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Shop Tips FROM FORD

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Technical parts and service information published by Ford Division to assist servicemen in Service Stations, Independent Garages and Fleets.

Be sure to file this and future bulletins for ready reference. If you have any suggestions for additional information that you would like to see included in this publication please write to: Ford Division of Ford Motor Company, Parts and Service Promotion and Training Dept., P.O. Box 658, Dearborn, Michigan, 48121.

FoMoCo GENUINE PARTS

ROTUNDA

From Your Ford Dealer

Distributed By

BILL BOYER FORD

MPLS., MINN. FE. 2-7571

Representative

1965 ECONOLINE and FALCON

VEHICLE IDENTIFICATION

The vehicle warranty number and other important identifying information is stamped on the warranty plate which is attached to the rear face of the left front door lock panel. The official Vehicle Identification Number for title and registration purposes is stamped on the body.

GENERAL DIMENSIONS

Wheelbase	90 inches
Tread:	
Front	60 inches
Rear	60.2 inches
Over-all Length:	
Pickup	164.1 inches
Van or Bus	167.5 inches
Over-all Width:	
Pickup	75.00 inches
Van or Bus	75.80 inches

APPROXIMATE REFILL CAPACITIES

	U.S. Measure	Imperial Measure
Fuel Tank	14 gallons	11½ gallons
Cooling System	9½ quarts	8* quarts
Engine Crankcase	4½† quarts**	3¾† quarts
Transmission:		
3-Speed Manual	3.5 pints	2½ pints
Automatic 170	7 qts. 28 oz.	6 quarts
Automatic 240	10 qts. 10.5 oz.	8¾ quarts
Rear Axle—Std.	2½ pints	2 pints
HD	4¼ pints	3½ pints

*Includes 1.0 quart for heater.
†Includes 1 quart extra required for filter replacement.
**5 quarts required on 240 CID.

ENGINES

Bore (Inches)		
170 CID		3.50
240 CID		4.00
Stroke (Inches)		
170 CID		2.94
240 CID		3.18
Taxable (SAE Horsepower)		
170 CID		29.4
240 CID		38.4
Maximum Brake Horsepower		
170 CID		105 @ 4400 rpm
240 CID		150 @ 4000 rpm
Maximum Gross Torque (Foot-Pounds)		
170 CID		158 @ 2400 rpm
240 CID		234 @ 2200 rpm
Ignition Timing	Std. Trans.	Auto. Trans.
170 CID	4°	8°
240 CID	6°	10°

CLUB WAGON SPECIFICATIONS

FUSES AND CIRCUIT BREAKERS

	Location	Fuse Number
Cigar Lighter	Cartridge in Feed Wire	SFE-14
Headlamps	Lights Switch	Circuit Breaker
Heater Fan	Fuse Panel	SFE-14
Instrument Panel Lamp Rheostat	Cartridge in Feed Wire	1 AG-1 or AGA-1
Radio (Manual	Fuse Panel	SFE-7.5
Rear, Parking and Dome Lamps	Fuse Panel	AGC-15
Spot Lamp	Cartridge in Feed Wire	SFE-7.5
Turn Indicator	Fuse Panel	AGC-14
Windshield Wiper Motor	Integral with Switch	Circuit Breaker

LIGHTS (12 VOLTS)

	Lamp Wattage or Candle Power	Lamp Number
Alternator Indicator	2 c	1895
Headlight	50-40 watts	6012
High Beam Indicator	1.5 c	1445
Interior	15 c	1003
Interior Turn Signal	2 c	1895
Oil Pressure Indicator	2 c	1895
Parking and Front Turn Indicator	4-32 c	1157
Radio Dial	2 c	1895
Rear License Plate	4 c	1155
Speedometer and Odometer	2 c	1895
Spotlight	30 watt	4405
Stop, Tail, and Rear Turn Indicator	4-32 c	1157

TUBELESS TIRE PRESSURES (COLD)

Tire Size	Pounds Front	Pounds Rear
6.50 x 13-4PR*	28	28
6.95 x 14-4PR*	28	28
6.95 x 14-8PR*	36	36
7.35 x 14-8PR*	44	44
7.00 x 14-8PR TT†	45	45

*Passenger Type †Truck Type

LOAD CAPACITIES

Maximum Payload Capacity (Van—Pickup)

Wagon & Bus	1400 Pounds
Van	1650 Pounds
Pickup	1660 Pounds
Van with H.D. GVW Pkg.	2100 Pounds
Pickup with H.D. GVW Pkg.	2125 Pounds

Maximum Gross Vehicle Weight (Van—Pickup)

Choice	3600, 4350 Pounds
With H.D. GVW Package	4930 Pounds

LOAD VOLUME CAPACITY

Wagon and Bus—204 cubic feet without rear compartment seats
Van—204 cubic feet | Pickup—73 cubic feet

LUBRICANT SPECIFICATIONS

ITEM	PART NUMBER	PART NAME
Body Hinges	C4AZ-19584-A	Lifetime Body Grease
Brake Master Cylinder	B7AZ-19542-A	Rotunda Heavy Duty Brake Fluid
Frt. Susp. Ball Joints and Steering Linkage	C1AZ-19590-B	FoMoCo Ball Joint Grease
Front Wheel Bearings	C2AZ-19585-A	FoMoCo Wheel Brg. Grease
Hood Latch & Safety Catch	C4AZ-19584-A	Lifetime Body Grease
Lock Cylinders	B4A-19587-A	Rotunda Lock Lubricant
Rear Axle	C1AZ-19580-E or F	FoMoCo Hypoid Gear Lube
Equa-Lock Axles (use 1 oz. per pint of C1AZ-19580-E or F)	C1AA-19B546-A	Equa-Lock additive
Steering Gear Housing	C3AZ-19578-A	Lifetime Steering Gear Grease
Transmission (Automatic)	C1AZ-19582-A	Rotunda Auto. Trans. Fluid
Transmission (Manual Shift)	C3RZ-19C547-B	Rotunda Manual Trans. Lube
Universal Joints	C1AZ-19586-B	FoMoCo Universal Lube
Engine Crankcase Oil		MS Sequence tested SAE 10W-30 above —10F SAE 5W-20 for sustained temperatures below —10F
Engine Oil Filter	C1AZ-6731-A	Rotunda Oil Filter 6,000 mile type
Exhaust Heat Control Valve	C0AA-19A501-A	Door Penetrating Lubricant

1965 FORD TRUCK

ENGINES

	170 CID	240 CID	300 CID	352 CID
Bore (inches)	3.500	4.00	4.00	4.00
Stroke (inches)	2.94	3.18	3.98	3.50
Taxable (SAE) Horsepower	29.4	32.5	38.4	51.2
Brake Horsepower at RPM	105 @ 4400	150 @ 4000	170 @ 3600	208 @ 4400
Foot Pound at RPM	158 @ 2400	234 @ 2200	283 @ 2400	315 @ 2400
Compression Ratio	9.1:1	9.2:1	8.4:1	8.9:1
Compression Pressure (psi at cranking speed)	155-195	155-195	150-200	160-200
Idle Speed (rpm at neutral) Std. Trans.	575-600	500-525	500-525	575-600
Auto. Trans.		474-525		475-500
Oil Pressure—Hot (psi @ 2000 rpm)	35-55	35-55	35-55	35-55
Cylinder Firing Order	1-5-3-6-2-4	1-5-3-6-2-4	1-5-3-6-2-4	1-5-4-2-6-3-7-8
Spark Plug Replacement Ford Part Number	B7A-12405-B	B7A-12405-A	B9T-12405-A	B8A-12405-A
Spark Gap Width	0.032"-0.036"	0.032"-0.036"	0.030"	0.032"-0.036"
Distributor Point Gap	0.024"-0.026"	0.024"-0.026"	0.024"-0.026"	0.014"-0.016"
Ignition Timing Std. Trans.	4°	6°	6°	6°
Auto. Trans.	—	12°	10°	6°

*Ignition timing requirements may vary depending upon locality, fuel, and operating conditions. For best economy and performance, the timing may be advanced to a point just short of audible detonation under load but not to exceed 5 over normal setting. Do not retard the initial advance beyond 2 for sub-standard fuels.

FUEL TANK CAPACITIES

Tank Type	Truck Model	Approximate Capacity U.S. Gallons	Approximate Capacity Imperial Gallons
Standard	F-Series (cab models)	18	15
Optional (mounted outside of frame)	P-Series Chassis F-250, F-350 Series (cowl or windshield models)	17	14
	P-400, P-500 and P-350	30	25

REAR AXLE LUBRICANT CAPACITIES

Rear Axle Model	Truck Model	Approximate Capacity (pints)
Ford 3300	F-100, P-100	5
Spicer-Dana 44	F-100	4½
Spicer-Dana 2414 (front axle)	4-Wheel Drive (F-100, F-250)	3½*
Spicer-Dana 60 (60-2)	F-250, P-350, P-3500	6
Spicer-Dana 70	F-350, P-350, P-3500 P-400, P-4000	5
Rockwell C-100-N	P-500, P-5000	15
Rockwell D-100-N	P-500	15

*Add ½ pint for each steering knuckle.

ENGINE COOLING SYSTEM REFILL CAPACITIES

Engine	Truck Model	Approximate Capacity (quarts)* U. S. Measure	Approximate Capacity (quarts)* Imperial Measure
170 CID Six	P-100	17.7	9
240 CID Six	F-100, F-250	14.0	12
300 CID Six	P-350, P-400, P-500 F-350 (dual rear wheels)	17.0	14
352 CID V-8	F-100-350	27	21

*Add 1 quart for trucks equipped with heater.

TRANSMISSION REFILL CAPACITIES

Transmission Type and Make	Approximate Capacity (pints) U. S. Measure	Approximate Capacity (pints) Imperial Measure
3-Speed (Ford)	3½	2¾
3-Speed With Overdrive (Warner T-85-N)	3¼	2½
3-Speed Medium Duty (Warner T-89-C)	3⅓	2¾
3-Speed Heavy Duty (Warner T-87-E)	5½	4½
4-Speed (Warner T-98-A)	8	6½
4-Speed (New Process 435)	6½	5½
Heavy Duty Cruise-O-Matic	22	18
C-4 Automatic	20	16
4-Wheel Drive Transfer Case	4½	3¼

ENGINE CRANKCASE REFILL CAPACITIES

Engine	Approximate Capacity (quarts)* U. S. Measure	Approximate Capacity (quarts)* Imperial Measure
170 CID Six	3½	3
240 CID Six	4	3
300 CID Six	4	3
352 CID V-8	5	4

*Add 1 quart with filter change.

WHEEL NUT TORQUE

Model	Wheel Type	Bolt Size	Wheel Nut Torque* (foot-pounds)
F-100, P-100	Disc	½-20	65-90
F-250, P-350	Disc	½-20	65-90
F-350, P-400	Disc	⅝-18	175-200‡
P-500	Disc	¾-16	400-500

*Torque specifications are for clean, dry bolt threads.
‡125-140 on 17.5 x 5.25 rim used on single wheels.

SPECIFICATIONS

Series 100 through 350, and P Series

ENGINE SPECIFICATIONS—FORD DIESEL

ENGINE	4-CYLINDER 220
Bore (inches)	3.9375
Stroke (inches)	4.524
Displacement (cubic inches)	220
Taxable (SAE) Horsepower	24.8
Horsepower @ rpm—Net —Gross	65 @ 2500 70 @ 2500
Maximum Torque (ft. lb. @ rpm)—Net —Gross	156 @ 1550 160 @ 1600
Compression Ratio	16:1
Compression Pressure	365 psi @ 215
Maximum Engine rpm (No Load) (Loaded)	2700 2500
Idle Speed (rpm @ Neutral) Hot	500-550
Valve Lash Hot (inches)—Intake —Exhaust	.015 .012
Oil Pressure Hot (psi)	30-40
Cylinder Firing Order	1-2-4-3
Air Cleaner—Type	Oil Bath

BATTERY (12 volts)

Capacity (Ampere-hours at 20 hour rate)	55	70	45
Number Of Plates	66	66	54
Ground Terminal Polarity	Negative	Negative	Negative

FUSES AND CIRCUIT BREAKERS

Circuit	Protective Device	Location
Dome Lamp	SFE-7.5 or SFE-9	Fuse Panel
Emergency Warning System	SFE-20	Cartridge In Feed Wire
Headlamps	Circuit Breaker	Integral With Switch
Heater	SFE-20	Fuse Panel
Instrument Panel Lights	1-AG	Fuse Panel
License Light	Circuit Breaker	Integral With Headlamp Switch
Lighter	SFE-14	Fuse Panel
Marker Lights	SFE-14	Cartridge In Feed Wire
Overdrive Circuit	3-AG	Clip On O/D Relay
Radio	SFE-14	Fuse Panel
Spotlight	SFE-7.5	Cartridge In Feed Wire
Stop Lamp	Circuit Breaker	Integral With Headlamp Switch
Turn Signal Lights	SFE-14	Fuse Panel
Windshield Wiper	Circuit Breaker	Integral With Wiper Switch
Emergency Warning System	SFE-14	Cartridge In Feed Wire
Headlamps	Circuit Breaker	Integral With Headlamp Switch
Heater	SFE-14	Cartridge In Feed Wire
Instrument Panel Lights	1-AG	Cartridge In Feed Wire
License Lamp	Circuit Breaker	Integral With Headlamp Switch
Parking Lamps	Circuit Breaker	Integral With Headlamp Switch
Stop Lamp	Circuit Breaker	Integral With Headlamp Switch
Turn Signal Lights	SFE-7.5	Cartridge In Feed Wire
Windshield Wiper	Circuit Breaker	Integral With Wiper Switch

DIESEL FUEL

	Grade #1	Grade #2
Cetane Number	43 Min.	45 Min.
Viscosity s.o.s. @ 100 F	33-38	30-33
Pour Point	0° F Max.	—25° F Max.
Cloud Point	10° F Max.	—15° F Max.
Carbon residue on 10% bottom	.15 Max.	.10 Max.
Sulphur Percent	.4 Max.	.25 Max.
Copper Strip Corrosion	#2	#1
Ash Percent/wt.	.01 Max.	.01 Max.
Water and Sediment Percent/vol.	0.10 Max.	Trace
Flash Point °F.	125 or Legal	125 or Legal
Distillation °F.	625 (90%)	600 (90%)
API Gravity	33 Min.	35 Min.

BULBS

Description	Candle Power or Wattage	Trade Number
Cigarette Lighter Socket	1.5 cp	1445
Dome Light	1.5 cp	1003
Front Parking Light Only	4 cp	1155
Front Turn Signal/Parking	32-4 cp	1157
Alternator	2 cp	1895
Headlights (Single—High-Low Beam)	50-40 watts	6012
Heater Control	2 cp	1895
Instrument Cluster Illumination	2 cp	1895
Instrument Panel Indicators Hi-Beam	2 cp	1895
Marker	4 cp	1155
Oil Pressure	2 cp	1895
Radio Dial	2 cp	1895
Rear License Light Only	4 cp	1155
Rear Turn Signal, Stop & Tail Lights	32-4 cp	1157
Spotlight	30 watts	4435
Turn Signal	2 cp	1895

1965 FORD TRUCK SPECIFICATIONS continued

Series 100 through 350, and P Series

LOAD CAPACITIES

Truck Model	Maximum Gross Vehicle Weight (pounds)	Recommended Minimum Rear Tire Size	Minimum Optional Equipment Required For Warranty Of Indicated Maximum Gross Vehicle Weight
F-100	4200*	7.75-15 4PRS	
F-100	4500	7.75-15 8PRS	8-Leaf 1250 lb. Rear Springs
F-100	4800	8.15-15 8PRS	8-Leaf 1250 lb. Rear Springs
F-100	5000#	6.50-16 6PRS	8-Leaf 1250 lb. Rear Springs
F-100 (4-wheel drive)	4600	7.75-15 4PRS	
F-100 (4-wheel drive)	4900	7.75-15 8PRS	
F-100 (4-wheel drive)	5400	6.50-16 6PRS	
F-100 (4-wheel drive)	5600	7-17.5 6PRS	11-Leaf 1950 lb. Rear Springs
F-250	4800*	6.50-16 6PRS	
F-250	5500#	7-17.5 6PRS	
F-250	6000	8-17.5 6PRS	11 Leaf 1950 lb. Rear Springs
F-250	6700	8-17.5 8PRS	11 Leaf 1950 lb. Rear Springs
F-250	7500	8-19.5 8PRS	10 Leaf 2400 lb. Rear Springs
F-250 (4-wheel drive)	4900*	6.50-16 6PRS	
F-250 (4-wheel drive)	5700	7-17.5 6PRS	
F-250 (4-wheel drive)	6100	8-17.5 6PRS	10-Leaf 2400 lb. Rear Springs
F-250 (4-wheel drive)	6800#	8-17.5 8PRS	3500 lb. Front Axle, 10 Leaf
F-250 (4-wheel drive)	7700	8-19.5 8PRS	2400 lb. Rear Springs
F-350	6000	8-17.5 6PRS	
F-350	6900	8-17.5 8PRS	
F-350	8000	8-19.5 8PRS	10 Leaf 3200 lb. Rear Springs
F-350	9000	7-17.5 6PRD	10 Leaf 3200 lb. Rear Springs, Dual Rear Tires

LOAD CAPACITIES

Truck Model	Maximum Gross Vehicle Weight (pounds)	Recommended Minimum Rear Tire Size	Minimum Optional Equipment Required For Warranty Of Indicated Maximum Gross Vehicle Weight
F-350	10000	8-17.5 6PRD	10 Leaf 3200 lb. Rear Springs, Dual Rear Tires
P-100	4300#	7-75-15 4PRS	
P-100	5000*	6.50-16 6PRS	7 Leaf 1250 lb. Rear Springs
P-350	5900	7-17.5 6PRS	
P-350	6500*	8-17.5 6PRS	
P-350	8000#	8-19.5 8PRS	10 Leaf 2400 lb. Rear Springs
P-3500 (Diesel)	5900*	7-17.5 6PRS	
P-3500 (Diesel)	8000#	8-19.5 8PRS	10 Leaf 2400 lb. Rear Springs
P-400	7700*	8-17.5 6PRS	
P-400	8800	8-19.5 8PRS	10 Leaf 3200 lb. Rear Springs
P-400	10000#	8-17.5 6PRD	10 Leaf 3200 lb. Rear Springs, Dual Rear Tires
P-4000 (Diesel)	7700*	8-17.5 6PRS	
P-4000 (Diesel)	8000	8-19.5 8PRS	10 Leaf 3200 lb. Rear Springs
P-4000 (Diesel)	10000	8-17.5 8PRD	10 Leaf 3200 lb. Rear Springs, Dual Rear Tires
P-500	10000*	8-19.5 8PRS	
P-500	12000	8-19.5 8PRD	10 Leaf 4500 lb. Rear Springs, Vacuum Brake Booster, Dual Rear Tires
P-500	15000	8-22.5 8PRD	10 Leaf 4500 lb. Rear Springs, 6 Leaf 1700 lb. Rear Springs, Vacuum Brake Booster, Dual Rear Tires
P-5000 (Diesel)	10000*	8-19.5 8PRS	
P-5000 (Diesel)	12000	8-19.5 8PRD	10 Leaf 4500 lb. Rear Springs, Dual Rear Tires, Vacuum Brake Booster, 4-Speed Transmission
P-5000 (Diesel)	15000	8-22.5 8PRD	10 Leaf 2200 lb. Front Springs, 10 Leaf 4500 lb. Rear Springs, 6-Leaf 1700 lb. Aux. Springs, Vacuum Brake Booster, Dual Rear Tires, 4-Speed Transmission

*Optional GVW Rating Plate #Standard GVW Rating Plate

LUBRICATION SPECIFICATIONS

ITEM	FORD PART NUMBER	PART NAME
Body Hinges	C4AZ-19584-A	Lifetime Body Grease
Brake Master Cylinder	B7AZ-19542-A	Rotunda Heavy Duty Brake Fluid
Front Suspension Ball Joints & Steering Linkage	C1AZ-19590-B	FoMoCo Ball Joint Grease
Front Wheel Bearings	C2AZ-19585-A	FoMoCo Wheel Bearing Grease
Hood Latch and Safety Catch	C4AZ-19584-A	Lifetime Body Grease
Lock Cylinders	B4A-19587-A	Rotunda Lock Lubricant
Rear Axle	C1AZ-19580-E or F	FoMoCo Hypoid Gear Lubricant
Exhaust Control Valve	COAZ-19A501-A	FoMoCo Solvent and Penetrating Fluid
Transmission (Automatic)	C1AZ-19582-A	Rotunda Automatic Transmission Fluid
Transmission (Manual Shift)	C3RZ-19C547-B	Rotunda Manual Transmission Lubricant
Universal Joints	C1AZ-19586-B	FoMoCo Universal Joint Lubricant
Steering Gear Housing	C3AZ-19578-A	Steering Gear Lubricant
Engine Crankcase Oil		MS Sequence tested SAE 10W-30 above −10° F. SAE 5W-20 for sustained temperatures below −10°F.

1965 FORD HEAVY TRUCK SPECIFICATIONS

Series 500 through 1100

ENGINES—GAS

	240 CID	300 CID LD	300 CID HD	330 CID V-8	330 CID HD-V-8	361 CID V-8	391 CID V-8	401 CID SD-2V-V-8	401 CID SD-4V-V-8	477 CID SD-2V-V-8	477 CID SD-4V-V-8	534 CID SD-V-8
Bore (Inches)	4.00	4.00	4.00	3.87	3.87	4.05	4.05	4.125	4.125	4.50	4.50	4.50
Stroke (Inches)	3.18	3.98	3.98	3.50	3.50	3.50	3.78	3.75	3.75	3.75	3.75	4.2
Taxable (SAE)	38.4	38.4	38.4	48.05	48.05	64.0	64.0	54.0	54.0	65.0	65.0	65.0
Brake Horsepower @ rpm	150 @ 4000	170 @ 3600	170 @ 3600	186 @ 4000	186 @ 4000	203 @ 4000	235 @ 4000	206 @ 3600	226 @ 3600	231 @ 3400	253 @ 3400	266 @ 3200
Maximum Gross Torque (Foot-Pound @ rpm)	234 @ 2200	283 @ 14-2400	283 @ 14-2400	300 @ 2000	300 @ 2000	330 @ 2000	372 @ 2000	341 @ 1800	343 @ 2600	412 @ 1800	415 @ 2600	481 @ 1800
Compression Ratio	8.75	8.4	8.0	7.6	7.6	7.6	7.6	7.5	7.5	7.5	7.5	7.5
Compression Pressure (psi @ Cranking Speed)	150-200	150-200	150-200	120-160	120-160	120-160	120-160	150	150	150	150	150
Idle Speed (rpm @ Neutral)	500-525	500-525	500-525	525-550	525-550	525-575	525-575	500-550	500-550	500-550	500-550	500-550
Oil Pressure—Hot (psi @ 2000 rpm)	35-55	35-60	35-60	35-55	35-55	35-55	35-55	35-65	35-65	35-65	35-65	35-65
Ignition Timing*	6°	6°	6°	12°	12°	12°	10°	8°	8°	8°	8°	8°
Transistorized Distributor Point Gap Width (Inches)	—	—	—	0.019 0.021	0.019 0.021	0.019 0.021	0.019 0.021	0.019 0.021	0.019 0.021	0.019 0.021	0.019 0.021	0.019 0.021
Conventional Distributor Point Gap Width (Inches)	0.024 0.026	0.024 0.026	0.024 0.026	0.024 0.026	0.014 0.016	0.014 0.016	0.014 0.016	0.014 0.016	0.014 0.016	0.014 0.016	0.014 0.016	0.014 0.016
Spark Gap Width	0.028 0.032	0.028 0.032	0.028 0.032	0.028 0.032	0.028 0.032	0.028 0.032	0.028 0.032	0.028 0.032	0.028 0.032	0.028 0.032	0.028 0.032	0.028 0.032
Cylinder Firing Order	1-5-3-6-2-4	1-5-3-6-2-4	1-5-3-6-2-4	1-5-4-2-6-3-7-8	1-5-4-2-6-3-7-8	1-5-4-2-6-3-7-8	1-5-4-2-6-3-7-8	1-5-4-8-6-3-7-2	1-5-4-8-6-3-7-2	1-5-4-8-6-3-7-2	1-5-4-8-6-3-7-2	1-5-4-8-6-3-7-2
Spark Plug Replacement Ford Part Number	C3TZ-12405-A	C3TZ-12405-A	C3TZ-12405-A	C3TZ-12405-A	C3TZ-12405-A	C3TZ-12405-A	C3TZ-12405-A	C3TZ-12405-A	C3TZ-12405-A	C3TZ-12405-A	C3TZ-12405-A	C3TZ-12405-A

*Ignition timing requirements may vary depending upon locality, fuel, and operating conditions. For best economy and performance, the timing may be advanced to a point just short of audible detonation under load but not to exceed 5 over normal setting. Do not retard the initial advance beyond 2 for sub-standard fuels.

ENGINES DIESEL

	FORD 330	V6E-195	V8E-235	V8-265	NHE-180	NHE-195	NH-220	NHE-225
Piston Displacement (Cubic Inches)	330	588	785	785	743	743	743	855
Bore (Inches)	3.94	5.50	5.50	5.50	5.12	5.12	5.12	5.50
Stroke (Inches)	4.52	4.12	4.12	4.12	6.0	6.0	6.0	6.0
Taxable (SAE) Horsepower	37.2	72.5	96.8	96.8	63.04	63.04	63.04	72.5
Brake Horsepower (@ rpm)	112 @ 2500	195 @ 2500	235 @ 2400	265 @ 2600	180 @ 1950	195 @ 1950	220 @ 2100	225 @ 1950
Maximum Gross Torque (Foot-Pound @ rpm)	265 @ 1500	450 @ 1800	567 @ 1600	600 @ 1800	534 @ 1300	580 @ 1300	606 @ 1600	670 @ 1300
Compression Ratio	16	17	17	17	15.5	15.5	15.5	14.9
Compression Pressure (psi @ Cranking Speed)	365 PSI	365 PSI	365 PSI	365 PSI	365 PSI	365 PSI	365 PSI	365 PSI
Idle Speed (rpm @ Neutral)	500-550	600-650	600-650	600-650	520	520	520	520
Oil Pressure—Hot (psi @ operating rpm)	35-40	35-50	35-40	35-40	30-50	30-50	30-50	30-50
Cylinder Firing Order	1-5-3-6-2-4	1-4-2-5-3-6	1-5-4-8-6-3-7-2	1-5-4-8-6-3-7-2	1-5-3-6-2-4	1-5-3-6-2-4	1-5-3-6-2-4	1-5-3-6-2-4

1965 FORD HEAVY

Series 500 through 1100

ENGINE COOLING SYSTEM REFILL CAPACITIES

GAS ENGINE			
Engine	Truck Model	Approx. Cap.* (Qts.) U.S.	Imperial
240-Six	F-500, F-600, B-600, N-500-600	19	16
300-Six	F-500, B-500, N-500	19	16
300HD-Six	F-600, B-600, N-600 C-550, C-600	19 21	16 17
330 V-8	F-500, B-500, F-600, B-600, B-700, N-500, N-600 C-550, C-600	24 28	20 24
330HD V-8	F-600, B-600, F-700, B-700, T-700†, N-600, N-700 C-600, C-700†	24 28	20 24
361 V-8	F-750, B-750, F-800, T-750, T-800, N-750 C-750-800, CT-750-800	24† 28†	20† 24†
391 V-8	F-800, T-750, T-800, N-750, B-750, F-750 C-750, C-800, CT-750, CT-800	24† 28†	20† 23¼†
401 SD V-8	F-, N-, NT-, T-Series C-, CT-Series	46 51	38¼ 42½
477 SD V-8	F-, N-, NT-, T-Series C-, CT-Series	46 51**	38¼ 42½**
534 SD V-8	F-, N-, NT-, T-Series C-1000, 1100 and CT-Series	46 52*	38¼ 43¼**

*Add 1 U.S. quart for trucks equipped with heater.
†Add 1½ U.S. quarts for trucks equipped with Transmatic Transmission.
**Add 7 U.S. quarts for trucks equipped with Transmatic Transmission.

DIESEL ENGINES			
Engine	Truck Model	Approx. Cap* (Qts.) U.S.	Imperial
NH-180 NHE-180 NHE-195 NHE-225	HT-950-D, H-1000-D, N-1000-D, NT-850-D, NT-950-D	44	36.6
NH-220	H-1000-D, HT-950-D N-1000-D, NT-850-D, NT-950-D	44 43	36.6 35.8
NH-250	H-1000-D, HT-950-D, N-1000-D, NT-850-D, NT-950-D	44	36.6
V6E-195	NT-850-D, NT-950-D, F-950-D, F-1000-D, F-1100-D, T-850-D, T-950-D, N-950-D, N-1100-D	31	25.8
V8E-235 V-8 265	H-1000-D, HT-950-D	51	42.5
4-Cyl. 220	P-3500, 4000, 5000	17	14¼
6-Cyl. 330	C-6000, 7000	24	20
6-Cyl. 330	N-6000, 7000	20	16¾

*Add 1 U.S. quart for trucks equipped with heater.

TRANSMISSION REFILL CAPACITIES

Transmission Type and Make	Filler Location	Drain Location	Approx. Capacity (Pints)
3-Speed Auxiliary (Spicer 5831)	Rt	L	4
3-Speed H.D. Auxiliary (Spicer 7231-8031)	Rt	L	8
4-Speed Auxiliary (Spicer 7041-8341)	Rt	L	12
4-Speed (Warner T98A)	L	Rt	6½
4-Speed (Warner T87E)	L	Rt	6½
4-Speed (New Process NP-435)	L	L	6½
5-Speed Medium-Duty (Clark 250)	Rt	L	9
5-Speed Heavy-Duty (Clark 265)	Rt	L	11½
5-Speed Extra Heavy-Duty (Spicer 5000)	Rt	L	13
5-Speed Extra Heavy-Duty (Spicer 6000)	Rt	L	12
8-Speed (Fuller Roadranger R-46)	L	L	17
10-Speed Fuller (R-96-960)	L	L	33
12-Speed Spicer (8125)	L	L	24
Transmatic Drive (MP-30-40)	*Rt	L	38

*On a C-Series truck, the dipstick should be removed through the opening in the panel behind the seat back cushion with the cab in its normal position.
Rt=Right
L=Left

REAR AXLE LUBRICANT CAPACITIES

Rear Axle Model	Truck Model	Approx. Cap. (Pints)	
Rockwell C-100-N	F, N, B-500; P-500, P-5000	12½	
Rockwell D-100-N	F, N, B-500; C-550, P-500	12½	
Eaton 13800, 13802 Rockwell F-106-NX-6	F, C, N-600; F, B, C, N-700; C, N-6000; F, N-500; C-550; F, N, C-6000; N, C-7000	19 13	
Eaton 1614	F, C, N-600-700; C, N-6000, C-7000, N-7000	24	
Eaton 16802	F, C, D, N-600-700-750; C, N-7000, F-800	24	
Rockwell H-140	F, B, C, N-750, F-800	18	
Eaton 1750A	N-850, F-850, C-850, F-950-D, N-950-D	*26.0	†29.0
Eaton 1880	N-850, N-950, N-950-D, F-850, F-950-D, H-1000, C-850, C-950	*26.0	†29.0
Eaton 1918	N-950, N-1000, NT-850-D, NT-950-D N-1000-D, F-1000, F-950-D, F-1000-D H-1000-D, HT-950, HT-950-D, C-1000		†34.0
Eaton 8802 & 8803	N-950, F-950, F-950-D, D-850, C-950		†34.0
Eaton 9502	N-950, N-1000, N-1000-D, F-950-D F-1000-D, H-1000-D, C-950, C-1000		†34.0
Rockwell U-200	N-1100, N-1100-D, F-1100, F-1100-D		†39.0
Eaton 17800 (2-Speed)	N-850, F-850, C-850, (F-950-D, N-950-D)	*26.0	†29.0
Eaton 18802 (2-Speed)	N-850, N-950, N-950-D, F-850, F-950, C-850, C-950, N-1000-D, F-950-D, H-1000, H-1000-D	*26.0	†29.0
Eaton 19800 (2-Speed)	N-850, N-950, N-950-D, F-850, F-950		

*Fabricated Housing †Forged Housing

TRUCK SPECIFICATIONS

(continued)

FUEL TANK CAPACITIES

Tank Type	Truck Model (500-800 Series)	Approximate Capacity (Gallons) U. S.	Imperial
Standard	C-, F-, N-, and T-Series	18	15
	B- and CT-Series	30	25
Optional Rectangular	C-, F-, N-Series and T-700-750 Series	30	25
Optional Step	F-800 and N-, T-Series	50	41⅔
Optional Cylindrical	C-, F-, T-700-800; N-700-750; CT-750-800	50 60	41⅔ 50
Optional Saddle	C-, F-, T-700-800; CT-750-800	125	101

Tank Type	Truck Model (850-1100 Series)	Approximate Capacity (Gallons) U.S.	Imperial
Standard	F-, C-, T-, NT-Series (cab models)	18	15
	H- and HT-Series	50	41½
	F-850 thru 950 (cowl models)	18	15
	CT-850-950	30	25
Optional (Cylindrical)	H-, HT-, F-, N-, T-, and NT-Series (850 through 1100)	60	50
Optional (Saddle)	F-, C-, and T-Series (850 through 1100)	125	104
Optional (Step)	F- and T-Series (850 through 1100)	50	41½

BULBS

	Candle Power or Wattage	Trade Number
EXTERIOR LIGHTS		
Headlights Single—High/Low Beam	50/40 W	6012
Front Turn Signal/Parking	32/4 C.P.	1157
Front Parking Only	4 C.P.	1155
Independent Turn Signal, Front & Rear	32 C.P.	1156
Rear Turn Signal & Stop/Tail	32/4 C.P.	1157
Rear License Light Only	4 C.P.	1155
Marker	4 C.P.	1155
Spotlight	30 W	4405
INTERIOR LIGHTS		
Instrument Panel Indicators		
Hi-Beam	2 C.P.	1895
Turn-Signal	2 C.P.	1895
Tachometer	2 C.P.	1895
Differential Locknut	1 C.P.	53
Air Pressure Gauge	2 C.P.	1895
Instrument Cluster Illumination	2 C.P.	1895
Cigar Lighter Socket	1.5 C.P.	1445
Heater Control	2 C.P.	1895
Radio Dial	2 C.P.	1895
INTERIOR ILLUMINATION		
Dome Light	15 C.P.	1003

FUSES AND CIRCUIT BREAKERS

Circuit	500-800 SERIES	
	Protective Device	Location
Headlamps	Automatic Circuit Breaker	Integral with Light Switch
Stop, Tail, License, Park, Marker	Automatic Circuit Breaker	Integral with Light Switch
2-Speed Axle—3-Speed Axle	Automatic Circuit Breaker	Fuse Panel
Tractor-Trailer Prot.	Automatic Circuit Breaker	Fuse Panel
Wiper Motor	Automatic Circuit Breaker	Wiper Switch
Glow Plug	Automatic Circuit Breaker	Dash Panel
Power and Charging Circuit	Manual Reset type Circuit Breaker	Cowl panel, L.H. side on F & T Series. Front body cross member on N & NT Series
Emergency Warning System	Fuse SFE-20	Cartridge in feed wire
Instrument Panel	SFE-7.5 Fuse	Fuse Panel
Turn Signal	SFE-7.5 Fuse	Fuse Panel
Dome Light	SFE-7.5 Fuse	Fuse Panel
Radio	SFE-7.5 Fuse	Fuse Panel
Spotlight	SFE-7.5 Fuse	Fuse Panel
Electric Fuel Pump	SFE-7.5 Fuse	Fuse Panel
Engine Warning Lights	SFE-7.5 Fuse	Fuse Panel
Heater Motor	SFE-14 Fuse	Fuse Panel
Lighter	SFE-14 Fuse	Feed Wire

Circuit	850-1100 SERIES	
	Protective Device	Location
Headlamps	Automatic Circuit Breaker	Integral with Light Switch
Stop, Tail, License, Park, Marker	Automatic Circuit Breaker	Integral with Light Switch
2-Speed Axle—3-Speed Axle	Automatic Circuit Breaker	Fuse Panel
Tractor-Trailer Prot.	Automatic Circuit Breaker	Fuse Panel
Wiper Motor	Automatic Circuit Breaker	Wiper Switch
Glow Plug	Automatic Circuit Breaker	Dash Panel
Power and Charging Circuit	Manual Reset type Circuit Breaker	Battery tray on C-Series. Power box on H, HT & NH Series with Cummins Diesel Rear cab support on all H, HT, Diesel and gas engine W/RPO Battery. C-Series Ford Diesel on Frame side member.
Emergency Warning System	SFE-20 Fuse	Cartridge in feed wire
Instrument Panel	SFE-7.5 Fuse	Fuse Panel
Turn Signal	SFE-7.5 Fuse	Fuse Panel
Dome Light	SFE-7.5 Fuse	Fuse Panel
Radio	SFE-7.5 Fuse	Fuse Panel
Spotlight	SFE-7.5 Fuse	Fuse Panel
Electric Fuel Pump	SFE-7.5 Fuse	Fuse Panel
Engine Warning Lights	SFE-7.5 Fuse	Fuse Panel
Heater Motor	SFE-14 Fuse	Fuse Panel
Lighter	SFE-14 Fuse	Feed Wire

1965 FORD HEAVY TRUCK SPECIFICATIONS

Series 500 through 1100 (continued)

ENGINE OIL

GASOLINE ENGINES

It is important to use only engine oils CERTIFIED by the maker to have passed the automobile manufacturers' specifications for engine operating sequence tests for service M.S. In practically all cases, 10W-30 oil will meet these requirements.

Oil Viscosity Temperature	Viscosity Required
Above 100° F.	SAE 40 or 20W-40
From 100° F. to 32° F.	SAE 30 or 10W-30
From 32° F. to 10° F.	SAE 20 or 10W-30
From 10° F. to −10° F.	SAE 10W
Below −10° F.	SAE 5W or 5W-20°

DIESEL ENGINES

Lubricating oil used in Ford Diesel engines should be HD type oils represented by the oil supplier as meeting the quality requirements of U. S. Military Specifications Mil-L-2104-A. The responsibility for meeting these specifications, the quality of the product, and its performance in service must necessarily rest with the oil supplier. Ford Motor Company does not recommend any specific brand of lubricating oil.

Follow the viscosity recommendation shown below:

Oil Viscosity Temperature	Viscosity Required
Above 90° F.	SAE 30
From 32° F. to 90° F.	SAE 20
From 0° F. to 32° F.	SAE 10W
From −10° F. to 0° F.	SAE 5W

WHEEL NUT TORQUE

Wheel Type	Bolt Size	Wheel Nut Torque (Foot Pounds)
Disc	½-20	65-90
Disc	⅝-18	175-200*
Disc	¾-16	400-500†
Disc	1⅛-16	400-500
Cast	⅝-11	170-200
Cast	9/16-12	120-150

*125-140 front and rear single 17.5 x 5.25 only.
†275-325 on 6 stud (2 piece design).

TUBELESS TIRES

Tire Size and Ply Rating	D.C. Rim Type	Revolutions Per Mile (New Tires)	Maximum Load Capacity (Pounds)	Pressure (psi)
7 x 22.5-6	5.25	598	1870	50
7 x 22.5-8	5.25	598	2180	65
8 x 22.5-8	5.25, 6.0	558	2740	65
8 x 22.5-10	5.25, 6.0	558	3090	80
9 x 22.5-10	6.0, 6.75	540	3330	70
9 x 22.5-12	6.0, 6.75	540	3730	85
10 x 22.5-10	6.75, 7.5	520	3960	70
11 x 22.5-12	7.5, 8.25	504	4580	75
12 x 22.5-12	8.25, 9.0	487	5150	75

LUBRICANT SPECIFICATIONS

ITEM	PART NUMBER	PART NAME
Air Brake Valve Linkage—Radiator Shutter Pivot and Arms—Vacuum Booster Air Cleaner—Clutch Linkage—Main and Auxiliary Transmission Linkage—Accelerator, Brake and Parking Brake Linkage, Pivots, Clevises and Retracting Springs—Transmatic Detent Ass'y.		Engine Oil SAE 10W
Carburetor Oil Bath Air Cleaner		Engine Oil SAE 30 above 32° F.—SAE 20 below 32° F.
Manual-Shift Transmission Lubricant		Engine Oil (MIL-L-2104-A) SAE 50 or Straight Mineral Oil Gear Lubricant (with no EP additives) SAE 90 for prevailing temperatures above 10° F., SAE 80 for prevailing temperatures below 10° F.
Steering Gear	C3AZ-19578-A	Lifetime Steering Gear Grease
Front Axle Spindle Bolts—Steering Linkage—Front and Rear Spring Studs—Universal Joints and Slip Yoke—Roadranger Transmission Air Cylinder, Shift Lever and Linkage—Clutch Linkage Fittings—Steering Column U-Joints (C and N Series).		Chassis Lubricant
Transmission Remote Gear Shift Front Cross Shaft and Levers, U-Joints, Crank Arm and Side Bushings (C-Series Only)		Chassis Lubricant for prevailing temperatures above 10° F. Calcium Soap Grease for prevailing temperatures below 10° F.
Rear Axle	C2AZ-19580-A (SAE 90) C2AZ-19580-B (SAE 80)	FoMoCo or Rotunda Hypoid Gear Lubricant (SAE 90) above −25° F SAE 80 for temperatures below −25° F.
Automatic Transmission	C1AZ-19582-A	FoMoCo or Rotunda Automatic Transmission Fluid
Power Steering Reservoir	C1AZ-19582-A	FoMoCo or Rotunda Automatic Transmission Fluid
Radiator Shutter Control Air Filter	COTZ-19591-A	Ford Shutter Fluid
Clutch and Brake Master Cylinder	B7A-19542-B	Ford Heavy-Duty Brake Fluid
Speedometer, Parking Brake and Tachometer Cables	B5A-19581-A	Ford Speedometer Cable Grease
45° Speedometer and Tachometer Adapter	COAZ-19584-A	Lubriplate
Front and Rear Wheel Bearings	C2AZ-19585-A	Ford Wheel Bearing Grease
2-Speed Rear Axle Shift Unit		Engine Oil SAE 10W above 0° F. 3 parts SAE 10W and 1 part kerosene below 0° F.

1965

FORD HEAVY TRUCK IMPROVEMENTS

In 1965, Ford continues its policy of improvement enabling truck operators to fill their requirements more exactly and more economically with Ford heavy and extra heavy trucks. There are new improvements in axles, engines, braking systems, electrical equipment and many other areas designed to improve the over-all performance of Ford truck components.

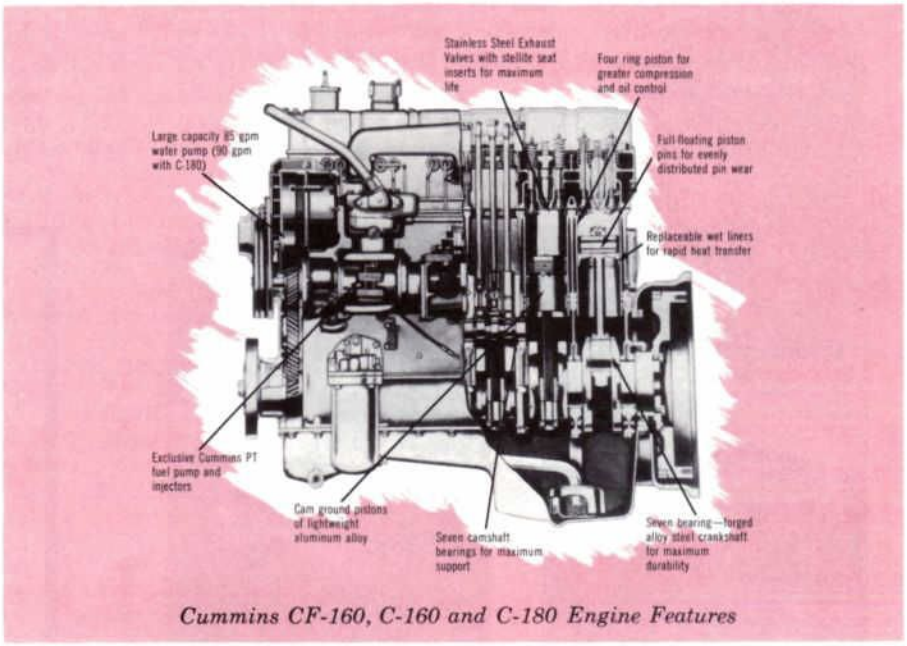
ENGINES

In 1965, Ford is offering for the first time two new applications designed to meet the new trend in the trucking industry of Diesel power for short hauls. Ford offers its C-8000 tractor and T-8000 tandem truck with either the Cummins CF-160, C-160 or C-180 Diesel Engine as a Special Order Item. All three of these engines are 464 cubic inches and feature almost complete major component interchangeability (except C-180 pistons and supercharger). The basic engine is available with three power ratings.

Cummins CF-160—This naturally aspirated Diesel is governed at 2800 rpm. It delivers horsepower comparable to the optional C-160, but torque ratings are less than the C-160 due to a lower fuel pump setting. It is capable of delivering excellent fuel economy, particularly for those operations where maximum engine speed is not a continuous requirement.

Cummins C-160—Has a higher torque output than the CF-160 for maximum performance. Like the CF-160, it is naturally aspirated and produces the same 160 gross horsepower but at a slower 2500 governed engine rpm.

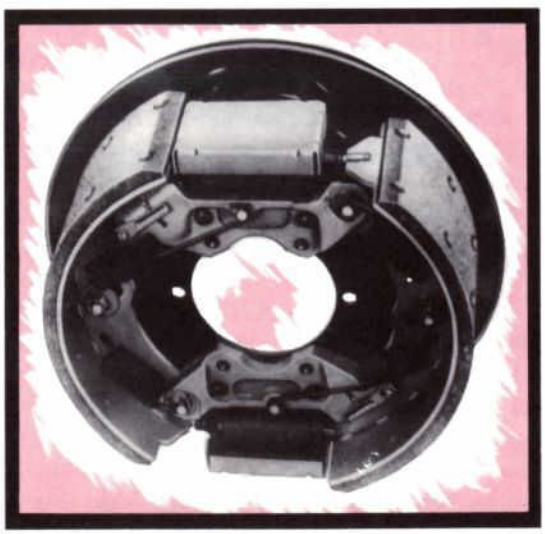
Cummins C-180—The supercharger, which is standard with the C-180 provides this engine with substantially greater horsepower and torque than either the CF-160 or the C-160, and maintains these powers better at higher altitudes and should be almost as economical in operation as the CF-160 engine.



Cummins CF-160, C-160 and C-180 Engine Features

CUMMINS ENGINE SPECIFICATIONS

ENGINE	CF-160	C-160	C-180
Type—Number of Cylinders	Overhead Valve, In-Line Six		
Bore & Stroke (in.)		4.4375X5	
Displacement (cu. in.)		464	
Max. Gross HP (bhp. @ rpm.)	160 @ 2800	160 @ 2500	180 @ 2500
Max. Net HP (hp @ rpm.)	148 @ 2800	146 @ 2500	164 @ 2500
Max. Gross Torque (lbs./ft. @ rpm.)	346 @ 1700	377 @ 1400	424 @ 1700
Max. Net Torque (lbs./ft. @ rpm.)	325 @ 1700	352 @ 1400	400 @ 1700
Compression Ratio	15.8	15.8	14.5
Taxable (SAE) Horsepower	47.26	47.26	47.26



BRAKES

EXTRA CAPACITY HYDRAULIC BRAKES

Increased lining area, extra capacity hydraulic brakes are now available on 17,000 lb. single and 30,000 lb. tandems, 18,500 lb. single and 34,000 tandem rear axles on F-N-C-600, 700, 750: N-C-6000, 7000; F-C-800; F-N-C 850; and T-N-700 through 850 models. This means added brake life from more lining area. With this increased lining area, these smaller diameter brakes dissipate heat faster and improve air circulation around the brake drum.

FORD HEAVY TRUCK IMPROVEMENTS

1965

BRAKES CONTINUED

ORSCHELN PARKING BRAKE LEVER

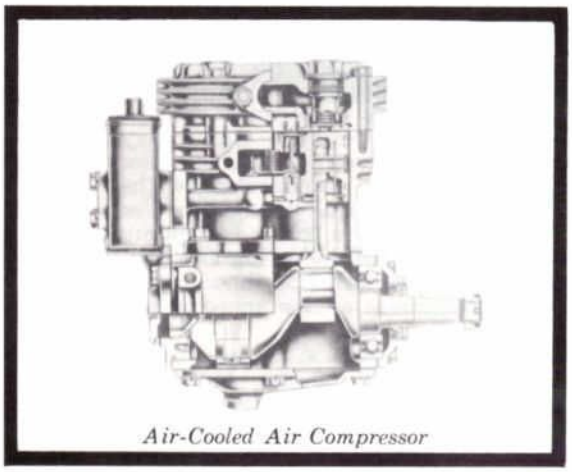
This is standard on all 1965 C-550 through 1100; CT-750 through 950; and C-6000 and 7000 models. The Orscheln lever is an over-center type which when engaged, locks in position by cam action. To release the parking brake, all that is required is to push the lever over center. Parking brake tension is adjusted by turning the screw type top on the end of the lever.

Orscheln Lever Applied

Orscheln Lever Released

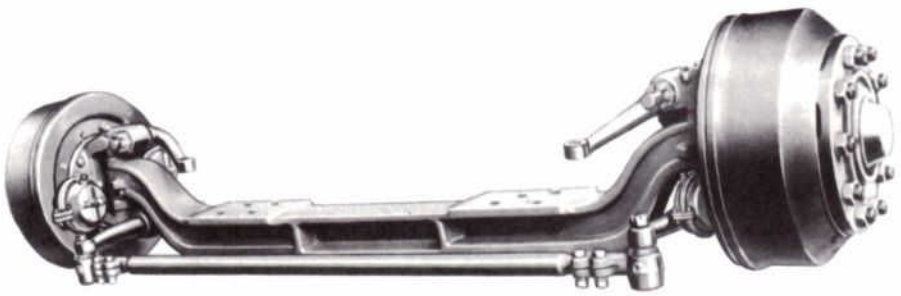
NEW AIR-COOLED AIR COMPRESSOR

An air-cooled 7½ cu. ft. capacity air compressor is featured on all 1965 Series 600 through 800 when equipped with air-over-hydraulic or full air brakes. This new compressor is a two-cylinder design with an aluminum head and block. It is pressure lubricated by the engine lubrication system. The cylinder head has large fins providing added surface area for the rapid dissipation of heat.



Air-Cooled Air Compressor

AXLES



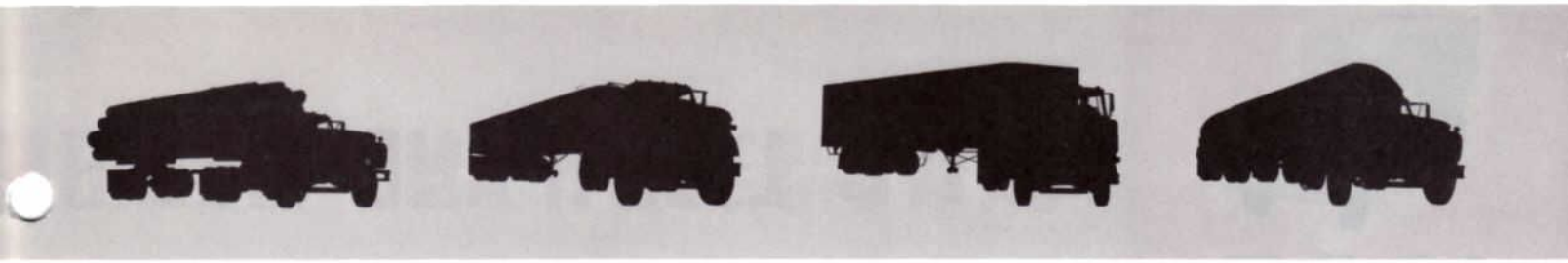
There are several improvements in Ford axles for 1965 designed mainly to fill more and varied applications, to give greater durability and strength, and to improve over-all performance.

A Ford-Rockwell 9000 lb. front axle is now available on the model N-750 to fill applications requiring high front axle loadings. Included with the 9000 lb. axle are: 4000 lb. springs (capacity at pad), Gemmer 400-6D steering gear and 15″ x 3″ brakes.

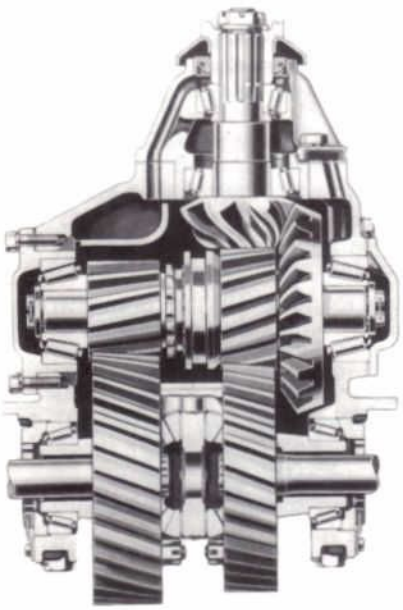
An 18,000 lb. front axle with resultant increased GVW ratings is available on T-850-950 gas and Diesel models. This Rockwell Standard FL-9000 axle is added to the Ford line primarily for ready-mix and other on-off highway applications. It provides higher braking efficiency with less air input from Stopmaster 15″ x 5″ x ¾″ air brakes utilizing the double wedge actuation principle.

The Rockwell-Standard F-106 single-reduction, hypoid 15,000 lb. rear axle is now standard on the 1965 Ford C-600 and C-6000 models. It provides greater durability and a more simplified product line since all 600's have the same standard rear axle.

Rockwell-Standard L-346 Rear Axle with an 18,500 lb. capacity is now available on the F-N-C-B-700-750; F-C-800; C-N-7000; F-N-C-850; F-N-950-D; and N-H-1000-D models and will provide improved performance through a true double-reduction two-speed axle giving maximum gear reduction as well as top road speeds. The first reduction is through a hypoid pinion and ring gear set. The second reduction is through one set of gears with a low numerical ratio for maximum speed or through a set with high numerical ratio for maximum reduction.



AXLES continued

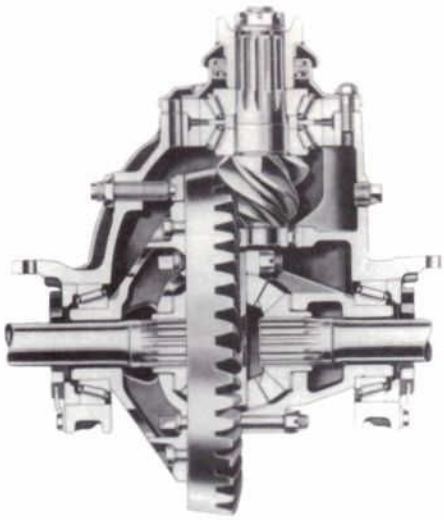


Rockwell-Standard L-346 Rear Axle

A 23,000 lb. Rockwell-Standard R-171 rear axle is available on 1965 N and H-1000-D models for greater strength and durability. This arises from a thicker axle housing permitting higher load capacities. The thickness has been increased from 3/8" to 1/2". It also features a malleable differential carrier in contrast to the old aluminum one.

Ford is also returning to the forged round housing design for 1965. This change applies to all Eaton single, two-speed and tandem axles. Axle components with the exception of the spring caps and U-bolts are completely interchangeable with those used in 1964. All 1965 Eaton axles (with the exception of the 23,000 lb. axles, the 22M-34M-42DP and the forward axle on all tandems) features the contoured, venturi-type banjo cover plate.

Wide Tread Eaton 13802 Axle . . . The tread on this axle has been increased from 68 to 69.5. By providing for the use of deeper dish disc wheels, nylon and all-traction tires can be used with a minimum of possibility of tire sidewall wear caused by rear tires rubbing against each other.



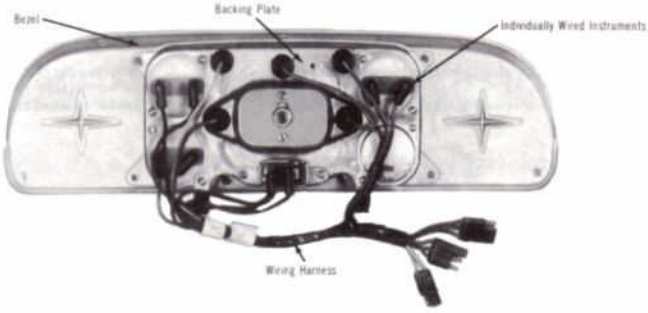
Rockwell R-171, 23,000-lb. Rear Axle

ELECTRICAL

Constantly increasing demands on truck electrical systems by electrically-operated accessories have lead to the adoption of the alternator as a means of increasing battery life, prolonging charge at idle speeds and helping to prevent electrical system failures. The latest improvements in the Ford alternator line are: enclosed slip ring brush assembly for protection against water, dirt and oil; circuit board mounting of diode terminals improving current flow; and increased ball diameters of the front bearing for added durability. 38 and 45 amp. alternators are standard on Ford 100-600 and 700-800 models. 60 amp. alternators are standard on 850-1100 models.

Instrument Cluster Wiring . . . The instrument cluster for the 1965 C-550 through 1100; CT-750 through 950; H-1000, 1000-D; HT-950, 950-D models features individually mounted and wired instruments. A stamped metal plate holding the individually wired instruments replaces the printed board circuitry. The copper core wiring is held by a single harness which connects to the redesigned main wiring harness through the use of three multiple connectors. This means added durability through the use of copper core wiring; quick connecting and disconnecting for easy servicing through the use of multiple connectors on harnesses; and ready accessibility to individual instruments by the easy removal of the bezel from the front of the instrument panel and disconnecting the instrument cluster harness from the main wiring harness. This leaves instruments available for servicing or replacing from the rear of the back plate.

Fuse Panel Relocation . . . A new fuse panel containing the accessory fuses for the F-N-100 through 600; B-500 through 750; F-700 through 750 Cowl Models only, is mounted on the inside cab firewall just to the left of the steering column. This exposes fuses for easy accessibility and eliminates the necessity of reaching blindly up and under the dash to check or replace fuses.



Instrument Cluster Wiring

1965

FORD LIGHT AND MEDIUM

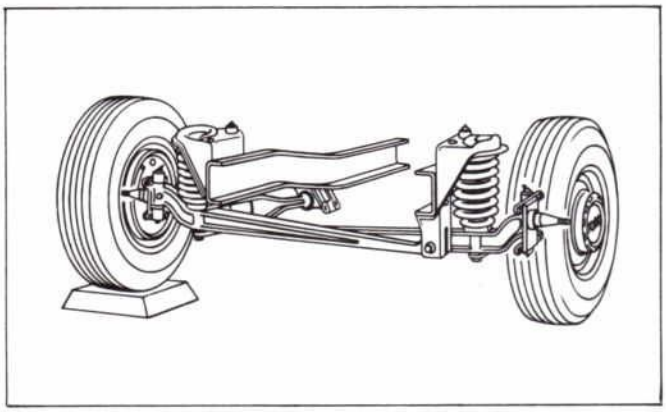
The 1965 line of Ford light and medium duty trucks features many new firsts designed to give added durability, power and wider applications to owners. Heading the list of new improvements is the all new Twin-I-Beam independent front suspension. There is also available a new range of engines, bigger and more powerful than ever before.

TWIN-I-BEAM INDEPENDENT SUSPENSION

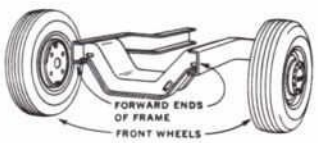
The 1965 Ford light and medium duty trucks come equipped for the first time with an all new suspension system designed to give the best of both Single-I-Beam suspension and Dual Control Arm Independent suspension.

Each axle and wheel combination acts independently of the other when going over a bump or through a rut. The axles are held parallel to each other by the I-Beam radius rods but are permitted to move freely up and down until they reach their maximum high and low points where they are limited by mechanical stops.

Driving thrusts from the frame to the axle, and braking forces from the axle to the frame are transmitted by the radius rods and flexible insulating bushings. Shock absorbers are located just outside of the coil springs to give instantaneous cushioning to irregularities in the road surface. Shock absorbers are larger than last year and have a new "all weather" multiviscosity fluid which gives excellent ride qualities over a wider temperature range.

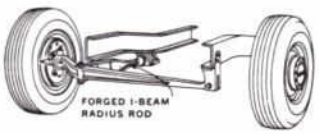


HOW FORD'S TWIN-I-BEAM WORKS



Object: Suspend front wheels independently, yet retain big-truck durability of solid I-beam axles.

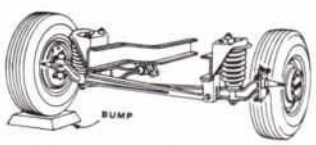
Forged steel I-beam axle attaches wheel to frame, locks in wheel camber. Axle pivots in husky, chatter-proof bushing.



Big-truck radius rod secures axle to frame side rail. Stabilizes front end, locks in wheel caster.

Heavy-duty, non-sag coil spring gives entire suspension low-friction, easy-riding action.

Opposite wheel is similarly suspended. Each wheel has its own forged steel I-beam axle, radius rod and spring.



Each front wheel—on its own axle—operates independently to smooth the ride on the roughest roads.

TRUCK IMPROVEMENTS

ENGINES

170 & 200 CID SIX . . .

The 170 CID Six is now standard on Ford compact trucks. It provides a big boost in economy from a higher compression ratio, improved pistons, redesigned manifoldings plus larger valves for easier breathing.

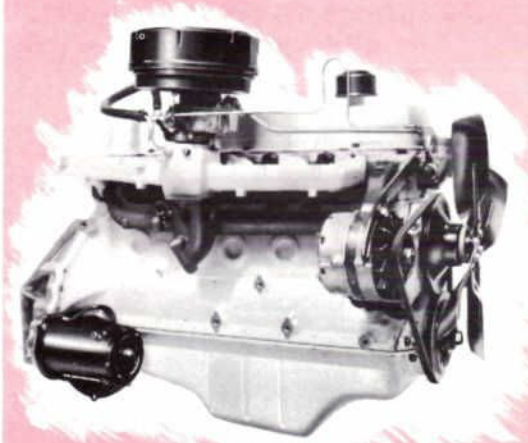
The 200 CID Six adds a higher compression ratio, new cylinder block with 7-bearing crankshaft, improved pistons, larger valves and new camshaft timing. Some of the outstanding features of these two engines are:

- **INTEGRAL INTAKE MANIFOLD** . . . Cast as an integral part of the cylinder head, eliminates gaskets, studs and leakage, and equalizes fuel-air mixture delivery to all cylinders.
- **TIN-PLATED ALUMINUM PISTONS** . . . Resist scuffing, have cast-in-steel struts to maintain piston concentricity, and increases bore and engine life.
- **INDUCTION HARDENED CAMSHAFT** . . . Lobes of precision-molded camshaft are hardened to resist wear and last longer than the usual untreated cast iron shaft.
- **FREE TURN INTAKE AND EXHAUST VALVES** . . . These are self-cleaning and help prevent sticking. Provide a tighter seal between valve and seat for more efficient power.
- **INTEGRAL VALVE GUIDES** . . . Provide lower valve operating temperatures and reduce valve warping and increase stem and guide life.
- **STEEL-BACKED REPLACEABLE BEARINGS** . . . These have a long-wearing babbitt material for main bearings and copper-lead for connecting rods.
- **ROTOR-TYPE OIL PUMP** . . . Has extra capacity for maintaining a higher, more constant oil pressure even at idle.
- **38-AMP. ALTERNATOR STD.** . . . Ford built for positive battery charging at low engine speeds. Sealed from dust and dirt and requires no lubrication.

240 & 300 CID SIX . . .

For 1965 these two engines provide more power and economy. The 240 CID Six is optional on the Econolines but is standard on the F&N 100-600 series. The 300 HD Six is standard on the C-550, 600 tilts and is optional on other 600's. Some outstanding features are:

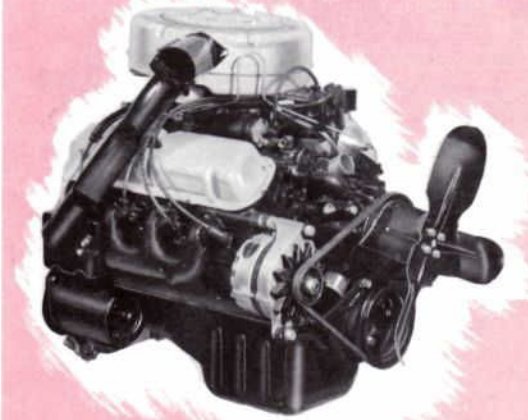
- **SILENCED OIL BATH AIR CLEANER** . . . Provides a more silent ride and protects truck engines better than other type air cleaners.
- **INDUCTION HARDENED CAMSHAFT** . . . Provides exceptionally high resistance to wear and pitting and results in extended engine efficiency.
- **INTERNAL OIL LINES** . . . Help to eliminate the possibility of oil line breaking and provide better oil retention for longer engine life.
- **RIGID FLYWHEEL HOUSING MOUNTING** . . . This is secured by 6 bolts instead of only 4 or 5 to give a more solid coupling between drive train and engine.
- **NEW PROCESS 435 TRANSMISSION** . . . Has greater torque-carrying capacity and provides greater performance and durability.
- **EXHAUST VALVE SEAT INSERTS** . . . Extra hard, replaceable tungsten-cobalt exhaust valve seat inserts resist pitting and burning for better valve seating and longer life.
- **7-BEARING NODULAR-CAST CRANKSHAFT** . . . Ford's specially cast crankshaft has extra bearing support for smoother power and is stronger than cast iron crankshafts.
- **POSITIVE ENGAGEMENT STARTING MOTOR** . . . Standard on all sixes. Does not begin cranking until fully engaged. This prolongs the life of the starter, ring gear and battery.



289 V8 . . .

New for 1965 on the Ranchero and Sedan Delivery Models. There is a 200 hp 2V model and a high-performance 225 hp 4V model available. Some of the outstanding quality features are:

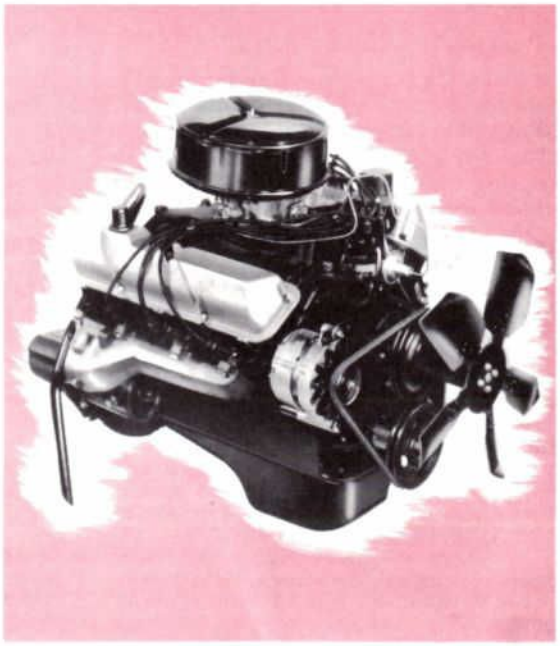
- **EXTRA DURABLE PISTON RINGS** . . . Three quality rings are either chrome-plated or phosphate coated to protect against corrosion.
- **STEEL-BACKED REPLACEABLE BEARINGS** . . . These are intermediate copper-lead on mains and regular copper-lead on connecting rods for longer bearing life.
- **ROTOR-TYPE OIL PUMP** . . . Extra large capacity and maintains a higher, more constant oil pressure even at idle.
- **FULLY SYNCHRONIZED TRANSMISSION** . . . Optional is Ford's "Four-On-The-Floor" easy shifting, fully synchronized transmission. Regular 3-speed is standard —new automatic is optional.



1965

FORD LIGHT and MEDIUM TRUCK IMPROVEMENTS

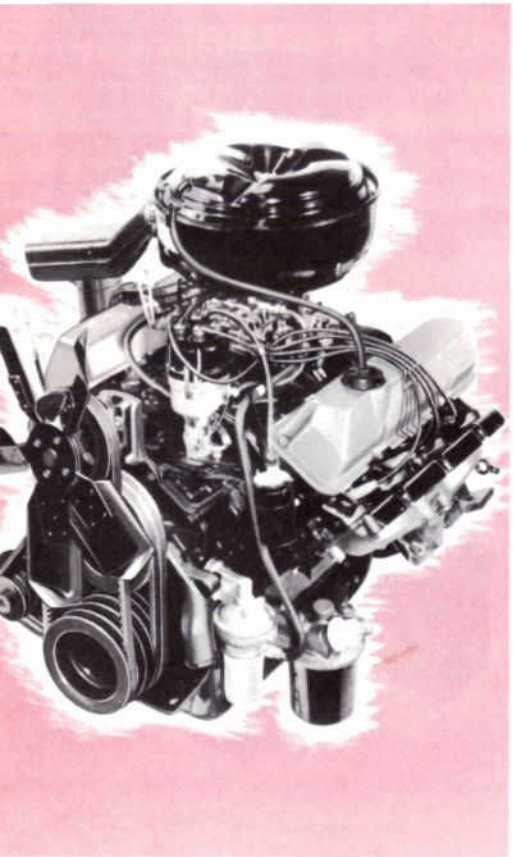
ENGINES, continued



352 V8 . . .

The new 352 CID is the biggest, most powerful engine available as a standard production feature. It replaces the 292 V-8 providing 48 more horsepower than before. It features:

- **CUSTOM FITTED PISTONS** . . . These have steel reinforcing struts, are light in weight, and provide controlled expansion for precise fit, high efficiency and top performance.
- **DEEP SKIRT CYLINDER BLOCK** . . . Extends below center of crankshaft for increased cylinder block strength and rigidity.
- **FREE-TURN INTAKE AND EXHAUST VALVES** . . . Reduce friction and permit valve to rotate instead of sticking.
- **SILENCED OIL BATH AIR CLEANER** . . . Standard on the 352 V-8; adds to the quieter passenger-car type performance. Protects engine from dust particles.



330 & 330 HEAVY DUTY V8's . . .

Introduced last year, the 330 V8 continues as an option on the C-550 truck, while the 330 and 330 HD V8's continue as optional engines in the F-N-C Series. In addition, the 330 V8 is now optional in the F-N 500 series. Some of the quality features are:

- **STRESS-RELIEVED CYLINDER HEADS** . . . These minimize the possibility of warping and cracking. Exhaust ports are alternated with cooler intake ports to avoid hot spots.
- **POSITIVE ENGAGEMENT STARTING MOTOR** . . . Does not begin cranking until fully engaged. Prolongs the life of the starter and engine. Gives faster starts.
- **13 INCH CLUTCH** . . . Standard or optional, this clutch gives 23% extra lining area for 30% more torque carrying capacity and greater durability than a 12 inch clutch.
- **DOUBLE-STRAND ROLLER TIMING CHAIN** . . . Has extra large bushings for maintaining more precise timing longer, and is more durable than single-strand link-type chains.
- **HOT AND COLD AIR INDUCTION SYSTEM** . . . Maintains a more efficient temperature of air to the carburetor and provides maximum performance and extra fuel economy. Optional fresh air intake system ups fuel economy 5%.
- **NEW PROCESS 435 TRANSMISSION** . . . Standard with the 330 V8's and has extra torque carrying capacity. Provides greater performance and durability.