Used) .....  
Clearance .....  
Diameter and Length—

Cylinder Block  
5  
.001-.003 in.

Cylinder Block  
5  
.001-.003 in.

Cylinder Block  
5  
.001-.003 in.

Number 1 .....  
2 .....  
3 .....  
4 .....  
5 .....

2.000 x .86 in.  
1.984 x .76 in.  
1.969 x .76 in.  
1.953 x .76 in.  
1.5625 x .94 in.

2.000 x .75 in.  
1.984 x .75 in.  
1.969 x .67 in.  
1.953 x .75 in.  
1.750 x .75 in.

2.000 x .75 in.  
1.984 x .75 in.  
1.969 x .67 in.  
1.953 x .75 in.  
1.750 x .75 in.

2.000 x .75 in.  
1.984 x .75 in.  
1.969 x .67 in.  
1.953 x .75 in.  
1.750 x .75 in.

Connecting Rod Journals—  
Diameter ..... LA318-1, 318-1  
318-3

2.124-2.125 in.  
2.1235-2.1245 in.

2.374-2.375 in.

2.374-2.375 in.

\* With Cleaner Air Package 5° ATC

\*\* With cleaner Air Package TDC manual  
5° BTC automatic

TRUCK ENGINE DESIGNATION	361-2, 3, 4	383-1	413-2, 3
Maximum Allowable Out-of-Round	.0005 in.	.0003 in.	.0005 in.
Service		.0006 in.	
Maximum Allowable Taper	.0005 in.	.0005 in.	.0005 in.
Service		.001 in.	
Connecting Rod Bearings—			
Material	LA318-1, 318-1 318-3	Steel-Backed Babbitt	Tri-Metal
End Play (2 Rods)	.006-.014 in.	.009-.017 in.	.009-.017 in.
Standard Clearance	.0005-.0015 in.	.0005-.0015 in.	.0010-.0020 in.
Desired	.001-.002 in.	.0005-.0015 in.	.0010-.0020 in.
Maximum Allowable	.003 in.	.0025 in.	.0025 in.
Crankshaft—			
No. of Main Bearings	5	5	5
Material of Main Bearings	LA318-1, 318-1 318-3	Steel-Backed Babbitt	Tri-Metal
No. 1, 2, 3 & 4	Steel-Backed Babbitt	Steel-Backed Babbitt	Tri-Metal
No. 5	Tri-Metal	Steel-Backed Babbitt	Tri-Metal
Thrust Taken by	Steel-Backed Babbitt	Steel-Backed Babbitt	Tri-Metal
End Play	No. 3	No. 3	No. 3
Main Bearing Clearance	.002-.007 in.	.002-.007 in.	.002-.007 in.
Desired	.0005-.0015 in.	.0005-.0015 in.	.0015-.0025 in.
Maximum Allowable	.001-.002 in.	.0005-.0015 in.	.0015-.0025 in.
Journal Size (Main)—	.003 in.	.0025 in.	.003 in.
Diameter	2.4995-2.5005 in.	2.6245-2.6255 in.	2.7495-2.7505 in.
Maximum Allowable Out-of-Round	.0005 in.	.0005 in.	
Maximum Allowable Taper	.0005 in.	.0005 in.	
Cylinders—			
Maximum Allowable Taper	.001 in.	.001 in.	.001 in.
Maximum Allowable Out-of-Round	.001 in.	.001 in.	.001 in.
Max. Allowable Before Recondition			
Out-of-Round	.005 in.	.005 in.	.005 in.
Taper	.010 in.	.010 in.	.010 in.
Pistons—			
Clearance in Bore (with .0015 in. by .50 in Feeler Stock)	5-10 lb. Pull	Method Not Used	5-12 lb. Pull
Clearance (Top of Skirt)	.0005-.0015 in.	.0005-.0015 in.	.0005-.0015 in.
Piston Length (Overall)	3.21 in.	3.84 in.	3.96 in.
Piston Available for Service Oversize	.005, .020, .040 in.	.005, .020, .040 in.	.005, .020, .040, .060 in.
Piston Pins—			
Type	Full Floating	Interference Fit in Rod	Interference Fit in Rod
Diameter	.9841-.9843 in.	1.0935-1.0947 in.	1.0935-1.0947 in.
Length	2.990-3.000 in.	3.440-3.450 in.	3.555-3.575 in.
Fit in Piston	.0000-.0005 in.	.00035-.00085 in.	.00045-.00075 in.
Clearance in Rod	.0001-.0004 in.	.0007-.0012 in.	.0007-.0012 in.
	Selective	Interference Fit	Interference Fit



TRUCK ENGINE DESIGNATION	LA318-1 318-1 318-3	361-2, 3, 4	383-1	413-2, 3
<b>Piston Rings—</b>				
Compression Rings (No. Used) .....	2	2	2	2
Oil Rings (No. Used) .....	1	1	1	1
Ring Gap .....	.010-.020 in.	.013-.025 in.	.013-.025 in.	.013-.025 in.
Side Clearance—Upper .....	.0015-.0030 in.	.0025-.004 in.	.0015-.003 in.	.0025-.004 in.
Intermediate .....	.0015-.003 in.	.0025-.0040 in.	.0015-.003 in.	.0025-.004 in.
Lower .....	.001-.005 in.	.001-.0030 in.	.0002-.005 in.	.001-.003 in.
Valves (Intake) .....	Solid Stem	Solid Stem	Solid Stem	Solid Stem
Head Diameter .....	1.775-1.785 in.	1.875-1.885 in.	2.08 in.	1.875-1.885 in.
Length (Overall) .....	1.839-1.849 in.	5.6605-5.6755 in.	4.87 in.	5.6605-5.6755 in.
Stem Diameter .....	4.8919-4.9069 in.	5.6605-5.6755 in.	4.87 in.	5.6605-5.6755 in.
Stem Guide Clearance .....	4.5015-4.5165 in.	.372-.373 in.	.372-.373 in.	.372-.373 in.
Maximum Allowable (Wobble Method) ..	.001-.003 in.	.001-.003 in.	.001-.003 in.*	.001-.003 in.*
Face Angle .....	.017 in.*	.016 in.*	.017 in.*	.016 in.*
Valve Lift .....	45°	45°	45°	45°
Rotators .....	.390 in.	.360 in.	.425 in.	.360 in.
Seat Inserts .....	.388 in.	No	No	No
Valves (Exhaust) .....	No	No	No	No
LA318-1, 318-1	Solid Stem	Sodium Filled—	Sodium Filled—	Sodium Filled—
318-1, 3		Stellite Faced	Stellite Faced	Stellite Faced
318-3				
Head Diameter .....	Solid Stem—	Sodium Filled—	Sodium Filled—	Sodium Filled—
Length (Overall) .....	Stellite Faced	Stellite Faced	Solid Stem	Stellite Faced
Stem Diameter .....	1.495-1.505 in.	1.495-1.505 in.	1.60 in.	1.495-1.505 in.
Stem to Guide Clearance .....	1.558-1.568 in.	5.6625-5.6875 in.	4.87 in.	5.6625-5.6875 in.
Maximum Allowable (Wobble Method) ..	1.468-1.478 in.	.433-.434 in.	.371-.372 in.	.433-.434 in.
Face Angle .....	4.8992-4.9142 in.	.003-.005 in.	.002-.004 in.	.003-.005 in.
Valve Lift .....	4.441-4.456 in.	.018 in.	.017 in.*	.018 in.*
Rotators .....	47°	45°	45°	45°
Seat Inserts .....	45°	.360 in.	.435 in.	.360 in.
Valves (Exhaust) .....	391 in.	Positive	Non-Positive	Positive
LA318-1, 318-1	390 in.	Replaceable	Cast in Head	Replaceable
318-1, 3	Non-Positive	Yes	No	Yes
318-3	Positive	Replaceable	Cast in Head	Replaceable
Head Diameter .....	Cast in Head	.374-.375 in.	.374-.375 in.	.374-.375 in.
Length (Overall) .....	Intake	.437-.438 in.	.374-.375 in.	.437-.438 in.
Stem Diameter .....	Exhaust	Replace Guides	Replace Guides	Replace Guides
Stem to Guide Clearance .....	.005 in. O.S. Valve	No. O.S. Valves	No. O.S. Valves	No O.S. Valves
Maximum Allowable (Wobble Method) ..	.015 in. O.S. Valve	Replace Guides	Replace Guides	Replace Guides
Face Angle .....	.030 in. O.S. Valve	No O.S. Valves	No O.S. Valves	No O.S. Valves
Valve Lift .....		Replace Guides	Replace Guides	Replace Guides
Rotators .....				
Seat Inserts .....				
Valve Guides—Type .....				
Ream—				
Std. Size Valve .....				
Intake				
Exhaust				
.005 in. O.S. Valve .....				
.015 in. O.S. Valve .....				
.030 in. O.S. Valve .....				

TRUCK ENGINE DESIGNATION	LA318-1 318-1, 3	361-2, 3, 4	383-1	413-2, 3
Replaceable—Length—Intake .....		3.28 in.		3.28 in.
Exhaust .....		3.09 in.		3.09 in.
Valve Seat to Top of Guide—				
Intake .....		1.14 in.		1.14 in.
Exhaust .....		1.30 in.		1.30 in.
Ream After Installation—				
Intake .....		.374-.375 in.		.374-.375 in.
Exhaust .....		.437-.438 in.		.437-.438 in.
Tappets—				
Type .....	Hydraulic	Hydraulic	Hydraulic	Hydraulic
*With tools C-3973 and C-3339 using wobble method.				
Body Diameter .....	.9040-.9045 in.	.9040-.9045 in.	.9040-.9045 in.	.9040-.9045 in.
Clearance in Block .....	.0005-.0015 in.	.0005-.0018 in.	.0005-.0015 in.	.0005-.0018 in.
Springs—Free Length				
Intake .....	LA318-1 2.0 in.	2-5/16 in.	2-11/32 in.	2-5/16 in.
	318-1, 3 1.92 in.			
Exhaust (Outer) .....	LA318-1 2.0 in.	2-1/8 in.	2-11/32 in.	2-1/8 in.
	318-1 1.92 in.			
	318-3 1-57/64 in.			
(Inner)	None	1-7/8 in.	None	1-7/8 in.
Load when compressed to				
Intake (Valve Closed) .....	LA318-1 78-88 @ 1-11/16"	75-85 lbs. @ 1-55/64 in.	121-129 lbs. @ 1-55/64 in.	75-85 lbs. @ 1-55/64 in.
	318-1 49-57 @ 1-11/16"			
	318-3 49-57 @ 1-11/16"			
(Valve Open) .....	LA318-1 170-184 @ 1-5/16"	173-187 lbs. @ 1-15/32 in.	192-208 lbs. @ 1-15/32 in.	173-187 lbs. @ 1-15/32 in.
	318-1 137-150 @ 1-5/16"			
	318-3 137-150 @ 1-5/16"			
Exhaust (Valve Closed) ..	LA318-1 78-88 @ 1-11/16"	54-60 lbs. @ 1-47/64 in.	95-105 lbs. @ 1-55/64 in.	54-60 lbs. @ 1-47/64 in.
	318-1 49-57 @ 1-11/16"	25-29 lbs. @ 1-17/32 in.	None	25-29 lbs. @ 1-17/32 in.
	318-3 80-90 @ 1-35/64"			
(Valve Open) .....	LA318-1 170-184 @ 1-5/16"	110-120 lbs. @ 1-3/8 in.	187-203 lbs. @ 1-15/32 in.	110-120 lbs. @ 1-3/8 in.
	318-1 137-150 @ 1-5/16"			
	318-3 178-192 @ 1-5/32"			
Engine Lubrication—Type .....	Full Pressure	Full Pressure	Full Pressure	Full Pressure
Oil Pump—Type .....	Rotary	Rotary	Rotary	Rotary
Location .....	In Sump	External	External	External
Drive .....	Camshaft Gear	Camshaft Gear	Camshaft Gear	Camshaft Gear
Normal Pressure .....	LA318-1, 318-1 50-70 psi. @ 1500 rpm	50-70 psi. @ 1500 rpm	45-65 lbs. @ 1000 rpm	60-80 psi. @ 1500 rpm
	318-3 60-80 psi. @ 1500 rpm			

**ENGINE OILING**

TRUCK ENGINE DESIGNATION	225-1, 2		251-3	LA318-1		361-2, 3		383-1		361-4	
	5	6	5	318-1, 3	318-1-5 318-3-6	8	10	6	8	413-2, 3	
Crankcase Capacity	5	6	5	LA318-1 318-3-6	LA318-1 318-1-5 318-3-6	8	10	6	8	383-1	361-4 413-2, 3
With Filter	6	6	6	LA318-1, 318-1-6 318-3-7	LA318-1, 318-1-6 318-3-7	10	11	7	11	383-1	361-4 413-2, 3
With Oil Cooler											
Oil Filter Element	Replaceable Full-Flow	Replaceable Full-Flow	Replaceable Full-Flow	Replaceable Full-Flow	Replaceable Full-Flow	Replaceable Full-Flow	Replaceable Full-Flow	Throw away Full-Flow	Replaceable Full-Flow plus One Quart	Throw away Full-Flow	Replaceable Full-Flow plus One Quart
Oil Filter Type	Camshaft 50 psi. @ 1000 rpm	Camshaft 40 psi. @ 1000 rpm	Camshaft 40 psi. @ 1000 rpm	Camshaft 50-70 psi. @ 1500 rpm—318-1 60-80 psi. @ 1500 rpm—318-3	Camshaft 50-70 psi. @ 1500 rpm—318-1 60-80 psi. @ 1500 rpm—318-3	Camshaft 60-80 psi. @ 1500 rpm	Camshaft 60-80 psi. @ 1500 rpm	Camshaft 45-65 lbs. @ 1000 rpm	By-pass Camshaft 60-80 lbs. @ 1500 rpm	Camshaft 45-65 lbs. @ 1000 rpm	By-pass Camshaft 60-80 lbs. @ 1500 rpm
Oil Pump Drive	Rotary	Rotary	Rotary	Rotary	Rotary	Rotary	Rotary	Rotary	Rotary	Rotary	Rotary
Operating Pressure											
Type											
Pressure drop resulting from clogged filter (checked with gauge only)	.....7 to 9 psi										

**CONVERSION TABLE**

U.S. Quart	5	6	7	8	10	11
Imperial Quart	4-1/4	5	5-3/4	6-3/4	8-1/4	9-1/4

**EXHAUST SYSTEM**

**6-CYLINDER ENGINES**

Truck Model Designation Engine Model	W100, W200, P200, P300, D300, D400, D500		D100, D200		W300, W500	
	225 Cu. In.		225 Cu. In.		225 Cu. In.	
Muffler—Type	Straight Through with Restrictor C. R. Steel		Straight Through with Restrictor C. R. Steel		Straight Through with Restrictor C. R. Steel	
Material	22		30		22	
Length (inches)	5		5		5	
Diameter (inches)	2.00		2.00		2.00	
Exhaust Pipe—Diameter (inches)	Yes		Yes		Yes	
Welded to Muffler	1.75		1.75		1.75	
Tail Pipe—Diameter (inches)	Thermostatic		Thermostatic		Thermostatic	
Manifold Heat Control						

Truck Model Designation Engine Model	P400, S400, S500, 225 Cu. In.	WM300 251 Cu. In.	PERKINS DIESEL PD500, PD600 354-2 6 Cyl.
Muffler—Type .....	Straight Through with Restrictor	Straight Through with Restrictor	Straight Through with Restrictor
Material .....	C. R. Steel	C. R. Steel	C. R. Steel
Length (inches) .....	35	18	35
Diameter (inches) .....	5	5	5
Exhaust Pipe—Diameter (inches) .....	2.25	2.00	2.25
Welded to Muffler .....	Yes	No	Yes
Tail Pipe—Diameter (inches) .....	2.00	1.75	2.00
Manifold Heat Control .....	Thermostatic	Thermostatic	None

### 8-CYLINDER ENGINES

(Extra Equipment, except as indicated. Standard \* and \*\*.)

Truck Model Designation Engine Model	D100, D200, D300 W100, W200 LA318-1	D400, D500, D600* S400, S500, S600, W300, W500 318-3*	D500, D600 S500, S600 361-2	D700*, D800** 361-3*, 361-4** 413-2	D100, D200, D300 W100, W200 383
Muffler Type .....	Straight Through with Restrictor	Straight Through with Restrictor	Straight Through with Mixing Chamber	Straight Through with Mixing Chamber	Straight Through with Mixing Chamber
Material .....	C. R. Steel	C. R. Steel	Aluminized Steel	Aluminized Steel	C. R. Steel
Length (inches) .....	35	35	30	30	35
Diameter (inches) .....	5	5	7	7	5
Y-Exhaust Pipe Diameter (inches) .....	Front 1.875 Rear 2.25	Front 1.875 Rear 2.25	2.50	2.50	2.25
Welded to Muffler .....	No	No	No	No	No
Tail Pipe Diameter (inches) .....	2.00	2.00	2.50	2.50	2.00
Manifold Heat Control .....	Thermostatic	Exhaust Heated Intake Manifold	Water Heated Intake Manifold	Water Heated Intake Manifold	Thermostatic

**FRAME DIMENSION CHART**

Truck Model Designation	W100 D100	P200	W200* D200*	W300 D200	W200 D300	P300	P300	P300	WM300	P400
Wheelbase (in.)	114	104-122	146	128	133	104	125	137	126	All
Width of Frame										
(Rear) (in.)	37.96	38.08	38.18	38.10	34	34	34	34	40.09	34.06
(Front) (in.)	33.76	33.85	33.98	33.90	34	34	34	34	33.09	34.06

Truck Model Designation	D400	S400 D400	D400	W500	D500 PD500	D500	D500	D500 PD500	S500 D500 PD500	D500 S500
Wheelbase (in.)	133	157	175	All	133	145	157	175	197	221
Width of Frame										
(Rear) (in.)	34.06	34.06	34.06	34.18	34.06	34.06	34.06	34.06	34.12	34.18
(Front) (in.)	34.06	34.06	34.06	34.18	34.06	34.06	34.06	34.06	34.12	34.18

Truck Model Designation	S500	D600 PD600	D600	D600	D600	D600 PD600	S500 D600 S600	D700 D800
Wheelbase (in.)	240	133	145	157	175	197	240-258	All
Width of Frame								
(Rear) (in.)	34.25	34.18	34.18	34.18	34.18	34.18	34.25	34.18
(Front) (in.)	34.25	34.18	34.18	34.18	34.18	34.18	34.25	34.18

\*Crew Cab

**FUEL SYSTEM**

**Ball and Ball BBS Series Carburetor**

Type: Ball and Ball Single Throat	Standard		CAP (Cleaner Air Package)		
	Manual	Automatic	Manual	Automatic	Manual
Transmission Type	225	225	225	225	251-3
Engine Displacement (Cu. In.)	BBS-4177S	BBS-4342S	BBS-4340S	BBS-4341S	BBS-3277S
Model					
Bore	1-11/16"	1-11/16"	1-11/16"	1-11/16"	1-11/16"
Venturi	1-11/32"	1-11/32"	1-11/32"	1-11/32"	1-11/32"
Main Metering Jet					
Standard	#120-293S	#120-293S	#120-263S	#120-293S	#120-205S
One Step Lean	#120-277S	#120-277S	#120-267S	#120-277S	#120-206S
Two Steps Lean	#120-263S	#120-263S	#120-268S	#120-263S	#120-215S
Step-Up Wire Standard	75-1626	75-1591	75-1593	75-1634	75-1507
Diameter	(.024")	(.032")	(.026")	(.034")	(.033")
ADJUSTMENTS					
Float Setting (at center of float)	1/4"	1/4"	7/32"	1/4"	7/32"
Choke Unloader	—	3/16"	—	3/16"	—
Fast Idle Cam Position	—	#48	—	#48	—
Vacuum Kick (drill size)	—	#35	—	#35	—
Bowl Vent Valve Setting (from under side of valve to air horn)	.060"	.060"	.060"	.060"	.060"
Idle Mixture Screw (turns open)	1-2	1-2	1-2	1-2	1-2
Idle Speed R.P.M. (curb idle)	550	550	650	600	550
Fast Idle Speed (r.p.m.)	—	700†	—	1550†	—
CHOKE					
Control	Hand	Thermostat	Hand	Thermostat	Hand
Type	—	Well	—	Well	—
Setting	—	2 Notches Rich	—	2 Notches Rich	—

3—Standard Engine

†After Approx. 500 Miles (If Necessary)



	WW3 Series		Standard		CAP (Cleaner Air Package)	
	Manual	Automatic	Manual	Automatic	Manual	Automatic
Type: Stromberg Dual Downdraft	361-2		318		318 LA	
Transmission Type	361-2					
Engine Displacement (Cu. In.)	WW3-225	WW3-226A	WW3-243	WW3-278	WW3-279	WW3-281
Model	1-7/16"	1-7/16"	1-7/16"	1-7/16"	1-7/16"	1-7/16"
Bore	1-3/16"	1-3/16"	1-3/16"	1-1/8"	1-1/8"	1-1/8"
Venturi						
Main Metering Jet						
Standard (388539)	.056"	.053"	.053"	.054"	.050"	.051"
1 Size Lean (388539)	.054"	.051"	.051"	.052"	.048"	.049"
2 Sizes Lean (388539)	.032"	.049"	.049"	.050"	.046"	.047"
Power Jet (2 Stage)	2 #56	2 #57	.028" x .047"	.052"	.035" x .075"	.028" x .067"
ADJUSTMENTS						
Float Setting	7/32"	7/32"	7/32"	7/32"	7/32"	7/32"
Choke Unloader			5/16"			5/16"
Fast Idle Cam Position			#44			#20
Vacuum Kick Adjustment (Drill Size)			#4			#4
Bowl Vent (throttle at curb idle)			.060"	.060"	.050"	.050"
Idle Mixture Screws (turns open)	1-1/4 to 1-3/8	1-1/4	1-1/4	1-1/4	1-1/2	1-1/2
Idle Speed (curb idle)	500	500	500	500	650	600
Fast Idle Speed			700*			1400*
CHOKE						
Control	Hand	Hand	Thermostatic	Hand	Hand	Well
Type			Coil Spring	Coil Spring	Coil Spring	Well
Setting			Well	Well	Well	On Index

Type: Ball and Ball Dual Downdraft BBD

	Standard		CAP (Cleaner Air Package)	
	Manual	Automatic	Manual	Automatic
Type: Ball and Ball Dual Downdraft BBD	383		383	
Transmission Type	BBD-4296S	BBD-4297S	BBD-4306S	BBD-4307S
Model	383	383	383	383
Engine Displacement (cu. in.)	1-9/16"	1-9/16"	1-9/16"	1-9/16"
Bore	1-1/8"	1-1/8"	1-1/8"	1-1/8"
Venturi				
Main Metering Jet				
Standard	120-314S	120-314S	120-314S	120-314S
One Step Lean	120-315S	120-315S	120-315S	120-315S
Two Steps Lean	120-316S	120-316S	120-316S	120-316S
Step-Up Wire (Standard)	75-1644	75-1651	75-1765	75-1765
Diameter (2 Stage)	.031 x .026"	.033 x .027"	.034 x .027"	.034 x .027"
ADJUSTMENTS				
Accelerator Pump Setting	29/32" ± 1/64"	29/32" ± 1/64"	1" ± 1/64"	1" ± 1/64"
Float Setting (at Center of Floats)	5/16"	5/16"	5/16"	5/16"
Vacuum Kick Adjustment	#20	#42	#20	#30
Fast Idle Cam Position Adjustment	#42	#42	#42	#42
Bowl Vent Valve (at curb idle)	1/16"	1/16"	1/16"	.050 ± .010"
Choke Unloader	1/4"	1/4"	1/4"	1/4"
Idle Mixture Screws (Turns Open)	1-1/2	1-1/2	1-1/2	1-1/2
Idle Speed RPM (Curb Idle)	550	550	650	600
Fast Idle Speed RPM	700*	700*	1700*	1400*
CHOKE Type	Well	Well	Well	Well
Control	Thermostatic	Thermostatic	Coil Spring	Well
Setting	2 Notches Rich	2 Notches Rich	2 Notches Rich	2 Notches Rich

\*After Approx. 500 Miles (If Necessary)

## 34—SPECIFICATIONS

### BBD Carburetor

Type .....	BBD Dual Throat
Model .....	2905SA
Manual Transmission and Choke .....	361-3, 361-4 and 413-2
Engine Displacement (cubic inches) .....	1-9/16"
Bore .....	1-5/16"
Venturi .....	120-238S
Main Metering Jet (Standard) .....	120-249S
One Step Lean .....	120-250S
2 Steps Lean .....	75-1518
Step-Up Wire (Standard) .....	.034"
Diameter .....	
<b>ADJUSTMENTS</b>	
Float Setting .....	15/64"
Accelerator Pump (top of plunger and Air Horn) .....	1-3/32"
Idle Mixture Screw (turns open) .....	1
Idle Speed (curb idle) .....	500
<b>CHOKE</b>	
Control .....	Hand
3—Full Premium—Mod. Torque.	
4—Full Premium—Full Torque.	

### AFB Carburetor

Type .....	4 Barrel Downdraft
Model .....	AFB-4393S
Engine Displacement .....	413-3
<b>THROTTLE BORE</b>	
Primary .....	1-7/16"
Secondary .....	1-11/16"
<b>MAIN VENTURI</b>	
Primary .....	1-3/16"
Secondary .....	1-9/16"
<b>LOW SPEED JET</b>	
Primary .....	#120-159 .089"
<b>METERING RODS</b>	
Standard .....	#16-70 .062"-.055"
One Step Lean .....	#16-117 .0635"-.058"
Two Steps Lean .....	#16-39 .066"-.061"
<b>ADJUSTMENTS</b>	
Accelerator Pump Setting .....	7/16"
Idle Speed (curb idle) .....	500
Float Setting .....	7/32"
Float Drop .....	3/4"
Idle Mixture (both screws) (turns open) .....	1-1/2
Secondary Throttle Lever .....	23/64" to 3/8"

### FUEL FILTER

Engine Displacement (Cu. In.)	Vehicle Model	Ceramic 80 Micron Replaceable Element	Throw-away Element	15 Micron Replaceable Element
225-1	D-1, D-2, P-2, P-3, W-1, W-2	—	X	—
225-1	D-3	—	X	—
225-2	D-4, 5, P-4, W-3, 5	—	—	X
251	WM-3	X	—	—
318-1	D-1, 2, 3, W-1, 2	—	X	—
318-2	D-4, 5, 6, W-3, 5	—	—	X
361-383-413	All	—	—	X

### FUEL PUMP

Make .....	Carter	Carter	Carter	Carter
Model .....	MS-3674S	M-3219S	MS-3673S	MS-3672S
Engine Displacement (cu. in.) .....	225	251	318	361, 383 and 413
Type .....	Diaphragm	Diaphragm	Diaphragm	Diaphragm
Number of Valves .....	2	3	2	2
Driven by .....	Camshaft	Camshaft	Camshaft	Camshaft
Pump Pressure (lbs.) .....	3-1/2 to 5	5 to 7	5 to 7	3-1/2 to 5

### GOVERNORS

Truck Model	Eng. Disp.	Model No.	Set by Vendor N. L. RPM	Can be Reset N. L. RPM
6-D1-2-3, W1-2, P2-3-4	225	*V6-631	3500-3700	2400-3700 (1)
		*V65S-632	2700-2900	1600-2900 (1)
6-WM3	251	V6-236	3000-3200	2100-3200
		S-30M-142	3000-3200	2600-3200
8-D1-2-3-4-5-6, W1-2-3-5			3800-4000	2700-4000
8-D6, W5 Ex. Eq. D4, D5	318	*V9-554	3800-4000	2700-4000
		*S20DM-68	3800-4000	3600-4000
(D5-6, Ex. Eq. Eng.)	361-2	V9-548	3500-3700	2400-3700
S5-6, Std. D5-6, Ex. Eq.	361-2	V9-650	3500-3700	2400-4000
		S20DM-72	3500-3700	3100-3700
D-7, D-8	413-2	Pierce GC-4917-3	3700	—

(1) Spacer No. 2205857 required between carburetor and governor when equipped with closed crankcase ventilation system.

Governors not used with Loadlite Auto. Trans.

\*—Set and sealed by vendor.

N.L.—No Load.

#### Governor Identification

V65 or V6—King Seeley (single bore)	SZODM—Hoof (dual bore)
V9U or V9—King Seeley (dual bore)	GC—Pierce Mechanical
S30M—Hoof (single bore)	

### PROPELLER SHAFT

Truck Model Designation	D100 D200 D300	D400 S400	D500 S500	D600 S600	P200 P300	P400
Propeller Shaft						
Make .....	own	own	own	own	own	own
Model .....	7260	5380	5380	5380	7260	5380

Truck Model Designation	W100 W200	W300 W500	WM300	D700 D800
Propeller Shaft				
Make .....	own	own	own	Spicer
Model .....	5380	5380	5360 5160	1480 1550

### FRONT SPRINGS

Truck Model Designation	D200 D100	D200 (Crew Cab)	D300	D400	D500 PD500	D600 PD600	D700	D800
Standard Equipment								
Length (inches) .....	48	48	48	52	52	52	52	52
Width (inches) .....	2.5	2.5	2.5	3.0	3.0	3.0	3.0	3.0
No. of Leaves .....	4	6	5	5	6	6	6	7
Type of Bushings								
Upper..	Bronze	Bronze	Bronze	Rubber	Rubber	Rubber	Bronze	Bronze
Lower..	Rubber	Rubber	Rubber	Rubber	Rubber	Rubber	Bronze	Bronze

## 36—SPECIFICATIONS

Truck Model Designation	D200 D100	D200 (Crew Cab)	D300	D400	D500 PD500	D600 PD600	D700	D800
Capacity, Axle (lbs.) ....	2500	3800	3800	4000	5000	5000	5000	7000
Capacity, Spring (lbs.) ..	1025	1500	1250	1700	2100	2100	2100	3000
Extra Equipment								
Length (inches) .....	48		48	52	52	52	52	52
Width (inches) .....	2.5		2.5	3	3	3	3	3
No. of Leaves .....	5		7	6	7-8	7-8	7-8-10	7-8-10
Type of Bushings Upper..	Bronze		Bronze	Rubber	Rubber	Rubber	Bronze	Bronze
Lower..	Rubber		Rubber	Rubber	Rubber	Rubber	Bronze	Bronze
Capacity, Axle (lbs.) ....	3800		3800	5000	7000	7000	7000 9000	9000
Capacity, Spring (lbs.) ..	1250		1500	2100	2500 3000	2500 3000	2500 4000 3000	4000

Truck Model Designation	P200	P300	P400	W100	W200	W200 (Crew Cab)	W300	WM300	W500
Standard Equipment									
Length (inches) .....	48	48	52	48	48	48	49	39	49
Width (inches) .....	2.5	2.5	3.0	2.5	2.5	2.5	2.25	1.75	2.25
No. of Leaves .....	8	7	5-6	9	9	9	6	11	10
Type of Bushings .....	Rubber	Rubber	Rubber	Rubber	Rubber	Rubber	Bronze	Bronze	Bronze
Capacity, Axle (lbs.) ....	2800	3800	4000	3000	3000	3000	4500	3750	7500
Capacity, Spring (lbs.) ..	1250	1500	1700	1350 1550	1350 1500	1550	1450 1750	1600	2800
Extra Equipment									
Length (inches) .....		48	52	48	48	48	49		
Width (inches) .....		2.5	3	2.5	2.5	2.5	2.25		
No. of Leaves .....		7	6	9	9	9	6		
Type of Bushings .....		Rubber	Rubber	Rubber	Rubber	Rubber	Bronze		
Capacity, Axle (lbs.) ....			5000			3500	4500		
Capacity, Spring (lbs.) ..			2100			1550	1750		

Truck Model Designation	S400	S500	S600
Standard Equipment			
Length (inches) .....	52	52	52
Width (inches) .....	3.0	3.0	3.0
No. of Leaves .....	5	6 W/197-221 W.B. 7W/ 240 W.B.	7
Type of Bushings .....	Rubber	Rubber	Rubber
Capacity, Axle (lbs.) .....	4000	5000	7000
Capacity, Spring (lbs.) .....	1700	2100-2500	2500
Extra Equipment			
Length (inches) .....	52	52	52
Width (inches) .....	3	3	3
No. of Leaves .....	6	7W/197-221 W.B.	8
Type of Bushings .....	Rubber	Rubber	Rubber
Capacity, Axle (lbs.) .....	5000	7000	
Capacity, Spring (lbs.) .....	2100	2500	3000

## REAR SPRINGS

Truck Model Designation	D100	D200	D300	P200	P300
Rear Spring (Type)	Progressive		Single Stage	Single Stage	
Width (inches) .....	2.5	2.5	2.5	2.5	2.5
Length Std. (inches) .....	52	52	52	52	52
Aux. (inches) .....		34	36.5		

Truck Model Designation	D100	D200	D300	P200	P300
Capacity (lbs.) 6-8 Cyl. Standard.....	1100/1300	1500/1750	2050/2400	1700/1950	2050/2400
Extra .....	(1)1400/1650	(1)1950/2200	3000/3350	2600/2900	3000/3350
Extra .....	(2)1750/1950	(2)2600/2900	3600/4000		3600/4000
No. of Leaves Standard.....	5	6	6	6	6
Extra .....	4	6	7	7	7
Extra .....	7	7	7-4		7-4
Aux.....		3	4		
Type of Bushings .....	Rubber	Rubber	Bronze	Rubber	Bronze

(1) Required with 383-1 engine.  
(2) Single Stage

Truck Model Designation	W100	W200	W300	WM300
<b>Standard Equipment</b>				
<b>Rear Spring</b>				
Length (inches) .....	52	52	52	52.25
Width (inches) .....	2.5	2.5	2.5	1.75
No. of Leaves .....	5	6	8	14
Type of Bushings .....	Rubber	Rubber	Bronze	Bronze
Capacity (lbs.) 8 Cyl. ....	1350	1750	3250	
Capacity (lbs.) 6 Cyl. ....				3000
<b>Extra Equipment</b>				
Length (inches) .....	52	52	52	
Width (inches) .....	2.5	2.5	2.5	
No. of Leaves .....	6	8	8 Main 4 Aux.	
Type of Bushings .....		Rubber	Rubber	
Capacity (lbs.) 6-8 Cyl. ....	1750	2600	4050	

### REAR SPRINGS (Variable Rate)

Truck Model Designation	P400 D400	D500 D600	PD500 PD600	D700 D800
Width .....	3 in.	3 in.		3 in.
Length (Inches) .....	Max. 59.25	59.25	59.25	59.25
	Light 55.25	55.25	55.25	55.25
	Loaded 46.0	46.0	46.0	46.0
	Auxiliary 34.5	34.5	34.5	34.5
Capacity @ Pad/Ground .....	Std. 4600/5200	(2)6800/7500		8200/9200
	Extra 6800/7500	(3)8200/9200		9400/10400
	Extra (1)6900/7500	9400/10400		10500/11500
	Extra (1)9100/9800	10500/11500		(1)10500/11500
		(1)(2)9100/9800		(1)11700/12700
		(1)10500/11500		(1)12800/13800
		(1)11700/12700		
		(1)12800/13800		
Rate of Deflection (Lbs. Per. In.)..	4600 Lb. 225/1700	6800 Lb. 380-2150	8200 Lb. 652-2680	9400 Lb. 780-3300
	6800 Lb. 380/2150	8200 Lb. 652-2680	9400 Lb. 780-3300	10500 Lb. 780-3300
	2300 Lb. Aux. 1430	9400 Lb. 635-2900	10500 Lb. 780-3300	2300 Lb. Aux. 1430
		10500 Lb. 780-3300	2300 Lb. Aux. 1430	
		2300 Lb. Aux. 1430		
No. of Leaves .....	4600 Lb. 12	6800 Lb. 12	8200 Lb. 12	9400 Lb. 13
	6800 Lb. 12	8200 Lb. 12	9400 Lb. 13	10500 Lb. 14
	2300 Lb. Aux. 4	9400 Lb. 13	10500 Lb. 14	2300 Lb. Aux. 4
		10500 Lb. 14	2300 Lb. Aux. 4	
		2300 Lb. Aux. 4		
Mounting Front and Rear .....	Cam	Cam		Cam
Radius Leaf Eye Pin .....	1.25	1.25		1.25
	Bushing	Bushing		Bushing



## 38—SPECIFICATIONS

Truck Model Designation	S400	S500 S600	W500
Width .....	3 In.	3 In.	3 In.
Length (inches) .....	Max. 59.25	59.25	59.25
	Light 55.25	55.25	55.25
	Loaded 46.00	46.0	46.0
	Auxiliary		34.5
Capacity @ Pad/Ground .....	Standard 6800/7500	6800/7500	(1)6900/7500
	Extra	8200/9200	(1)9100/9800
	Extra	9400/10400	
Rate of Deflection (Lbs. Per. In.)..	380-2150	6800 Lb. 380-2150 8200 Lb. 652-2680 9400 Lb. 635-2900	6900 225-1700 9100 380-2150
No. of Leaves .....	12	6800 Lb. 12 8200 Lb. 12 9400 Lb. 13	6900 12 Aux. 4 9100 12 Aux. 4
Mounting Front and Rear .....	Cam	Cam	Cam
Radius Leaf Eye Pin .....			
Dia.	1.25	1.25	1.25
Bushing	Bronze	Bronze	Bronze

(1)—Includes 2300 Lb. Auxiliary. Recommended For High Load Center Application, and/or Off-Highway Operation.  
 (2)—D5, PD5,  
 (3)—Standard For D6, PD6,

### MANUAL STEERING GEAR

Truck Model Designation	D100, D200, D300, W100, W200	WM-300
Front Axle Capacity (Pounds) .....	2500—D100 2800—D200 3000—W100, W200 3800—D300 Extra Eq. 3500—W200	3750
Model .....	525D	B-60
Type .....	Recirculating Ball	Worm and Sector (Long Column Shaft)
Gear Ratio .....	24 to 1	23.2 to 1
Arm Length (Inches) .....	D100, D200—7.5 W100, W200—6.34 D300—8.25	6.38
Column Diameter (Inches) .....	1.75	1.50
Steering Wheel Diameter (Inches) .....	D100, D200—17 W100, W200, D300—18"	17
Worm Bearing Pre-Load (Inch-pounds) .....	5-9	7-14
—to keep the worm shaft moving		
Gear Lash (inch-pounds)—Includes .....	14-18	20-27
Worm Bearing Pre-load and Cross Shaft Gear Mesh...	Pull through Center	Pull through Center

Truck Model Designation	P200, P300, P400	D400, D500, D600, D700 S400, S500, PD500, PD600
Front Axle Capacity (Pounds) .....	2800—P200 3800—P300 4000—P400 Extra Eq. 5000—P400	4000—D400, S400 5000—D500, S500, D600, D700, PD500, PD600 Extra Eq. 5000—D400, S400
Model .....	Y4D-335	Y4D-335
Type .....	Worm and Roller (Long Column Shaft)	Worm and Roller (Stub Shaft)
Gear Ratio .....	23.2 to 1	23.2 to 1
Arm Length (Inches) .....	P200—6.76 P300—7.19 P400—6.94 Extra Eq. (P400 with 5000 lb. Front Axle) 7.08	All—7.44
Column Diameter (Inches) .....	1.75	1.75

Truck Model Designation	P200, P300, P400	D400, D500, D600, D700 S400, S500, PD500, PD600
Steering Wheel (Inches) .....	Std. 18 Extra Eq. 20—P400	Std. 18 Extra Eq. 20
Worm Bearing Pre-Load (Inch-pounds) .....	7-14 to keep the column shaft moving	7-14 to keep the worm shaft moving
Gear Lash (inch-pounds)—Includes Worm Bearing Pre-Load and Sector Shaft Gear Mesh .....	20-27 pull through center	20-27 pull through center

Truck Model Designation	W300, D500, S500, PD500, D600, D700, S600, PD600, D800	W500—D700
Front Axle Capacity (Pounds) .....	4500—W300 Extra Equip. 7000—D500, S500, PD500, D600, D700, S600, PD600	7500—W500 9000—D700 (Ex. Eq.)
Model .....	Y5D-375	6D-400 (Slim Line)
Type .....	Worm and Roller (Stub Shaft)	Worm and Roller (Stub Shaft)
Ratio .....	27.6 to 1	28.0 to 1
Arm Length (inches) .....	5.94—W300 All above models with 7000 lb. axles 8.18	7.38 W500 8.08 D700
Column Diameter (inches) .....	1.75	1.75
Steering Wheel Diameter (inches) .....	18—W300 other models 20	20
Worm Bearing Pre-Load (inch-pounds) .....	7-14 to keep the worm shaft moving	7-14
Gear Lash (inch-pounds)—Includes Worm Bearing Pre-Load and Sector Shaft Gear Mesh .....	20-27 pull through center	25-32

**POWER STEERING GEAR**

Truck Model Designation	D100, D200, D300 *	D400, D500, D600, D700, S400, S500	D500, D600, D700, D800, S500, S600
Front Axle Capacity (Pounds).	2500—D100 2800—D200 3800—D300	4000—D400, S400 5000—D600, D700, D500 S500 Extra Eq. 5000— D400, S400	7000
Steering Gear Chuck-Model ...	525D	Y4D-335	Y5D-375
Type .....	Cyl. Integral with Tie Rod	Cyl. Integral with Tie Rod	Cyl. Integral with Tie Rod
Arm Length (Inches) .....	D100-D200—7.50 D300—8.25 1.75—D100, D200	7.44	
Cylinder Diameter (Inches) ..	1.625—D300	1.625	2.38
Stroke (Inches) .....	D100, D200—5.00 D300—9.75"	9.54	9.54
Control Valve .....	On Drag Link	On Drag Link	On Drag Link

\*Power Steering Available with 8 Cylinder Engine Only.

**POWER STEERING GEAR**

Truck Model Designation	D700
Front Axle Capacity (Pounds) .....	9000
Steering Gear Chuck-Model .....	6D-400 Slim Line
Type .....	Worm and Roller (Stub Shaft)
Arm Length (Inches) .....	8.18

**POWER STEERING GEAR (Con't.)**

Truck Model Designation	D700
Cylinder Diameter (Inches) .....	2.38
Stroke (Inches) .....	9.54
Control Valve .....	On Drag Link

**POWER STEERING PUMP**

Pump Type .....	Constant Displacement
Fluid Capacity of System .....	2-1/4 Quarts (1-3/4 Quarts Imperial Measure)
Maximum Fluid at 1200 rpm .....	3.25 to 4.1 Gallons Per Minute
Maximum Pump Pressure .....	900 to 1000 psi
Type of Fluid .....	Power Steering Fluid
	Part No. 2084329 or equivalent

**TRANSMISSION**

Truck Model Designation	D100, D200, W100, W200, P200		P300 (Std. Equip.)	WM300	D300, D400, P400, S400, D500, S500, D600, S600, PD500, PD600 *W300, *W500 (Std. Equipment)	D100, D200, D300 P200, P300 W100, W200 (Extra Equip.)
	Type .....	Synchro-Shift		Synchro-Shift	4-Speed Dual P.T.O.	4-Speed Single P.T.O.
Model .....	745	T87E		#420	435	435D
No. of Forward Speeds .....	3	3		4	4	4
Ratios in Transmission						
4th .....				1.00-1	1.00-1	1.00-1
3rd .....	1.00-1	1.00-1		1.69-1	1.66-1	1.31-1
2nd .....	1.76-1	1.871-1		3.10-1	3.34-1	2.28-1
1st .....	3.02-1	3.714-1		6.68-1	6.68-1	4.56-1
Reverse .....	3.95-1	4.588-1		8.25-1	8.25-1	5.65-1
Power Take-off Location .....				Both Sides	Right Side	Right Side
Type .....				6 Stud (S.A.E.)	6 Stud (S.A.E.)	6 Stud (S.A.E.)
Shift Lever .....	Steering Column	Steering Column		On Trans.	On Trans.	On Trans.
Lubricant Capacity (Pts.) (U.S.)..	3.25	6		5.5	7	7
Imp. Measure (Pts.) .....	2-3/4	5		4-1/2	5-3/4	5-3/4

Truck Model Designation	D400, S400, D500, S500, D600, D700 PD500, PD600 (Extra Equip.)		D700 D500, D600 (Extra Equip.)	D800 (Std. Equip.) D700 (Extra Equip.)	D700, D800 (Extra Equip.)	D700, D800 (Extra Equip.)
	Type .....	5-Speed		5-Speed	5-Speed	5-Speed
Model .....	Dual P.T.O.		Dual P.T.O.	Dual P.T.O.	Dual P.T.O.	Dual P.T.O.
No. of Forward Speeds .....	#540		540 Short 4th.	541	541 Short 4th.	#5652A
Ratios in Transmission						
5th .....	1.00-1	1.00-1		1.00-1	1.00-1	1.00-1
4th .....	1.48-1	1.16-1		1.59-1	1.17-1	1.62-1
3rd .....	2.40-1	1.84-1		2.61-1	1.86-1	2.72-1
2nd .....	4.05-1	3.31-1		4.33-1	3.30-1	4.37-1
1st .....	7.41-1	6.06-1		7.24-1	6.16-1	7.08-1
Reverse .....	7.85-1	6.42-1		7.22-1	6.13-1	7.50-1
Power Take-off Location .....	Both Sides		Both Sides	Both Sides	Both Sides	Both Sides
Type .....	6 Stud (S.A.E.)		6 Stud (S.A.E.)	6 Stud (S.A.E.)	6 Stud (S.A.E.)	6 Stud (S.A.E.)
Shift Lever .....	On Trans.		On Trans.	On Trans.	On Trans.	On Trans.
Lubricant Capacity (Pts.) (U.S.)..	9.5	9.5		9.5	9.5	13
Imp. Measure (Pts.) .....	8	8		8	8	10-3/4

**TRANSFER CASE**

Truck Model Designation	W100, W200, W300	Canadian Models	WM300	W500
Model .....	95060	91000	39360	T223-E
No. of Speeds .....	2	2	2	2
Ratio				
High .....	1-1	1-1	1-1	1-1
Low .....	1.96-1	1.96-1	1.96-1	1.94-1
Lubricant Capacity (Pts.) (U.S.)..	4.5		5	4
Imp. Measure (Pts.) .....	3-3/4	5-1/2	4-1/4	3-1/4

**POWER TAKE-OFF**

Truck Model Designation	WM300	W500	W100, 200, 300
Model .....	12546	12570	FTD7
Speed			
Rotation with Engine .....	61.5%	58.3%	
Rotation opp. Engine .....	47.5%	45.2%	
Location			
On Transmission .....	On Transfer Case	On Transmission	On Transfer Case
Lubrication .....	From Transmission	From Transmission	From Transfer Case

\*Dual P.T.O.

**LOADFLITE TRANSMISSION**

TYPE .....	3-Speed, Fully Automatic
MODEL .....	A-727-A and B)
TORQUE CONVERTER DIAMETER .....	11-3/4 inches
OIL CAPACITY OF TRANSMISSION AND TORQUE CONVERTER (Dry Fill) ..	18-1/2 pts.
	(Imp. Meas. 15-1/4 pts.)
	Automatic Transmission
	Fluid AQ-ATF Suffix "A"
	Water
METHOD OF COOLING .....	Pump (Rotor Type)
LUBRICATION .....	
CLUTCHES	
Number of Front Clutch Plates .....	4
Number of Front Clutch Discs .....	4
Number of Rear Clutch Plates .....	3
Number of Rear Clutch Discs .....	4
GEAR RATIOS	
1—Low .....	2.45 to 1
2—Second .....	1.45 to 1
D—Drive .....	1 to 1
R—Reverse .....	2.20 to 1
N—Neutral .....	—
PUMP	
Type .....	Gear (Rotary)
End Clearance (Rotor) .....	.0015 to .0030 inch
DRIVE TRAIN END PLAY .....	.036 to .084 inch
CLUTCH PLATE CLEARANCE	
Front Clutch .....	.024 to .123 inch
Rear Clutch .....	.037 to .060 inch
SNAP RINGS	
Front and Rear Clutches	
Rear Snap Ring (Selective) .....	.060 to .062 inch
	.074 to .076 inch
	.088 to .090 inch
Output Shaft (Forward End) .....	.048 to .052 inch
	.055 to .059 inch
	.062 to .066 inch
THRUST WASHERS	
Reaction Shaft Support to Front Clutch Retainer (Selective) .....	.061 to .063 inch (Green)
	.084 to .086 inch (Red)
	.102 to .104 inch (Yellow)

**LOADFLITE TRANSMISSION (Con't.)**

Output Shaft to Input Shaft .....	.062 to .064 inch
Driving Shell Thrust Plate—Steel (1) .....	.034 to .036 inch
Rear Planetary Gear to Driving Shell .....	.062 to .064 inch
Front Planetary Gear to Annulus Gear .....	.062 to .064 inch
Front Annulus Gear to Driving Shell .....	.062 to .064 inch
Front Clutch to Rear Clutch .....	.061 to .063 inch
Rear Planetary Gear to Annulus Gear .....	.034 to .036 inch

**WHEELS**

Truck Model Designation	D200 and W100		D300, W300	WM300	D400, S400 and P400
	D100	P200, W200	P300		
Wheels—Type .....	Disc.	Disc.	Disc.	Disc.	Disc.
No. of Studs .....	5	8	6	5	5
Bolt Circle (Diameter) .....	4-1/2 in.	6-1/2 in.	7-1/4 in.	6-7/8 in.	8 in.

Truck Model Designation	PD500, D500, S500, and W500	PD600, D600, S600	D700
	Wheels—Type .....	Disc. (Std. Equip.) Cast Spoke (Extra Equip.)	Disc. (Std. Equip.) Cast Spoke (Extra Equip.)
No. of Studs .....	6	6 (Std. Equip.) 10	
Bolt Circle (Diameter) .....	8-3/4 in.	8-3/4 in.	8-3/4 in.