



VOL. 5, SUPPLEMENT No. 1

JULY 1, 1931

STANDARD SIZES AND ADJUSTMENTS

Name	726-733	740-745	826-833	840-845	901-902	903-904
BRAKE—FRONT						
Clearance around drum	Free	Free	Free	Free	Free	Free
Length of Lining	Prim. 14" Sec. 17 ⁷ / ₃₂ "	Prim. 14" Sec. 17 ⁷ / ₃₂ "	Prim. 14" Sec. 17 ⁷ / ₃₂ "	Prim. 14" Sec. 17 ⁷ / ₃₂ "	Prim. 14" Sec. 17 ⁷ / ₃₂ "	Prim. 14" Sec. 17 ⁷ / ₃₂ "
Width and Thickness	1 ³ / ₄ " x ³ / ₁₆ "	2" x ³ / ₁₆ "	1 ³ / ₄ " x ³ / ₁₆ "	2" x ³ / ₁₆ "	1 ³ / ₄ " x ³ / ₁₆ "	2" x ³ / ₁₆ "
No. per Vehicle	Prim. 4 Sec. 2	Prim. 4 Sec. 2	Prim. 4 Sec. 2	Prim. 4 Sec. 2	Prim. 4 Sec. 2	Prim. 4 Sec. 2
BRAKE—HAND						
Clearance around drum	Free					
Wheels locked against turning	Fifth Notch					
Setting Bands Concentric	Inherent	Inherent	Inherent	Inherent	Inherent	Inherent
Length of Lining	Prim. 14" Sec. 17 ⁷ / ₃₂ "	Prim. 14" Sec. 17 ⁷ / ₃₂ "	Prim. 14" Sec. 17 ⁷ / ₃₂ "	Prim. 14" Sec. 17 ⁷ / ₃₂ "	Prim. 14" Sec. 17 ⁷ / ₃₂ "	Prim. 14" Sec. 17 ⁷ / ₃₂ "
Width and Thickness	1 ³ / ₄ " x ³ / ₁₆ "	2" x ³ / ₁₆ "	1 ³ / ₄ " x ³ / ₁₆ "	2" x ³ / ₁₆ "	1 ³ / ₄ " x ³ / ₁₆ "	2" x ³ / ₁₆ "
No. per Vehicle	Prim. 4 Sec. 2	Prim. 4 Sec. 2	Prim. 4 Sec. 2	Prim. 4 Sec. 2	Prim. 4 Sec. 2	Prim. 4 Sec. 2
BRAKE—REAR						
Clearance around Drum—Minimum	Free	Free	Free	Free	Free	Free
Length of Lining	Prim. 14" Sec. 17 ⁷ / ₃₂ "	Prim. 14" Sec. 17 ⁷ / ₃₂ "	Prim. 14" Sec. 17 ⁷ / ₃₂ "	Prim. 14" Sec. 17 ⁷ / ₃₂ "	Prim. 14" Sec. 17 ⁷ / ₃₂ "	Prim. 14" Sec. 17 ⁷ / ₃₂ "
Width and Thickness	1 ³ / ₄ " x ³ / ₁₆ "	2" x ³ / ₁₆ "	1 ³ / ₄ " x ³ / ₁₆ "	2" x ³ / ₁₆ "	1 ³ / ₄ " x ³ / ₁₆ "	2" x ³ / ₁₆ "
No. per Vehicle	Prim. 4 Sec. 2	Prim. 4 Sec. 2	Prim. 4 Sec. 2	Prim. 4 Sec. 2	Prim. 4 Sec. 2	Prim. 4 Sec. 2
CLUTCH						
No. of Driving Plates	1	2	1	2	1	2
Clearance Plates on Keys—Minimum	Clearance Splined Hub on Clutch Shaft No Perceptible Back Lash	Clearance Splined Hub on Clutch Shaft No Perceptible Back Lash	Clearance Splined Hub on Clutch Shaft No Perceptible Back Lash	Clearance Splined Hub on Clutch Shaft No Perceptible Back Lash	Clearance Splined Hub on Clutch Shaft No Perceptible Back Lash	Clearance Splined Hub on Clutch Shaft No Perceptible Back Lash
Tension of Clutch	12 springs 125 lbs. at 1 ⁵ / ₈ "	12 springs 115 lbs. at 1 ⁵ / ₈ "	12 springs 125 lbs. at 1 ⁵ / ₈ "	12 springs 115 lbs. at 1 ⁵ / ₈ "	12 springs 125 lbs. at 1 ⁵ / ₈ "	12 springs 115 lbs. at 1 ⁵ / ₈ "
Clutch Pedal to Floorboard Minimum Clearance—Clutch Engaged	1"					

NOTE

Information which has previously been issued in Part Two of the Service Manual will be revised and issued in the form of Service Letter Supplements. Be sure and retain these Supplements, as they will make a valuable file for future reference.

STANDARD SIZES AND ADJUSTMENTS—Continued

Name	726-733	740-745	826-833	840-845	901-902	903-904
COOLING SYSTEM						
Capacity	5 gals.	6 1/4—740 6 1/2—745	5 gals.	6 1/4	5 gals.	6 1/2 gals.
Gravity Flow of Water Through Radiator per Min.	29 gals.	29 gals.	22 gals.	24 gals.	24 gals.	26 gals.
Clearance Fan to Radiator core	3/4"	3/4"	3/4"	3/4"	1/2" at bottom	1/2" at bottom
Thermostat Temp. at which Valve Should Open	Motor thermostat not used		Radiator shutter thermostat starts to open at 155 F.°			
Clearance Thermostat Valve to Seat	Motor thermostat not used					
Fan Belt	45 degree Vee Type					
Length Fan Belt	39 3/8"	39 3/8"	39 3/8"	39 3/8"	39 3/8"	39 3/8"
Adjustment	Total Deflection Midway between Pulleys not Exceed 1 1/8"	Total Deflection Midway between Pulleys not Exceed 1 1/8"	Total Deflection Midway between Pulleys not Exceed 1 1/8"	Total Deflection Midway between Pulleys not Exceed 1 1/8"	Total Deflection Midway between Pulleys not Exceed 1 1/8"	Total Deflection Midway between Pulleys not Exceed 1 1/8"
Range of Belt Adjustment	3/4"					
GASOLINE SYSTEM						
Tank Capacity—Gals.	25	25-28	25	25	25	25
Carburetor Auxiliary Air Valve Adjustment	Does not apply to new type Carburetor		Does not apply to new type Carburetor		Does not apply to new type Carburetor	
Interval Between Compressing Upper and Lower Springs	Does not apply to new type Carburetor		Does not apply to new type Carburetor		Does not apply to new type Carburetor	
Level of Gas in Float Chamber Below Top of Jet or Idling Well	Does not apply to new type Carburetor		Does not apply to new type Carburetor		Does not apply to new type Carburetor	
Diameter Open. of Spray Tube	Does not apply to new type Carburetor		Does not apply to new type Carburetor		Does not apply to new type Carburetor	
Inside Diameter of Inlet Manifold at Flange	1 1/8"	2 1/8"	1 1/8"	2 1/8"	1 1/8"	2 1/8"
ELECTRICAL SYSTEM						
Generator Charging Rate	9-11 Amperes					
Battery Capacity—Ampere Hours	140 Amp. Hrs. 6-7 Volt	160 Amp. Hrs. 6-7 Volt	160 Amp. Hrs. 6-7 Volt	160 Amp. Hrs. 6-7 Volt	160 Amp. Hrs. 6-7 Volt	160 Amp. Hrs. 6-7 Volt
Lamp Bulbs, Bayonet Lock Type, Headlight	Up. Filament 21 C. P. Low. Filament 21 C. P. Double Contact	Up. Filament 21 C. P. Low. Filament 21 C. P. Double Contact	Up. Filament 21 C. P. Low. Filament 21 C. P. Double Contact	Up. Filament 21 C. P. Low. Filament 21 C. P. Double Contact	Up. Filament 32 C. P. Low. Filament 32 C. P. Double Contact	Up. Filament 32 C. P. Low. Filament 32 C. P. Double Contact
Dimmer or Auxiliary	3 C. P.	None	3 C. P.	None	3 C. P.	None
Instrument Light and Side Light	3 C. P.	3 C. P.	3 C. P.	3 C. P.	3 C. P.	3 C. P.
Stop Light	21 C. P.	21 C. P.	21 C. P.	21 C. P.	21 C. P.	21 C. P.
Tail Light	3 C. P.	3 C. P.	3 C. P.	3 C. P.	3 C. P.	3 C. P.
Backing Light	21 C. P.	21 C. P.	21 C. P.	21 C. P.	None	None
Tonneau Light	3 C. P.	3 C. P.	3 C. P.	3 C. P.	3 C. P.	3 C. P.
Dome Light	6 C. P.	6 C. P.	6 C. P.	6 C. P.	6 C. P.	6 C. P.
Fender, Cowl or Courtesy Lamp		3 C. P.		3 C. P.	3 C. P.	3 C. P.
Spark Timing	Full Advance Occurs 3/4" of Flywheel Travel Before T. D. C.	Full Advance Occurs 3/4" of Flywheel Travel Before T. D. C.	Full Advance Occurs 3/4" of Flywheel Travel Before T. D. C.	Full Advance Occurs 3/4" of Flywheel Travel Before T. D. C.	Retard occurs 12° B. T. D. C.	Retard occurs 4° B. T. D. C.
Breaker Point Gap	.015—.020	.015—.020	.015—.020	.015—.020	.015—.020	.015—.020
Spark Plug Gap	.025	.025	.025	.025	.025	.025
MOTOR						
Compression	84-87 Lbs.	84-87 Lbs.	84-87 Lbs.	84-87 Lbs.	95-100 Lbs.	95-100 Lbs.
Firing Order	1-6-2-5-8-3-7-4	1-6-2-5-8-3-7-4	1-6-2-5-8-3-7-4	1-6-2-5-8-3-7-4	1-6-2-5-8-3-7-4	1-6-2-5-8-3-7-4
Front End Chain 1 1/2" Wide, 1/2" Pitch, No. of Links	64	64	64	64	64	64
Adjustment of Front End Chain. Tech. Letters 1460-1598	Downward Deflection Midway Between Sprockets not to exceed 1/4"					
Camshaft End Thrust	.002—.005					
Clearance to Bearings	Minimum .001					
Clearance Piston Pin Bushing to Pin—Minimum	Palm Push Fit—Piston heated to 160° in water					

STANDARD SIZES AND ADJUSTMENTS—Continued

NAME	726-733	740-745	826-833	840-845	901-902	903-904
MOTOR—Cont.						
Clearance Bearing to Crankpin	Minimum .0005					
End Play Connecting Rod on Crankshaft	Minimum .003					
End Play Connecting Rod on Piston Pin—Nominal	One-eighth of an inch					
Diameter of Crankpins	2.1875	2.1875	2.1875	2.1875	2.1875	2.1875
Clearance on All Main Bearings	Minimum—One thousandth of an Inch					
End Play Crankshaft on Main Thrust Bearing	Minimum—Three thousandths of an Inch					
Diameter of Main Journals	2.625	2.625	2.625	2.625	2.625	2.625
Diameter Cylinder Bore—Standard	3 $\frac{1}{16}$ "	3 $\frac{1}{2}$ "	3 $\frac{1}{8}$ "	3 $\frac{1}{2}$ "	3 $\frac{1}{8}$ "	3 $\frac{1}{2}$ "
Reground Oversizes	Fifteen, Thirty and Forty-Five Thousandths Over Standard					
Diameter of Piston Pins	$\frac{7}{8}$ "	$\frac{7}{8}$ "	$\frac{7}{8}$ "	$\frac{7}{8}$ "	$\frac{7}{8}$ "	$\frac{7}{8}$ "
Oversizes	Three and Six Thousandths Over Standard					
Piston Pin Offset in Piston	0	0	0	0	0	0
Install in Motor	Slots Opposite from Valves	Slots Opposite from Valves	Slots Opposite from Valves	Slots Opposite from Valves	Slots on Valve side	Slots on Valve side
Width of Ring Groove	$\frac{1}{8}$ "				Comp. $\frac{1}{8}$ " Oil $\frac{3}{32}$ "	Comp. $\frac{1}{8}$ " Oil $\frac{3}{32}$ "
Depth of Ring Groove	.145	.145	.145	.145	.157	.157
Clearance Piston Skirt to Cylinder Wall	Minimum; Alloy—.0015"	Minimum; Alloy—.0015"	Minimum; Alloy—.0015"	Minimum; Alloy—.0015"	Minimum; Alloy—.0015"	Minimum; Alloy—.0015"
Piston Ring Gap Compressed to Cylinder Diameter	Ten-thousandths—Minimum				Seven-thousandths—Minimum	
Pressure Required to Close Ring to Correct Gap	6-9 Lbs.	4-7 Lbs.	6-9 Lbs.	6-9 Lbs.	Comp. 6 $\frac{1}{4}$ Lbs. Min. Oil 4 $\frac{1}{2}$ -7 $\frac{1}{2}$ Lbs.	Comp. 6 $\frac{3}{4}$ Lbs. Min. Oil 4 $\frac{1}{2}$ -7 $\frac{1}{2}$ Lbs.
Piston Sizes	Standard .003 .005 .010 .015 .020 .030 .045 over	Standard .003 .005 .010 .015 .020 .030 .045 over	Standard .003 .005 .010 .015 .020 .030 .045 over	Standard .003 .005 .010 .015 .020 .030 .045 over	Standard .003 .005 .010 .015 .020 .030 .045 over	Standard .003 .005 .010 .015 .020 .030 .045 over
Clearance to Push Rods—Motor Warm	Four-thousandths of an inch					
Width of Contact at Valve Seat	Eight Hundred Eighty-Three Ten-thousandths of an Inch					
Clearance Between Valve Stem and Guide	Inlet—Minimum—Two and one-half thousandths of an Inch Outlet—Minimum—Four and one-half thousandths of an Inch					
Tension of Valve Springs	43 Lbs. at 3 $\frac{1}{16}$ "	43 Lbs. at 3 $\frac{1}{16}$ "	43 Lbs. at 3 $\frac{1}{16}$ "	43 Lbs. at 3 $\frac{1}{16}$ "	73 Lbs. at 3 $\frac{1}{16}$ "	73 Lbs. at 3 $\frac{1}{16}$ "
Oil Pump Pressure at 1000 R. P. M.	Minimum—35 Lbs.					
Crankcase Oil Capacity	8 qts.	10 qts.	8 qts.	10 qts.	8 qts.	10 qts.
Rod Clearance to Surface of Oil in Crankcase	1 $\frac{1}{16}$ "	1 $\frac{1}{16}$ "	1 $\frac{1}{16}$ "	1 $\frac{1}{16}$ "	1 $\frac{1}{16}$ "	1 $\frac{1}{16}$ "
Valve Timing	00's on Crankshaft and Camshaft Sprockets Should be Nearest together and Line up on Each Side of Center					
REAR AXLE						
Oil Capacity	4 $\frac{1}{2}$ Qts.	5 Qts.	3 Qts.	3 $\frac{1}{2}$ Qts.	3 Qts.	3 $\frac{1}{2}$ Qts.
Back Lash Between Driving Ring Gear and Pinion—Minimum	.004					

STANDARD SIZES AND ADJUSTMENTS—Continued

NAME	726-733		740-745		826-833		840-845		901-902		903-904	
SPRINGS												
Front Springs Nominal Cap. in Lbs. When in Normal Position	Rt. 950 Lbs. Lt. 850 Lbs.		Rt. 1050 Lbs. Lt. 950 Lbs.		Rt. 950 Lbs. Lt. 850 Lbs.		Rt. 1050 Lbs. Lt. 950 Lbs.		Rt. 950 Lbs. Lt. 850 Lbs.		Rt. 1050 Lbs. Lt. 950 Lbs.	
Rear Springs Nominal Capacity in Pounds When in Normal Position	Body Type	Lbs. Spring	Body Type	Lbs. Spring	Body Type	Lbs. Spring	Body Type	Lbs. Spring	Body Type	Lbs. Spring	Body Type	Lbs. Spring
	400	1000	410	1200	460	1000	470	1200	500	1000	510	1200
	401	1000	411	1100	461	1000	471	1100	501	1000	511	1100
	402	1000	412	1100	462	1000	472	1100	503	1200	513	1300
	403	1200	414	1400	463	1200	476	1300	504	1300	514	1400
	404	1300	415	1400	464	1300	477	1200	505	1300	515	1400
	405	1300	416	1300	465	1300	478	1200	506	1200	516	1300
	406	1200	417	1200	466	1200	479	1200	507	1100	517	1200
	407	1100	418	1200	467	1100	473	1300	508	1100	518	1200
	408	1100	419	1200	468	1100	474	1400	509	1100	519	1200
	409	1100	420	1200	469	1100	475	1400	521	1000	531	1100
	431	1000	421	1200	481	1000	491	1100	523	1100	533	1200
			422	1100					527	1100	537	1200
			423	1300					543	1200		
			424	1400								
			425	1400								
			426	1300								
			451	1200								
		439	1200									
		427	1200									
		428	1200									
		429	1300									
		441	1100									
Clearance Spring Bushing to Pin	.002											
STEERING												
Front Wheel Camber	1° 30'		1° 30'		1° 30'		1° 30'		1° 30'		1° 30'	
Front Wheel Toe-In	1/8"		1/8"		1/8"		1/8"		1/8"		1/8"	
Castor	1°		1°		1°		1°		1°		1°	
Adjust Knuckle Stop	Adjust to 4 1/2" Clearance Spring to Wheel Rim											
Minimum Turning Radius	726—22' 9" 733—24'		740—24' 6" 745—26' 9"		826—24' 6" 833—25' 9"		840—27" 845—27' 5"		901—23" 902—24' 3"		903—26" 904—26' 9"	
Taper Roller Bearing Adjustment for Front Wheel	Tighten Nut as Tight as Possible then Back Off 1/2 Turn or More and Lock											
Recommended Tire Pressure	Front—40 Lbs. Rear—40 Lbs.		Front—40 Lbs. Rear—40 Lbs.		Front—40 Lbs. Rear—40 Lbs.		Front—40 Lbs. Rear—40 Lbs.		Front—40 Lbs. Rear—40 Lbs.		Front—40 Lbs. Rear—40 Lbs.	
Stabilator Adjustment	Not Used		Not Used		Not Used		Not Used		Not Used		Not Used	
Shock Absorber Adjustment	Bottom and Back Off 1 1/2 Turns		Bottom and Back Off 1 1/2 Turns		Front Rebound Valve—3G Rear Rebound Valve—3J Front Compression Valve—G4 Rear Compression Valve—G2		Front Rebound Valve—3G Rear Rebound Valve—3J Front Compression Valve—G4 Rear Compression Valve—G2		Front Rebound Valve—1C Rear Rebound Valve—5G Front Comp. Valve—G4 Rear Comp. Valve—G2		Front Rebound Valve—1C Rear Rebound Valve—5G Front Comp. Valve—G4 Rear Comp. Valve—G2	
Balancing Wheels	Wheels Equipped with Balloon Tires Should be in Static Balance											
TRANSMISSION												
Oil Capacity	2 Quarts											
Ratio to Rear Wheels in Direct Drive	Optional 4.38 4.69 4.69 5.08		Optional 4.07 4.38 4.69		4.38 4.69 5.08 4.07		4.38 4.69 5.08 4.07		4.41-1 4.69-1 5.07-1		4.06-1 4.41-1 4.69-1 5.07-1	
In Third	5.73 6.13 6.13 6.64		5.33 5.73 6.13		6.07 6.48 7.04 5.64		6.07 6.48 7.04 5.64		6.10-1 6.5-1 7.04-1		5.64-1 6.10-1 6.5-1 7.04-1	
In Second	8.83 9.41 9.41 10.02		8.19 8.83 9.41		8.08 8.63 9.37 7.5		8.08 8.63 9.37 7.5		8.11-1 8.65-1 9.37-1		7.5-1 8.11-1 8.65-1 9.37-1	
In First	15.00 16.00 16.00 17.35		13.95 15.00 16.00		13.77 14.7 16.00 12.8		13.77 14.7 16.00 12.8		13.80-1 14.74-1 16.0-1		12.8-1 13.80-1 14.74-1 16.00-1	
In Reverse	12.40 12.94 12.94 13.05		11.25 12.40 12.94		11.12 11.9 12.86 10.33		11.12 11.9 12.86 10.33		11.15-1 11.9-1 12.86-1		10.3-1 11.15-1 11.9-1 12.86-1	
Back Lash Between Gears Not Always in Mesh—Minimum	.004											
UNIVERSAL JOINT												
Assembling Universal Joints	Arrows on Shaft and Universal Joint Sleeve must be in line											