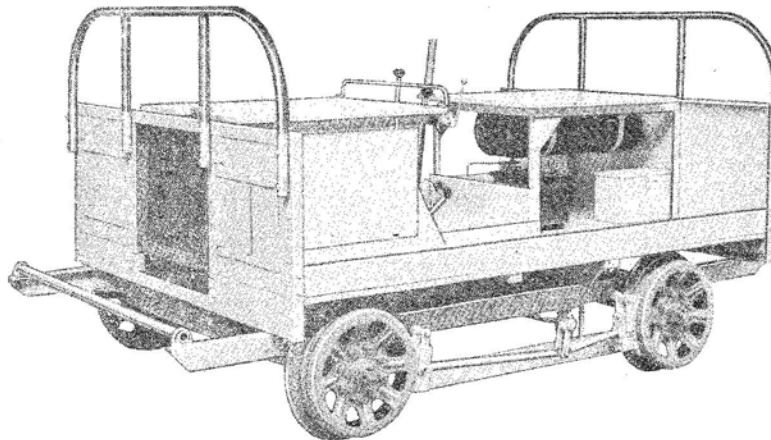


SERVICE INSTRUCTIONS AND PARTS LIST

2200

Fairmont

A4 SERIES D AND A5 SERIES E GANG CARS



This bulletin contains brief instructions for the operation and care of A4-D and A5 series E gang cars, and lists parts for them. Read page 6 before ordering repair parts. Always give factory car and engine serial numbers.

CAR PARTS--As printed, this bulletin lists parts for standard cars.

ENGINE--See manufacturer's bulletins for instructions and parts.

CARRURETOR--See manufacturer's bulletin for instructions and parts.

ELECTRICAL SYSTEM--Information and repair parts for battery ignition and electrical systems can be most quickly obtained from local automotive service stations.

MAGNETO--For magneto equipment, see manufacturer's bulletin for instructions and parts. It is furnished with magneto cars only.

TRANSMISSION--See bulletin 409 for parts. (A5-E cars)

CLUTCH--See bulletin 348 for parts. (A5-E cars)

FAIRMONT RAILWAY MOTORS, Inc.

FAIRMONT, MINNESOTA, U. S. A.

DISTRICT SALES OFFICES

Chicago New York Washington, D. C. St. Louis St. Paul

IN CANADA: Fairmont Railway Motors, Ltd., Toronto, Ont.

CEC

Printed in U. S. A.

**PREPARING
FOR SERVICE**

On battery cars connect the loosened cable to positive battery terminal. Be sure the negative terminal is grounded. Fill the oil can with medium engine oil and squirt a few drops in the generator and starter oilers.

Fill grease gun with a grease which will not congeal at 40⁰ below zero and will not flow at temperatures of 275⁰. All major oil companies can furnish such lubricant. Then force lubricant through the following fittings: one on differential axle sleeve, two on clutch release shaft bearings, one each brake shaft bearing and each axle bearing.

Check oil level in crankcase with bayonet gauge at left rear of engine block. Keep oil level at upper or full mark on gauge. Four quarts capacity. Under normal conditions and temperatures, use SAE 30 oil.

Fill cooling system with clean soft water, through radiator filler cap. About 14 quarts are required. Use a recommended anti-freeze in winter. A small carton of rust preventative is included in the tool box with each new unit and it is recommended this be regularly used, *except do not use with permanent anti-freeze mixtures*. Fill tank with clear gasoline. Tank holds 10 gallons. Replace filler cap. Open shutoff valve in fuel line under gas tank.

**CONTROLS
AND
INSTRUMENTS**

The throttle lever is mounted on brake lever guide. Cars have an automotive choke control. Pull out to choke carburetor when starting engine.

The long lever operating in a notched guide controls the brake. It is applied by pulling lever to the rear. Extending through the floor at right of control pit is the lever controlling the axle reverse or directional gear. With lever set in FORWARD position the four speeds of engine transmission can be used in driving car forward, and when set in REVERSE position the four speeds can be used in driving car backwards. *CAUTION--Disengage clutch and have car at a dead stop before shifting axle reverse gear.*

Battery ignition is turned on with key type ignition switch. Battery cars have an ammeter. Magneto cars have switches with the "Off" and "On" positions indicated. The oil gauge should show a pressure of 15 pounds for A5-E cars and 40 pounds for A4-D cars at normal speeds when engine is warm.

**STARTING
THE ENGINE**

Be sure the shift lever on engine transmission is in neutral position, and brake is set and locked. Partially open throttle. Be sure shutoff valve below gas tank is open. Turn on ignition and pull out choke, then crank engine. As soon as it starts, partially release choke, then after a few seconds completely release it. Allow a cold engine to run a few minutes to warm up before pulling loads. When starting a warm engine do not use choke unless the engine fails to fire the normal mixture. Ordinarily use choke only when starting new or cold engines.

**OPERATING
THE CAR**

When driving forward the lever controlling the axle reverse or directional gear should be in the position marked "FORWARD", this allows the four transmission speeds to be used in driving the car forward or with radiator ahead. *CAUTION--THE AXLE REVERSE OR DIRECTIONAL GEAR SHOULD ONLY BE SHIFTED WHEN CAR IS STATIONARY.* Always keep it in either forward or reverse position.

With engine running and directional gear set in "FORWARD" position, release brake and disengage clutch by pushing the foot pedal down. Move the shift lever of four speed transmission to left and ahead for low gear. Slightly speed up the engine by opening throttle and slowly engage clutch until the car moves.

To shift from low to second speed, again disengage clutch and pull shift lever straight back through neutral and into second, then engage clutch again. To shift from second to third speed, disengage clutch and carefully move the shift lever forward to neutral, then to right and ahead, after which engage clutch and speed engine up by opening throttle if necessary.

Shift from third to fourth speed by handling clutch as previously instructed, and pulling the shift lever directly back thru neutral, and into fourth speed. Always drive in fourth gear and control car speed by opening or closing the throttle, unless loads or grades make it necessary to drop back to other gear ratios.

When necessary to drive backward, move axle reverse or directional gear shift lever to the "REVERSE" position, and use the four speeds of engine transmission as first instructed.

Do not rest foot on clutch pedal, or press it down while driving, as unnecessary wear and slippage will result. To stop car push in clutch pedal and apply brake by pulling back on lever. When car comes to a stop move shift lever on four speed transmission to neutral, and lock brake. Leave the axle reverse or directional gear engaged, to prevent clashing of gears.

LUBRICATION

The same grade of oil as used in engine crankcase is satisfactory for general lubrication of car. Supply oilers on generator and starter with 8 to 10 drops of oil every 1000 car miles. Every 1000 car miles force a good grade of fibre universal joint grease in through fittings on the universal joint knuckles. Lubricate the two clutch release shaft bearings every 1000 miles with pressure gun lubricant. Also remove cover on flywheel housing and check clutch throwout bearing reservoir, replenish grease if necessary. Lubricate differential axle every 100 car miles, or daily if car is in constant service, use pressure gun grease.

Engine crankcase holds four quarts of oil. Check oil level with bayonet gauge, and maintain it at the full mark. Under normal conditions of temperature and service use SAE 30 oil. Change oil every 50 hours of running when car is new, and thereafter as necessary. Extreme conditions usually require different oils. Therefore consult engine manufacturer's bulletin for detailed information on weight of oil and frequency of changes if car is in severe service.

The engine transmission and axle reverse or directional gear each holds 4 pounds of oil. Use SAE 140 gear lubricant in summer and SAE 90 in winter. Check level with plug in side or end every 30 days.

GENERAL CARE AND ADJUSTMENT

If car makes any unusual noise, stop at once and locate the trouble. To secure best results let only one man operate and maintain the car, then he knows the effect of every adjustment.

COOLING SYSTEM—Never operate without water in the cooling system. Capacity is about 14 quarts. If leaks occur, have them taken care of promptly. Drain water if car stands exposed to freezing weather for any length of time, to prevent damage. If

a good anti-freeze is used, the cooling system does not require draining. Alcohol, Prestone, or Zerex solutions are recommended.

FAN BELT--The fan is driven by a "V" belt, and if slippage occurs the engine will run hot. Tighten belt by adjusting fan hub or shifting generator. Keep belt snug but not extremely tight.

CARBURETOR--Carburetor has a needle valve adjustment at bottom, and also an idling adjusting screw. At regular intervals, remove and clean gasoline filter bowl. When replacing bowl be sure it seats tight against the gasket.

STORAGE BATTERY--Check level of solution every two weeks, and keep it well above the plates but do not overfill. Replenish solution with distilled water only. In freezing weather add water before making a run, to insure its mixing with the solution. Keep battery terminals clean and tight, and well greased.

GENERATOR--The generator should not be operated unless it is connected to the battery (through the ammeter). If necessary to operate engine when generator is disconnected from the battery circuit, ground the generator. To do this disconnect wire from generator side of cut-out relay, and attach it to one of the cut-out mounting screws. Regulate generator charging rate by shifting the third brush. Generators have two charge regulators.

SETTING OFF--Avoid bending wheels or axles in planked track where wheel flanges might catch in flangeways if end of car were swung too sharply sidewise. Pull backwards while turning gradually sidewise and wheels will climb out. Where there are guard rails use extreme care in taking off to avoid catching wheels and bending axles. Avoid heavy jars or striking low hung parts of car on rail in taking off between crossings.

RUNNING GEAR--To insure safety of the car watch the wheels and axles to make sure that:

1. Axle end nuts are secured by cotters.
2. Wheel tires are not worn dangerously thin.
3. Wheels and axles run true.
4. Wheel tire bolts are tight.
5. All wheels are tight on axles.

The car should roll freely and easily and run without excessive side sway. If axles are sprung, they should be taken out of car and straightened cold in a press or lathe. Never use heat as this will ruin the steel. Wheel side thrust is transmitted from the hub through a fibre washer and shouldered sleeve to the axle bearing inner race. The conventional type of thrust collars are not used. Shims are used between axle bearing box flanges and frame side channels. When necessary to slightly shift wheel and axle assembly for wheel alignment, shims may be removed from one side and added to the other. Use enough shims to eliminate excess axle end play.

INSULATION--If wheels are removed be sure to replace insulation properly--fibre washers next to hub faces. Keep wheels tight so the axle cannot turn in the insulation.

GAUGE--Wheel gauge should be from 56-1/4" to 56-3/8" to permit car to track properly on all types of rail. If wheels come too close together, insulation should be built up by layers of tough

paper around the fibre bushing, or a new one used. If wheels are too far apart, bushing can be slightly reamed with M7669 reamer. Wheels can be loosened after removing axle end nut, by using shock wheel puller M12234 or a demountable wheel puller M19889.

BRAKE--Always keep brake in the best of condition--some day you will need it badly. As brake liners wear, adjust toggle eye bolts. When liners are worn out, put on new ones.

FRAME--Inspect the car regularly every week, wiping off grease and oil, tightening loose bolts, nuts, etc. Cars kept outdoors should be protected by a canvas cover, such as our M11155.

AXLE BEARINGS--If necessary to adjust axle bearings do not set them snug. These tapered roller bearings should have from .003" to .005" end play, obtained by adding or removing shims under the cover. This also applies to the single row bearings in the directional gear. The large double row bearings in the directional gear on which the bevel gears turn, should have a minimum end play of .012". Assemble new large double row bearings in bevel gears with ends of cone and cup marked "Y" toward inside (next to axle splined hub). Older unmarked bearings may be installed with either end in.

CLUTCH PEDAL ADJUSTMENT--The position of the clutch pedal can be adjusted by turning the yoke on the rod that connects the pedal to the arm on throw-out shaft.

REVERSE GEAR SHIFT LEVER ADJUSTMENT--The position of axle reverse gear shift lever can be adjusted by turning the yoke on shift rod.

INSTRUCTIONS FOR ORDERING PARTS

When this bulletin is received, complete the following motor car record from the FAIRMONT name plates on the car and on the engine. Always mention these factory serial numbers when writing about the car or ordering parts.

Factory Car No. _____ Class _____ Series _____
 _____ Group _____ Special _____
 Factory Engine No. _____ Make _____ Type _____

TO INSURE PROMPT AND CORRECT SHIPMENT of parts, always give:

- (1) Quantity of each part wanted.
- (2) Symbol number of part as shown in this book.
- (3) Description of part as shown in this book.
- (4) Factory serial numbers recorded above.
- (5) Car gauge if other than 56-1/2" standard.
- (6) State whether shipment is to be by mail, express, or freight.

All parts are shipped f. o. b. factory, transportation charges to be paid by customer. Terms are strictly cash with order.

Parts are listed by description, symbol and quantity. Quantities in right-hand columns show the number of parts in each assembly or group. Items printed in capitals are assemblies which include all parts listed immediately following and indented to the right. When assemblies can be used, always order them to save work of fitting separate parts. If in doubt as to any part wanted, send full description or sketch, or send old part with order.

For descriptive purposes the engine end of car is named front, and right and left are determined by looking from rear to front.

Common bolts, nuts and washers are not listed in this bulletin, as they can be obtained from any railroad store department.

Items used on cars having figures in the space on the name plate marked "Special" and different from those used on standard cars, are listed under that special car designation, see page 29. The main parts of accessories are given on pages 25 through 28.

ALWAYS GIVE FACTORY CAR AND ENGINE SERIAL NUMBERS AND STATE TRACK GAUGE, WHEN ORDERING PARTS OR WRITING US.

CAR IDENTIFICATION

(Found on Car Name Plate)

To accurately identify cars, all units carry a complete designation as follows:

Class A4 Series D Group _____ Special _____"
 Class A5 Series E Group _____ Special _____"

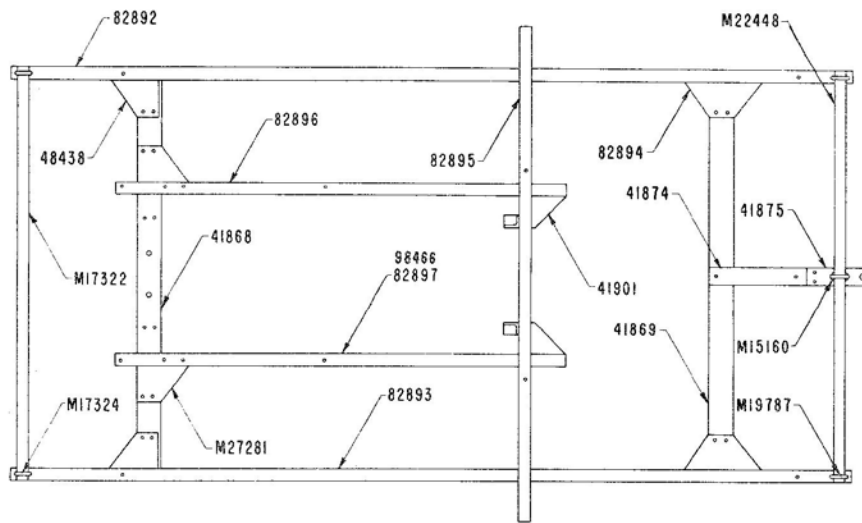
The class, series and group number are always shown, and cars having changes to customer's specifications also have figures in the space marked "Special". When the letter "Z" appears in the designation, it indicates either broad or narrow gauge.

NUMERICAL PART INDEX

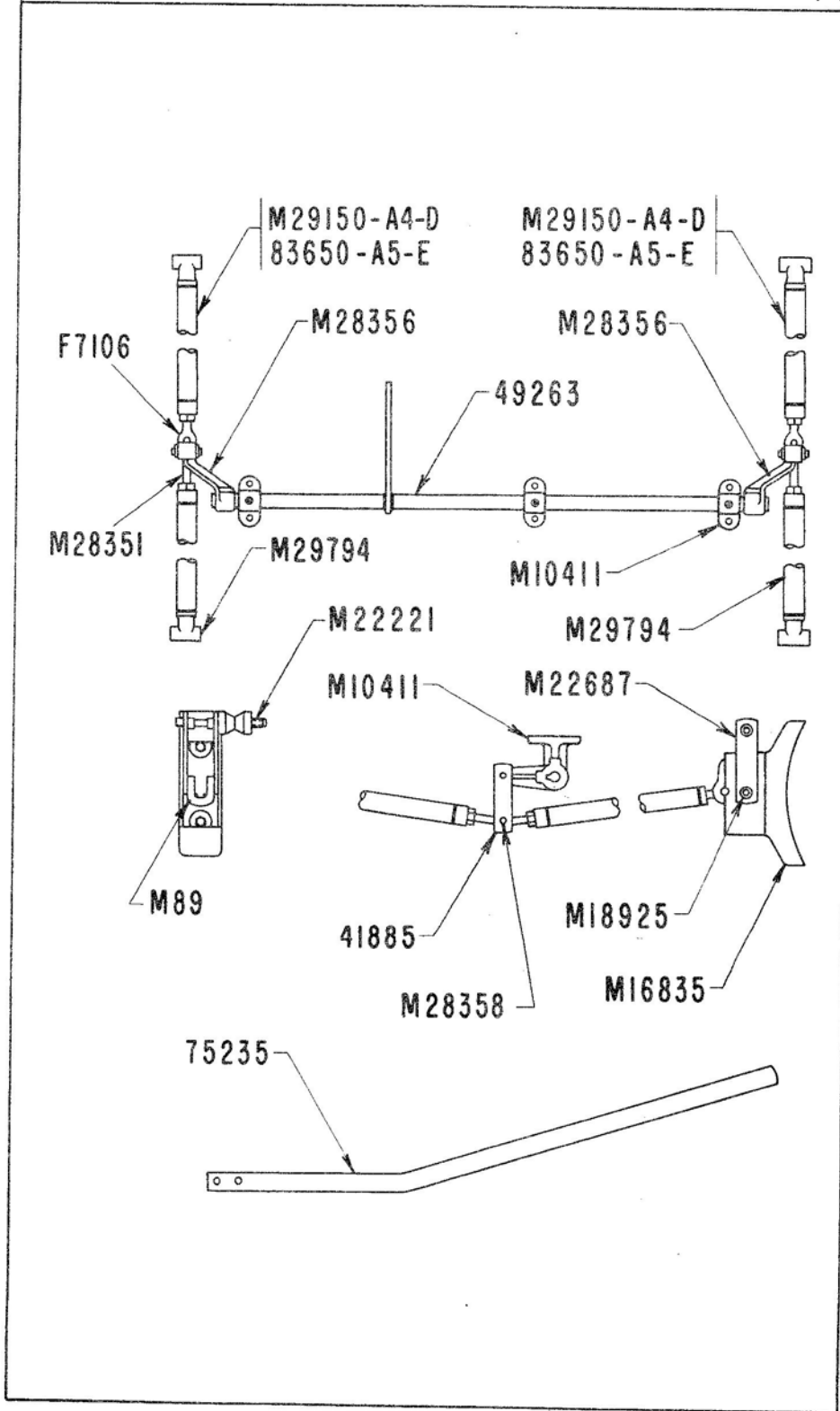
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FRAME - RAIL SKIDS

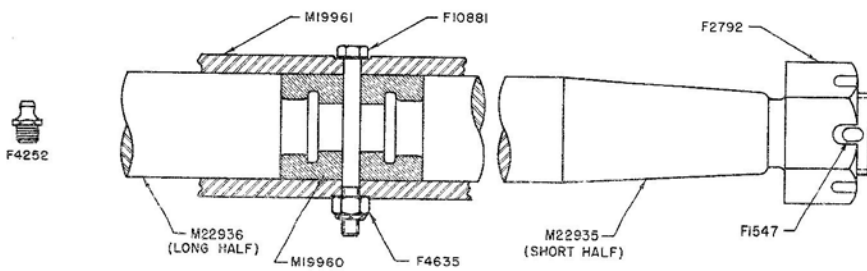
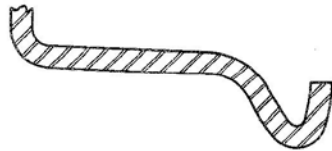
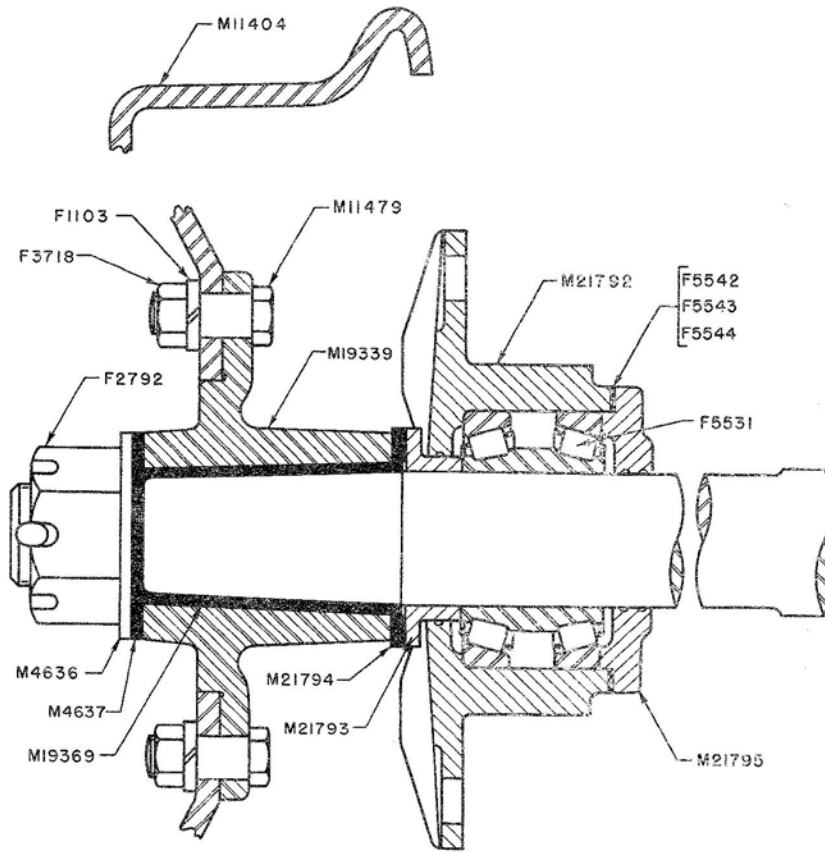


FRAME (assembled-A5-E-3 and later)	98884	1
FRAME (assembled-A5-E-1, A5-E-2 & A4-D)	82891	1
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Cross Angle (front)	41868	1
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U-Bolt (lift pipe - rear)	M19787	1
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U-Bolt (draw bar)	M17324	1
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Lock Nut 1/2".....	F2702	2
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Hanger (brake shoe).....	M22687	8
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Spring (hanger pin).....	M18926	4



AXLE BEARINGS - WHEELS

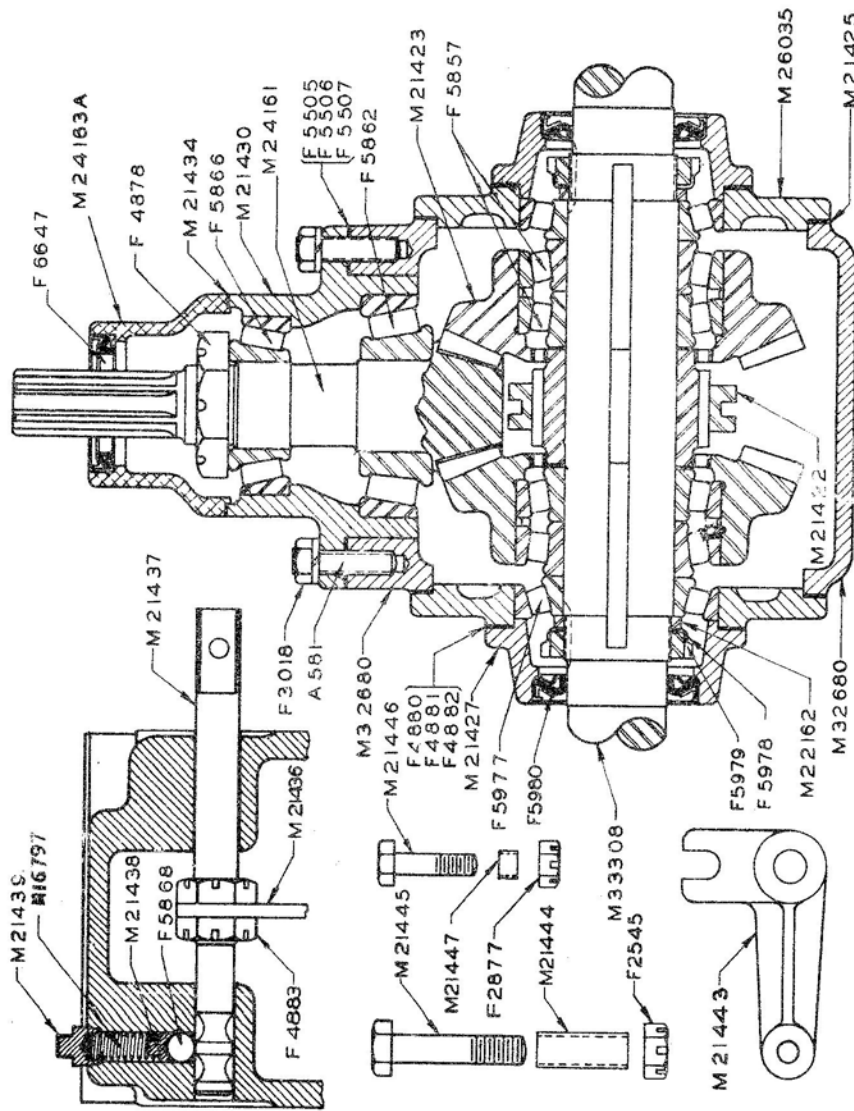
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Hex Nut 1/2" heat treated.....	F13691	8
Thrust Sleeve (wheel hub to bearing).....	M21793	4
Insulating Washer (hub inner face).....	M21794	4
INSULATION SET - 1-15/16".....	M19836	4
Insulating Sleeve.....	M19369	4
Insulating Washer (outer hub face).....	M4637	4
Steel Washer (outer).....	M4636	4
16" x 5/16" DEMOUNTABLE WHEEL (taper bored for insulation)	M19384D	4
Hub only (taper bored).....	M19339	4
16" x 5/16" Demountable Tire only.....	M11404	4
BOLT SET (8 each bolt, nut, and lockwasher).....	M12177	4
Hub Bolt 5/8 x 1-1/2" SAE.....	M11479	32
Hex Nut 5/8" SAE.....	F3718	32
Lockwasher 5/8".....	F1103	32

Following heavy duty wheels are used on some cars:

16" DEMOUNTABLE WHEEL (heavy duty - bored for insulation).	M30050D	4
Hub only (taper bored for insulation).....	M19339	4
16" Demountable Tire only (heavy duty).....	M21298	4
BOLT SET (8 each bolt, nut, and washer).....	M21801	4
Hub Bolt 5/8 x 2" SAE.....	M21802	32
Hex Nut 5/8" SAE.....	F3718	32
Lockwasher 5/8".....	F1103	32

DIFFERENTIAL AXLE

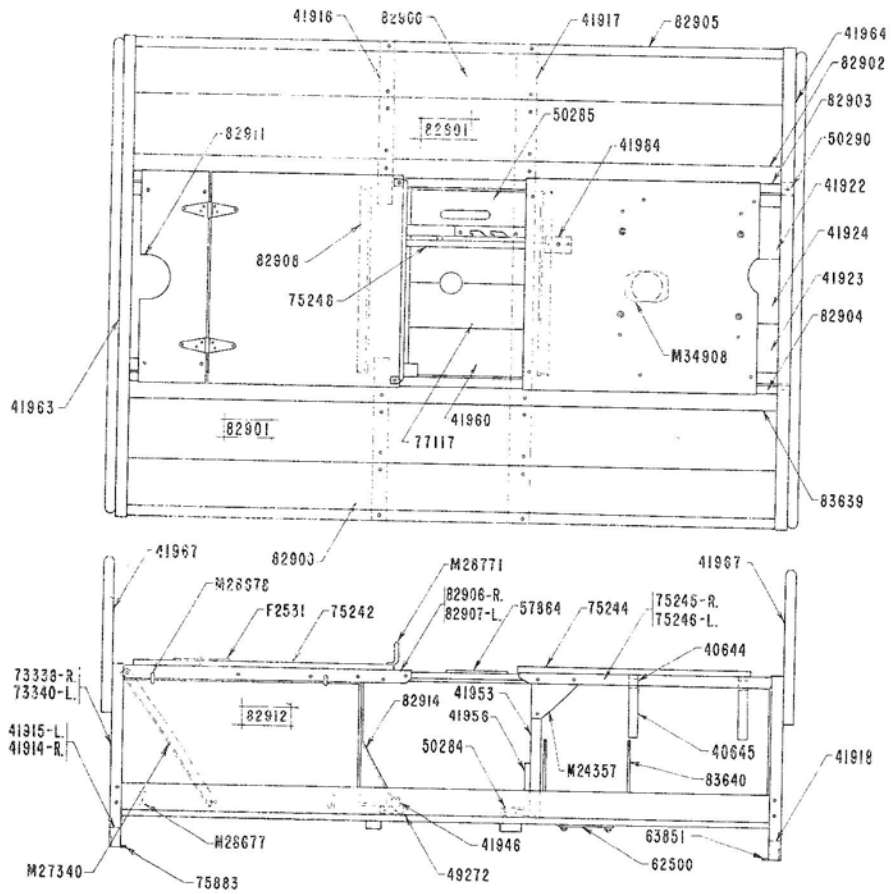
DIFFERENTIAL AXLE 1-15/16" (assembled - includes end nuts)	M22934N	1
Axle Half (long).....	M22936	1
Axle Half (short).....	M22935	1
Grease Fitting (Zerk type).....	F4252	1
Split Bushing (halves not sold).....	M19960	1
Axle Sleeve.....	M19961	1
Center Bolt 5/16 x 3-1/4".....	F10881	1
Elastic Stop Nut 5/16" hex.....	F4635	1
Axle End Nut.....	F2792	2
Cotter (axle end nut).....	F1547	2



NOTE--Assemble large double row bearings in bevel gears with ends of cone and cup marked "Y" toward inside (next to axle splined hub). Older unmarked bearings may be installed with either end in.

DRIVE AXLE AND REVERSE GEAR

DRIVE AXLE AND REVERSE GEAR (complete).....	41863	1
DRIVE AXLE WITH SPLINED HUB (assem. - inc. end nuts)....	M33308N	1
Axle End Nut (use F1547 cotter).....	F2792	2
Sliding Clutch Ring (10 teeth).....	M21422	1
Timken Bearing (double - bevel gears).....	F5857	2
Bevel Gear (35 teeth).....	M21423	2
Timken Bearing (axle to support).....	F5977	2
Spacer Ring (bearing to nut).....	M22162	2
Lock Nut (notched).....	F5979	2
Washer (with prongs).....	F5978	2
GEAR CASE WITH STUDS.....	M32680	1
Stud 1/2 x 1-15/16" (pinion housing).....	A581	6
SIDE CASTING WITH STUDS (brg. support).....	M26035	2
Stud 1/2 x 3-1/8" (bearing cover).....	M22164	8
Gasket (side casting).....	M21425	2
Cover (only - axle bearing).....	M21427	2
Oil Seal (axle bearing cover).....	F5980	2
Cap Screw 3/8 x 1-1/4" hex head.....	F1125	16
Shim .020" (axle brg. cover).....	F4880	4
Shim .007" (axle brg. cover).....	F4881	10
Shim .005" (axle brg. cover).....	F4882	8
BEVEL PINION, BRGS. & HOUSING (assem.).....	M24160	1
Bevel Pinion and Shaft (12 teeth).....	M24161	1
Housing (pinion and shaft).....	M21430	1
Timken Bearing (next to pinion).....	F5862	1
Timken Bearing (outer - small).....	F5866	1
Slotted Nut 1-1/2" extra fine thd. (use F4879 cotter).....	F4878	1
COVER WITH OIL SEAL (complete - ill. M24163A).....	M24162A	1
Oil Seal (outer pinion bearing).....	F6647	1
Gasket (bearing cover).....	M21434	1
Cap Screw 3/8 x 1-1/2" hex head.....	F1292	3
Shim .020" (pinion housing to case).....	F5505	2
Shim .007" (pinion housing to case).....	F5506	5
Shim .005" (pinion housing to case).....	F5507	4
Hex Nut 1/2".....	F3598	14
Shifter Fork.....	M21436	1
Shifter Shaft.....	M21437	1
Slotted Nut 7/8" extra fine thd.....	F4883	2
Stop Ball (shifter shaft).....	F5868	1
Cup (stop ball).....	M21438	1
Spring (shifter stop).....	M16797	1
Plug (stop spring).....	M21439	1
Support Angle (shifter bell crank).....	M21442	1
Bell Crank (shifter).....	M21443	1
Bushing (bell crank).....	M21444	1
Pivot Bolt (bell crank - use F2545 nut).....	M21445	1
Washer.....	M21281	1
End Bolt (shifter shaft - use F2877 nut).....	M21446	1
Spacer Bushing (end bolt).....	M21447	2
TOP COVER WITH FILLER AND CAP.....	M37154	1
Filler Cap.....	39573	1
Gasket (top cover).....	M21440	1
Cap Screw 3/8" x 1" hex head.....	F1007	2
Cap Screw 3/8" x 3/4" hex head.....	F1014	4
Pipe Plug 1".....	F2465	2
Torque Arm.....	41864	2



HOUSING BODY		
HOUSING.....	82899	1
Safety Rail (front and rear).....	41967	2
Deck Support (front).....	41916	2
Deck Support (middle-right front).....	41914	1
Deck Support (middle left front).....	41915	1
Deck Support (middle rear).....	41917	1
Deck Support (rear).....	41918	1
Deck Board (outer).....	82900	2
Deck Board (intermediate).....	82901	2
Deck Board (right inner).....	82902	1
Deck Board (left inner).....	83639	1
Deck Board (center-beneath rear seat).....	41924	1
Deck Board (right-beneath rear seat).....	41922	1
Deck Board (left-beneath rear seat).....	41923	1
Support Cleat.....	41946	1
Cockpit Floor Board (left).....	41969	1
Cockpit Floor Board (center).....	77117	2
Cockpit Floor Board (right).....	50285	1
Support Angle (cockpit boards - front).....	49272	1
Support Angle (cockpit boards - rear).....	50284	1
Side Board (deck).....	82905	2
End Board (rear).....	73315	1
TOOL TRAY END (right front).....	73338	1
TOOL TRAY END (left front).....	73340	1
Loop (strap - use F7050 rivet).....	F3393	4
Cover Plate (reverse gear filler).....	M34908	1
Guide (brake lever).....	75248	1
Catch (brake lever guide).....	57864	1
Support Angle (rear seat).....	82908	1
Side Angle (upper right).....	82906	1
Side Angle (upper left).....	82907	1
Deck Angle (lower right).....	82903	1
Deck Angle (lower left).....	82904	1
Angle Brace (front).....	M27340	2
Seat Board (stationary).....	82911	1
SEAT BOARD (hinged).....	75242	1
Grab Iron.....	M28771	1
Latch (seat board).....	M27852	2
Spacer (latch).....	M28230	2
Spring (latch).....	TF-68F	2
Washer (latch).....	F1106	2
Seat Board.....	75243	1
Hinge (4" strap).....	F2531	2
Side Panel (engine housing).....	82912	2
Hinge Clip (side panel).....	M28677	4
Fastener (side panel).....	M28678	4
Spring (fastener).....	M1245	4
Rear Panel (engine housing).....	82914	1
Cover Plate (clutch opening).....	M29953	1
HOUSING SEAT (rear - assembled).....	75244	1
Seat Support (front - angle iron).....	41953	1
Seat Board (rear).....	75247	1
Side Angle (right).....	75245	1
Side Angle (left).....	75246	1
Gusset.....	M24357	2
Angle Clip (housing seat).....	50290	2
End Board (cockpit - rear).....	41956	1
Cross Angle (lower front).....	75883	1
Cross Angle (lower rear).....	63851	1
Support Frame (housing front).....	41963	1
Support Frame (housing rear).....	41964	1
Spacer 3/8" pipe.....	41966	2

FUEL SYSTEM

FUEL TANK (with cap).....	41982	1
Threaded Bushing.....	PH-90F	2
Bayonet Catch (neck for cap).....	F3614	1
FILLER CAP (with gasket).....	F3618	1
Gasket (filler cap).....	F3651	1
Saddle (fuel tank).....	40644	2
Anti-Squeak Lacing 68" (specify length required).....	F6101	
Clamp Strap (fuel tank).....	40645	2
FUEL STRAINER WITH NIPPLE.....	M34410	1
Nipple 1/8 x 3/4" brass.....	F1688	1
Bowl (glass - strainer).....	F7876	1
Screen (strainer).....	F8892	1
Gasket (strainer bowl).....	F7877	1
FLEXIBLE FUEL LINE 7" (with fittings).....	M35062	1
Compression Nut.....	F3029	1
Compression Sleeve.....	F3650	1
Shut-off Valve.....	F4336	1
Fuel Pipe 62" (A4-D-specify length required).....	F1689	
Fuel Pipe 59" (A5-E-specify length required).....	F1689	
Clip (supports fuel pipe).....	F7506	2
Street Elbow 1/8" brass.....	F6584	1
Connector (1/4 tube - 1/8" pipe).....	F1709	1
Guard (fuel line).....	41984	1

AIR CLEANER

NOTE--Following 8 items for A4-D cars.

Air Cleaner.....	F12863	1
Support Band.....	F12864	1
Hose 32" (air cleaner).....	F12272	
Clamp (hose).....	F5193	2
Hose 1-1/2 - 2".....	F3529	
Elbow.....	73321	1
Clamp Support.....	82918	1
Clamp (hose).....	73322	1

NOTE--Following 8 items for A5-E cars.

Air Cleaner.....	F7665	1
Support Plate (air cleaner).....	M32902	1
Mounting Bracket (air cleaner).....	F7658	1
Gasket.....	F7916	1
Elbow (air cleaner).....	68976	1
Gasketing (springfelt - specify length required).....	F11221	14"
Air Duct (specify length required).....	F12272	22"
Clamp (hose).....	F1854	2

ENGINE - IGNITION (A4-D Cars)

ENGINE (Complete with Trans, Clutch & Electrical Accessories)	F14268	1
Shift Lever (transmission)	73306	1
Oil Pressure Gauge	F9261	1
Hose with Fittings 18"	F8978	1
Street Elbow 1/8" brass	F9899	1
Elbow 1/8" brass	F1398	1
Ignition Switch (key type)	F9060	1
Ammeter	F8675	1
Insulating Disc (ammeter)	37264	1
Storage Battery (12 volt)	F13550	1
Wood Platform	59556	1
Hold Down (battery)	78627	1
Rubber Washer	59555	2
Hex Elastic Stop Nut 1/4"	F4606	4
SUPPORT (battery)	87469	1
Stud 1/4 x 9-1/2"	78626	2
Spring	TF-68F	8
Hex Elastic Stop Nut 5/16"	F4635	4
Strap 1/8 x 1 x 6-3/4"	62500	4
Cable (battery to ground - 38")	F6275	1
Cable (battery to switch - 49")	F8325	1
Cable (switch to starter - 18")	F5927	1
Wire (switch to ammeter - 18")	M22354	1
Wire (coil to switch - 23")	89386	1
Wire (regulator to ammeter - 28-1/2")	66419	1
Wire (starter switch to ammeter - 6")	M24174	1
Wire (regulator to generator - 54")	73319	1
Wire (regulator to generator - 54-3/4")	73320	2
Support (regulator)	82917	1
Support Clip (cable)	F12862	1
Terminal (primary wire - small)	F4320	
Terminal (primary wire - large)	F6310	
Primary Wire - (per foot - no terminals)	F6317	
Switch (starter)	F6084	1

ENGINE MOUNTING - COOLING SYSTEM (A4-D Cars)

Support Bracket (engine, right front).....	73307	1
Support Bracket (engine, left front).....	73308	1
Oil Seal.....	F13144	1
PROPELLER SHAFT.....	77118	1
Universal Joint Assem.....	F9342	1
Yoke.....	79307	1
Rebound Insulator (rear).....	F7204	4
Support Angle (engine rear).....	75234	2
Support (rear engine and clutch pedal).....	71715	1
Spacer (rear support bracket).....	71718	2
RADIATOR.....	73309	1
Filler Cap.....	F5064	
Support Bracket (radiator).....	73310	2
Stud (radiator support).....	M22940	2
Spring.....	M11737	2
Brace (radiator).....	41904	2
Drain Cock (radiator).....	1560	1
Flexible Hose 1-1/4".....	F14110	1
Flexible Hose 1-1/2".....	F12855	1
Clamp (hose - 1-1/8 to 1-3/4").....	F1854	2
Clamp (hose - 1-5/8 to 2-5/8").....	F5193	2
Muffler.....	F12859	1
Elbow (muffler).....	F12856	1
Gasket.....	F12858	1
Clamp (muffler).....	F12860	1
Clamp (muffler).....	F12861	1
Support Bracket (muffler).....	73303	1
Tail Pipe.....	73311	1
Clamp (tail pipe).....	73312	1
Bushing 3/8" rubber.....	F6001	2

ENGINE - IGNITION (A5-E Cars)

ENGINE (with alternator-less clutch & trans.)	F16078	1
ENGINE (less clutch, trans. & Elec. Accessories)	F7025	1
Short Block	F9963	1
Spark Plug 18mm	F7455	4
Wire 22" (spark plug)	M23078	2
Wire 25" (spark plug)	M23079	2
High Tension Cable (per foot)	F1402	
Primary Wire (per foot)	F2958	
Alternator D-R 1100720 (A5-E-2 and later)		1
Regulator D-R 1119513 (A5-E-2 & later with alternator)		1
Generator 12 V. D-R 1102209 (A5-E-1 cars only)	F15826	1
Regulator D-R 1119245 (A5-E-1 Cars with generator)	F15827	1
Distributor D-R 625F	F6752	1
Coil D-R 1115043	F15606	1
Carburetor - Zenith 12167	F13309	1
Gasket (carburetor to manifold)	F6038	1
Stud 1-1/4" (carburetor)	M22384	2
Hex Nut 5/16"	F1451	2
Oil Pressure Gauge	F7830	1
Flexible Fuel Line 18" (with fittings)	F7803	2
Half Union	F7179	2
Street Elbow 1/8" brass	F6584	2
Nipple 1/8" brass	F1688	1
Tee 1/8" brass	F7814	1
Ignition Switch (key type)	F9060	1
Ammeter (A5-E-2 and later)	F12486	1
Ammeter (A5-E-1)	F3951	1
Insulating Disc (ammeter)	37264	1
Storage Battery (12 volt)	F13550	1
Wood Platform	59556	1
Hold Down (battery)	78627	1
Rubber Washer	59555	2
Hex Elastic Stop Nut 1/4"	F4606	4
SUPPORT (battery)	87469	1
Stud 1/4 x 9-1/2"	78626	2
Spring	TF-68F	8
Hex Elastic Stop Nut 5/16"	F4635	4
Plate	62500	4
Cable (battery to ground - 38")	F6275	1
Battery Terminal (ammeter wire A5-E cars w/out starter)	F3999	1
Wire (battery to ammeter - 56")	Y4053	1
Wire (switch to ammeter - 4")	Y4060	1
Wire (coil to switch - 26")	M24055	1
Wire (alternator to ground-A5 E-2 and later)	85499	1
Wire 28" (ammeter to alternator-A5-E-2 and later)	97318	1
Wire (gen. to reg. & reg. ground to gen. - A5-E-1)	85499	2
Wire (generator to ammeter - 26" - A5-E-1)	M24055	1
Wire (ammeter to switch - 6")	M24174	1
Terminal (primary wire - small)	F4320	
Terminal (primary wire - large)	F6310	
Primary Wire (per foot)	F6317	
NOTE - Following items for A5-E cars with starters		
Starter 12 Volt (D-R 1107234-A5-E-3 & later)	F16158	1
Starter 12 Volt (D-R 1107256 -A5-E-1 & A5-E-2)	F14366	1
Spacer (starter to bell housing)	F7315	1
Bolt 3/8 x 2-1/4" hex head	F2760	3
Switch (starter)	F6084	1
Cable (battery to switch - 49")	F8325	1
Cable (switch to starter - 22")	F6514	1
Wire (starter switch to ammeter - 18")	M22354	1
Support Clip (cable)	F5185	1

ENGINE MOUNTING-TRANSMISSION-COOLING SYSTEM (A5-E Cars)

Support Casting (engine-front)	M27303	1
Angle Bracket (engine-right rear)	M27411	1
Angle Bracket (engine-left rear)	M27412	1
Support Angle (bracket to frame)	M27302	2
Spacer 1/4 x 1 x 1" (rear)	M30298	2
Support Insulator (large rubber bushing)	F5876	4
Rebound Insulator (small rubber bushing)	F5878	4
Washer (large rubber bushing)	F5877	4
Bolt (support insulators)	F5879	4
Slotted Nut (support bolt)	F3383	4
Transmission (Warner - see bulletin 409)	F9055	1
Cap Screw 3/8 x 2" hex head	F1649	8
Cap Screw 3/8 x 1" hex head	F1007	8
Plug (speedometer drive hole)	M21790	1
Grease Fitting 1/8" (angle)	F4260	2
Spacer Sleeve (transmission rear)	M27301	1
Washer (transmission rear end nut)	M27574	1
Washer (rubber - shift lever)	F14387	1
Clutch (Borg & Beck - see bulletin 348)	F7061	1
Cap Screw 5/16 x 1" hex head	F1493	6
Pilot Bearing (clutch shaft)	F3137	1
Release Bearing and Carrier (clutch)	F7098	1
Spring (release bearing)	D-18C	1
Propeller Shaft Complete	F9343	1
RADIATOR (with filler cap)	F6979	1
Filler Cap (with gasket)	F5064	1
Support Leg (radiator)	83651	1
Mounting Pad (radiator)	M24466	2
Stud (radiator support)	44150	2
Spring (radiator mounting)	M11773	2
Washer (spring)	M18528	2
Slotted Nut 1/2"	F2545	2
Radiator Hose - 2" I.D. (upper 6-1/4", lower 10")	F4026	
Clamp (radiator hose)	F5193	4
Brace (radiator)	M28775	2
Drain Cock 1/4"	1560	1
Thermostat	F8594	1
Spring (thermostat)	61511	1
Muffler	F5301	1
Support Strip (muffler)	39131	1
U-Bolt (muffler)	M28776	1
Exhaust Elbow	66351	1
Adapter (muffler)	66350	1
Flexible Tubing 22-1/4" (specify length required)	F7345	
Clamp	F11834	2
Cap Screw 7/16 x 1-1/2" hex head	F1197	2
Lock Washer 7/16"	F2326	2
Hex Nut 7/16"	F7057	2
Tail Pipe (muffler)	M28778	1
Cap Screw 7/16 x 1-1/2" hex head	F1197	2
Lock Washer 7/16"	F2326	2
Hex Nut 7/16"	F7057	2

CONTROLS

	A4-D	A5-E	
Shift Lever (axle reverse gear).....	55043	55043	1
Ball (shift lever).....	F9263	F9263	1
Mounting Bracket (shift lever).....	55046	55046	1
Spacer (bracket).....	46023	46023	1
SHIFT ROD (axle reverse gear).....	46015	46015	1
Rod only.....	46021	46021	1
Yoke.....	M7256	M7256	1
Lock Nut.....	F1040	F1040	1
Washer.....	M36303	M36303	1
Pin (shift rod).....	M30874	M30874	1
Throttle Lever and Shaft.....	41974	53673	1
THROTTLE ROD (with ball joints).....	83654	83654	1
Ball Joint.....	F9552	F9552	2
Hex Nut 1/4".....	F2632	F2632	2
Throttle Lever Stop.....	53675	53675	1
Arm (throttle shaft).....	42039	53676	1
Bearing (throttle shaft).....	M27306	.....	3
Cross Shaft.....	M9676	.....	1
Control Arm (throttle).....	M17119	.....	1
Throttle Rod.....	41977	.....	1
Bell Crank (throttle).....	M22991	.....	1
Control Rod (throttle).....	42090	.....	1
Choke Control (dash).....	F8572	F3558	1
Cable End (choke control).....	55048	.....	1
Clip (anchors lower end).....	F7506	F7506	1
Support Clip.....	42971	42971	1
Pad (clutch pedal).....	F6015	F6015	1
Clutch Pedal (less pad - 1-1/16" bore).....	F6515	F6515	1
Stud (clutch pedal - 1-1/16" dia.).....	M27309	M27309	1
Support Angle (pedal stud).....	82898	82898	1
Hex Nut 1/2".....	F3598	F3598	2
Release Arm (on clutch release shaft).....	73611	M27307	1
Key (release arm).....	F3751	F3751	1
Rod (clutch release).....	82916	M22342	1
Adjusting Yoke (release rod).....	F6014	F6014	1
Pin (rod and yoke).....	F6016	F6016	2
Spring (clutch pedal return).....	M7298	M7298	1
Anchor Stud (spring).....	83653	83653	1
Set Screw 3/8 x 5/8" square head.....	F1110	F1110	1

TOOL BOX - TOOLS

Tool Box.....	42057	1
Lever Indicator (forward).....	M12227	1
Lever Indicator (reverse).....	M8304	1
Adjustable Wrench - 9".....	F2947	1
Grease Gun.....	F8269	1
Holder (oil can).....	F3510	1
Oil Can.....	F5652	1
Spark Plug Wrench.....	M36400	1
Handle (spark plug wrench).....	D-48A	1
TOOL KIT (in bag - replaces M6737).....	M36398	1
Draw String Bag.....	F6738	1
Ball Pein Hammer.....	F2945	1
Pliers - 6".....	F2946	1
Screw Driver - 4".....	F2948	1
Connecting Rod Socket & Wrench.....	F3096	1
End Wrench 7/16 & 3/8" openings.....	F7957	1
End Wrench 9/16 & 1/2" openings.....	F7956	1
End Wrench 3/4 & 5/8" openings.....	F7955	1
End Wrench 7/8 & 13/16" openings.....	F7954	1
End Wrench 15/16 & 1" openings.....	F7953	1
Rust Preventative.....	41039	1
Starting Crank (A5-E).....	83656	1

ACCESSORIES

The following standard accessories may be applied to A4-D and A5-E cars. When ordering for field installation, be sure to give factory car and engine serial numbers along with car designation. Also shown are some tools that will simplify maintenance work.

ALUMINUM WINDSHIELD 75873

Includes mounting parts complete for installation. All bolts, nuts and lockwashers are CADMIUM plated to resist rusting.

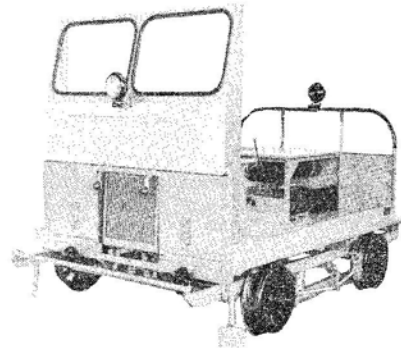
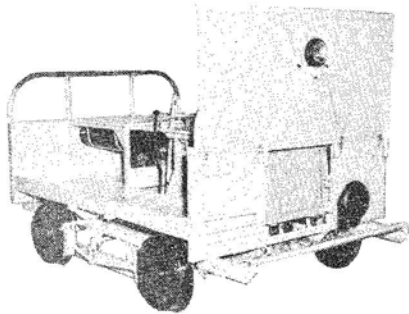
Window Glass 7'32 x 18-7/16 x 27-13/16.....	75951
Rubber Moulding.....	75952
Windshield Frame.....	76020
Side Gusset (right).....	76026
Side Gusset (left).....	76029
Guard Rail.....	58612
Mounting Bracket (guard rail)	58613
Groove Pin 1/4 x 1-3/4".....	F9905
Reinforcing Bar.....	80625
Gusset (side gusset to side rail).....	76018
Spacer 1/8 x 1 x 1".....	50971
Seal (windshield frame to front panel).....	76031

MOTOR CARTOP 83942

Combination of 83942 top and 75873 aluminum windshield gives durable all weather protection to motor car operator and passengers.

Aluminum top is bolted to top of windshield and a rear support which clamps on rear safety rail.

Roof Unit.....	83944
Support Pipe.....	77531
Socket (support pipe).....	83943
Rubber Insulator.....	F11486
Lockwasher 5/16" Cad. Plated.	F9546
Hex Nut 5/16" Cad. Plated....	F11487
Cap Nut 5/16" Cad. Plated....	F13206



WINDSHIELD WITH WINDOWS 83939

Adequate bad weather protection. Deflects wind away from operator. Windows allow full vision; easily applied in field.

Curtain with Windows.....	83940
Window (Specify 9 x 19).....	F4899
Window (Specify 9 x 16).....	F4899
Top Socket.....	M16415A
Vertical Post.....	M29985

REAR EXTENSION LIFT PIPE 39125

Side Pipe with Gusset.....	39127
Cross Pipe.....	39130
Guide Casting.....	39126
Bracket (muffler).....	39131
Hook.....	39132

WINDSHIELD PLAIN 83937

Full width of car, protects riders at minimum cost. Easily applied in field. Strong materials, withstands wintry gales.

Curtain.....	83938
Top Socket.....	M16415A
Vertical Post.....	M29980

SINGLE END CAB 82761

CAB FRONT COMPLETE.....	73327
Cab Front (less windows)..	73328
Window Glass 7/32 x 20 x 26".....	51405
Rubber Moulding (window)..	51406
Seal (cab front to front panel).....	73342
Seal (cab top to rear frame).	51411
End Frame (rear).....	83191
Roof Unit Complete.....	73334
Corner Gusset R. F. & L.R.....	73336
Corner Gusset L. F. & R.R.....	73337
Safety Rail (rear-cross).....	83195

SIDE PANELS (PR.) 83858

SIDE PANEL COMPLETE-R.....	83863
Side Panel only-R.....	83864
SIDE PANEL COMPLETE-L.....	83859
Side Panel only-L.....	83860
Window Glass 8 x 12".....	51530
Rubber Moulding (window)..	51531
Chrome Lock Gasketing 8'x8"..	F11221
Seal (side panel top).....	83866
Rubber Mounting.....	F10059
Mounting Plate.....	54608

REAR CURTAIN WITH WINDOW 83869

REAR CURTAIN WITH WINDOW.....	83870
Window (specify 14½ x 40).	F12197
Strip 1/8 x 1 x 59½" (curtain)	83871
Stud (lift dot fastener)....	F7748
Eyelet (lift dot fastener)...	F7746
Clinch Plate.....	F7747
Bottom Bar (curtain).....	49937

**NARROW SIDE CURTAINS AND REAR
CURTAIN WITH WINDOW 83872**

Made up of groups 83868 and 83869

**WIDE SIDE CURTAINS AND REAR
CURTAIN WITH WINDOW 83873**

Made up of groups 70188 and 83869

SINGLE HEAD AND TAILLIGHTS 83185

Headlight-Sealdbeam (12 volt)	F13445
Mounting Bracket (long).....	41000
Mounting Bracket (short).....	41001
Clamp Bracket.....	60404
U-Bolt.....	M16715
Wire Extension.....	65943
Tail Light (red lens-12 volt)	F13552
Lens (tail light - red).....	F7363
Mounting Bracket.....	42165
Fuse Block.....	F7074
Fuse 10 Amp.....	F5946
Switch.....	F5603

**NARROW SIDE CURTAINS (PR.) 83863**

Used only on cabs with side panels.

Slide Rod (side curtains)....	51998
SIDE CURTAIN COMPLETE.....	53606
Lock Bolt.....	51515
Handle (curtain bar).....	F9701
Curtain Bar.....	52001
Curtain Ring.....	43901
Lock Bolt Clips R.R.....	51463
Lock Bolt Clips L.R.....	51466

WIDE SIDE CURTAINS (PR.) 70188

Used only on cabs with out side panels.

Slide Rod (side curtains)....	51998
SIDE CURTAIN COMPLETE.....	51999
Lock Bolt.....	51515
Handle (curtain bar).....	F9701
Curtain Bar.....	52001
Curtain Ring.....	43901
Lock Bolt Clips R. F. & L.R...	51466
Lock Bolt Clips L. F. & R.R...	51463

DOUBLE HEAD AND TAILLIGHTS 83884

Same as 83185 except for the following:

Fuse Block.....	F4367
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FIXED SIDE STEPS 83887

Deck Angle (R.F. Center)...	83889
Deck Angle (L.F. Center)...	83888
Pipe Spacer.....	M32600
SIDE STEP.....	83890
Step Brkt. R.F. & L.R...	43830
Step Brkt. L.F. & R.R...	43826
Step Brkt. #2L.F. & #3R.R...	43828
Step Brkt. #3L.R. & #2R.F...	43832
Angle (step board).....	83891

CANVAS COVER M11155

Cars that are kept out of doors need this protection. 12 oz. Duck 9 x 12 feet. Eyelets for tying.

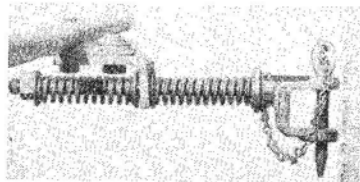
RAIL SWEEPS 43903 BLADE TYPE

Body (right).....	43932
Body (left).....	43937
Clamp Plate.....	M23957
Blade (belting).....	M23956
Hinge Bolt.....	M18562
Spring.....	QB-61C
Seat (spring).....	M30435A
Slotted Nut 1/2".....	F2545
Spacer Sleeve.....	M17191



LINK COUPLER M6656

One piece, holds securely, easily detached by lifting one end a few inches.

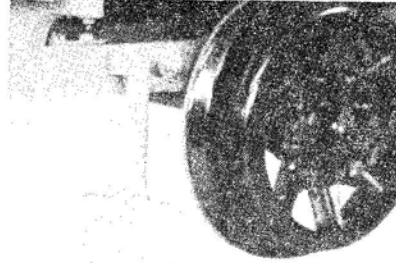


HINGED SIDE STEPS 83935

Hinge Bracket R.F. & L.R...	45472
Hinge Bracket L.F. & R.R...	45474
Reinforcing Strip (deck)...	47066
Spacer Sleeve.....	M34444
HINGED SIDE STEP.....	55876
Step Bracket L.F. & R.P...	45477
Step Bracket R.F. & L.R...	45478
Step Bracket (Center)...	45479
Angle (step board).....	55879

TURNTABLE M14910

Cross Truss.....	M14943
Rail (2 used).....	M14947
Base.....	M14948



RAIL SWEEPS 85540 HOSE TYPE

Support Bracket (right)...	85578
Filler Block (hose).....	M8096
Hinge Bolt.....	M18562
Spring.....	QB-61C
Seat (spring).....	M30435A
Slotted Nut 1/2".....	F2545
Spacer Sleeve.....	M17191

SAFETY COUPLER M11668

Provides maximum safety and efficiency in linking trailer to motor car. Hook of 7/8" rod with self closing malleable iron catch.



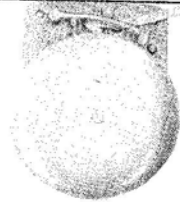
SPRING COUPLER M10953

Folts to draw bar on motor car. Springs cushion bumps and jerks when towing trailers.

HAND GONG - 10 INCH 83881

Loud, durable warning signal. Mounted away from tools. Operated by pull wire.

Gong only - 10".....	1337
Pull Cable 22-3/4".....	F3040
Pull Rod.....	55834
Cable Guide.....	55830
Support Strap.....	83882
Lever Extension.....	55829



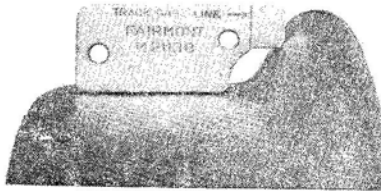
FOOT GONG - 10 INCH 37565

Loud warning signal operated by foot leaves both hands free. Mounted out of way of tools.

Gong only - 10".....	F3025
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ELECTRIC HORN

Horns (pair).....	F9444
Button (horn).....	F8311



POCKET WHEEL GAUGE M21138

This gauge provides a dependable method of checking motor car and trailer wheel gauges. Locate line of one wheel, hold tape or other accurate measure in position, then shift gauge to other wheel.



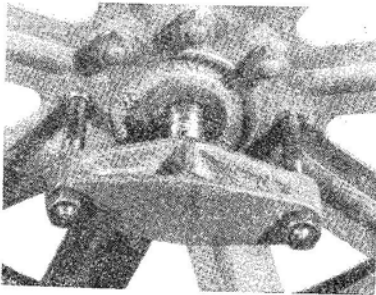
TAPER HAND REAMER M7666

Wheel reamers save time and provide an accurate means of bringing wheel and axle assemblies to gauge, and in removing burrs, paint, or rust from the bores.

Reamer (1-3/16 axle).....	M7666
Reamer (1-5/16 axle).....	M34728
Reamer (1-7/16 axle).....	M7667
Reamer (1-11/16 axle).....	M7668

WHEEL PULLER M19509

Very effective, yet light weight and easy to use, this puller makes it a simple matter to remove demountable wheels or hubs with complete safety. Consists of a cross bar and two long bolts with nuts and washers. Draw nuts evenly and, when tight a hammer blow on center of cross bar frees the wheel.



PARTS USED ON SPECIAL CARS ONLY

Listed on this and following pages, in numerical order according to car designation, are spare parts used only on A5 Series E cars with figures in the space on the name plate marked "Special".

The symbols at left side of page are for standard car parts as listed on pages 9 through 24, and symbols for corresponding parts as used on the special cars are shown at the right hand side of page. When selecting material for special cars, first locate items in standard parts section pages 9 through 24 and note symbol number. Then under the part of this section covering the car for which parts are being ordered, determine whether or not the symbol is changed for such cars. Items for which there are no corresponding parts in the standard parts section are shown as additional items under the car designation to which they apply.

		A5-E-1-1		
M19886	INSULATION SET		Omit Symbol	
M4637	Insulating Washer		Omit	
M4636	Steel Washer		Quantity should read	8
M19384D	16 x 5/16" DEMOUNTABLE WHEEL		should read	88194D
M11404	16 x 5/16" Demountable Tire		should read	88195
		A5-E-1-2		
83648	Rail Skid		should read	89621
Add.	2 Adjusting Channel			M23936
	Roller Chain 10 ft 3 in			F1445
	1 Offset Link			F2842
	1 Connecting Link			F2987
50575	AXLE BEARING 1-15/16"		Quantity should read	2
M21792	Bearing Casing		Quantity should read	2
Add.	2 AXLE BEARING 1-15/16" (front)			M23929
	2 Bearing Casing (front)			M23930
M22934	DIFFERENTIAL AXLE		Omit all parts	
Add.	1 Drive Axle (front)			M23924
	1 Sprocket 19T			M23925
	1 Key (sprocket)			M23928
	1 Set Screw 1/2 x 1"			M9643
	2 Stud 5/8 x 4-7/8"			M23981
41863	DRIVE AXLE AND REVERSE GEAR		should read	45176
M33308N	DRIVE AXLE WITH SPLINED HUB		should read	37908N
Add.	1 Sprocket 19T			M23925
	1 Key (sprocket)			M23928
	2 Set Screw 1/2 x 1"			M9643
F14330	Engine		should read	F15114
F13309	Carburetor		Omit	
F6038	Gasket (carburetor)		Omit	
M22384	Stud 1 1/4" (carburetor)		Omit	
F3951	Ammeter		should read	F12486
Add.	1 Hanger (tool box - right)			89622
	1 Hanger (tool box - left)			89623
	1 Tool Box			89624
	2 Spacer (tool box)			48853
		A5-E-1-3		
41923	Deck Board (left-beneath rear seat)		should read	93204
75243	Seat Board		should read	93205
75247	Seat Board (rear)		should read	93206
Add.	1 Grab Iron (front-center)			42403
	1 Grab Iron (rear-center)			93207
42057	Tool Box		should read	74805

		A5-E-1-4		
83648	Rail Skid		should read..	89621
Add:	2 Adjusting Channel			M23926
	Roller Chain 10 ft. 3 in.			F1445
	1 Offset Link			F2842
	1 Connecting Link			F2987
50575	AXLE BEARING 1-15/16"	Quantity should read..		2
M21792	Bearing Casing	Quantity should read..		2
Add:	2 AXLE BEARING 1-15/16" (front)			M23929
	2 Bearing Casing (front)			M23930
M22934N	DIFFERENTIAL AXLE	Omit all parts		
Add:	1 Drive Axle (front)			M23924
	1 Sprocket 19T			M23925
	1 Key (sprocket)			M23928
	1 Set Screw 1/2 x 1"			M9643
	2 Stud 5/8 x 4-7/8"			M23931
41863	DRIVE AXLE AND REVERSE GEAR	should read..		45176
M33308N	DRIVE AXLE WITH SPLINED HUB	should read..		37908N
Add:	1 Sprocket 19T			M23925
	1 Key (sprocket)			M23928
	2 Set Screw 1/2 x 1"			M9643
F14330	ENGINE			F15654
F3951	Ammeter	should read..		F12486
Add:	1 Hanger (tool box - right)			89622
	1 Hanger (tool box - left)			89623
	1 Tool Box			89624
	2 Spacer (tool box)			48853
		A5-E-1-5		
Has Heavy Duty Wheels, Turntable and Cross Seat. Write for special list.				
		A5-E-1-6		
83648	Rail Skid		should read..	89621
Add:	2 Adjusting Channel			M23936
	Roller Chain 10 ft. 3 in.			F1445
	1 Offset Link			F2842
	1 Connecting Link			F2987
50575	AXLE BEARING	Quantity should read..		2
M21792	Bearing Casing	Quantity should read..		2
Add:	2 AXLE BEARING 1-15/16" (front)			M23929
	2 Bearing Casing (front)			M23930
M22934N	DIFFERENTIAL AXLE	Omit all parts		
41863	DRIVE AXLE AND REVERSE GEAR	should read..		45176
M33308N	DRIVE AXLE WITH SPLINED HUB	should read..		37908N
Add:	1 Drive Axle (front)			M23924
	1 Sprocket 19T			M23925
	1 Key (sprocket)			M23928
	2 Set Screw 1/2 x 1"			M9643
	2 Adjusting Stud 5/8 x 4-7/8"			M23931
		A5-E-1-7		
M19836	INSULATION SET	Omit Symbol		
M4637	Insulating Washer	Omit		
M4636	Steel Washer	Quantity should read..		8
		A5-E-1-8		
F15826	Generator	Omit		
F15827	Regulator	Omit		
F13550	Battery	Omit		
		A5-E-1-9		
F16078	Engine (less clutch & Trans.)	should read..		F16079
F9060	Ignition Switch (key type)	should read Magneto		F6602
F3951	Ammeter	should read..		F12486

A5-E-2

Principal change from group 1

- 1 Engine has 12 V - 32 Amp. alternator in place of a generator.

A5-E-3

Principal change from group 2.

- 1 Provide clearance for D R 1107234 starter.

A5-E-3-1

PAGE 13 under AXLE BEARINGS - WHEELS

M19386	INSULATION SET 1-15/16"	Omit	
M19369	Insulating Sleeve	Omit	
M4637	Insulating Washer	Omit	
F4636	Steel Washer	Quantity should read	8
M19384D	16 x 5/16" DEM. WHEEL	should read	M19385D
M19339	Hub only	shcuid read	M19338

PAGE 15 under DRIVE AXLE AND REVERSE GEAR

M24162A	COVER WITH OIL SEAL	should read	46636
F6647	Oil Seal	should read	F5867
Add:	1 Speedometer Drive Gear		M21933
	1 Speedometer Drive Pinion		M21934
	1 Speedometer Drive Nipple		F5457
	1 Woodruff Key		F2551
	1 Speedometer Adapter 90°		F9707
	1 Drive Key		F9708
	1 Speedometer Cable		F9710
	1 Speedometer Head		F15198
	1 Mounting Strap		F12327
	2 Clamp 7/16"		F12845

PAGE 17 under HOUSING

82914	Rear Panel (engine housing)	should read	98425
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A5-E-3-2

PAGE 9 under FRAME - RAIL SKIDS

83648	Rail Skid	should read	89621
Add:	2 Adjusting Channel		M23926
	Roller Chain 10 ft. 3 in.		F1445
	1 Offset Link		F2842
	1 Connecting Link		F2987

PAGE 13 under AXLE BEARINGS - WHEELS

50575	AXLE BEARING	Quantity should read	2
M21792	Bearing Casing	Quantity should read	2
Add:	2 AXLE BEARING 1-15/16" (front)		M23929
	2 Bearing Casing (front)		M23930
M22934N	DIFFERENTIAL AXLE	Omit all parts	

PAGE 15 under DRIVE AXLE AND REVERSE GEAR

41863	DRIVE AXLE AND REVERSE GEAR	should read	45176
M33308N	DRIVE AXLE WITH SPLINED HUB	should read	37908N
Add:	1 Drive Axle (front)		M23924
	1 Sprocket 19T		M23925
	1 Key (sprocket)		M23928
	2 Set Screw 1/2 x 1"		M9643
	2 Adjusting Stud 5/8 x 4-7/8"		M23931

A5-E-3-3

PAGE 17 under HOUSING

82911	Seat Board (stationary)	should read	97998
75242	SEAT BOARD (hinged)	should read	97999
75243	Seat Board	should read	98000
75247	Seat Board (rear)	should read	98001
Add:	1 Grab Iron		62429

A5-E-3-4

Has Heavy Duty Wheels

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