RUCKSTELL Axle
FOUR SPEEDS FOR FORDS
PARTS PRICE LIST
EFFECTIVE MAY 1, 1924
OVER ENTIRE UNITED STATES
FOR
PASSENGER CAR AXLE
AND
ONE TON TRUCK AXLE
NOTE: PARTS AS ILLUSTRATED AND LISTED HEREIN ARE AS
FURNISHED IN PASSENGER CAR AXLES FROM No. 40, 401 UP, and
IN TRUCK AXLES FROM No. 503, 101 UP.

RUCKSTELL SALES & MFG. CO.
BERKELEY, CALIFORNIA

MANUFACTURED BY
HALL-SCOTT MOTOR CAR CO.
BERKELEY, CALIFORNIA
**What It is**—The Ruckstell Axle unit is a simple planetary gear built up with the differential assembly and contained in a special housing, which replaces the left half of the standard Ford axle housing. It gives regular Ford axle speed or a 55 per cent reduction functioning **BACK** of the ring gear. This device is noiseless, it operates in oil, and leaves the road clearance unchanged. Easily installed in any model of Ford car. Also made for Ford truck.

When running in Ford speeds, Ruckstell gears are locked and do not operate; this means no loss of power through driving auxiliary shafts or gears, or wear on Ruckstell parts.

(A) The Ford Steering Gear is planetary.
(B) The Ford Transmission is planetary.
(C) The Ruckstell Axle is planetary.

It becomes an integral part of the car or truck and makes the Ford the **ONLY** car or truck on the market with Two-Purpose performance—**TWO CARS IN ONE**.

**Easy to Operate**—The simple movement of a lever gives the Ford car a speed gear—ready for speedy driving on paved streets or level highways. Another movement of the lever gives the Ford a traffic or power gear—for negotiating congested streets, climbing stubborn hills, going through heavy, muddy roads and snow and slush.

**GEAR RATIOS**

WITH STANDARD FORD GEARS

<table>
<thead>
<tr>
<th>Gear Type</th>
<th>Gear Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ford High</td>
<td>3.6-1</td>
</tr>
<tr>
<td>Intermediate-High</td>
<td>5.6-1</td>
</tr>
<tr>
<td>Ford Low</td>
<td>10-1</td>
</tr>
<tr>
<td>Emergency Low</td>
<td>15.4-1</td>
</tr>
<tr>
<td>Ford Reverse</td>
<td>14.5-1</td>
</tr>
<tr>
<td>Low Reverse</td>
<td>22.3-1</td>
</tr>
</tbody>
</table>

WITH SPECIAL **3-1 OVERDRIVE GEARS**

<table>
<thead>
<tr>
<th>Gear Type</th>
<th>Gear Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ford High</td>
<td>3-1</td>
</tr>
<tr>
<td>Intermediate-High</td>
<td>4.7-1</td>
</tr>
<tr>
<td>Ford Low</td>
<td>8.5-1</td>
</tr>
<tr>
<td>Emergency Low</td>
<td>13-1</td>
</tr>
<tr>
<td>Ford Reverse</td>
<td>12-1</td>
</tr>
<tr>
<td>Low Reverse</td>
<td>18.5-1</td>
</tr>
</tbody>
</table>
What It Does—

1. Climbs all ordinary grades on intermediate or low high.
2. Negotiates the heaviest pulling with Ruckstell low.
3. Is flexible in traffic.
4. Shifts ratios instantly at any speed.
5. Is fool-proof in operation.
6. Is noiseless on 3rd and 4th speeds.
7. Will out perform any other light car on the market.
8. With addition of special three to one "over drive" gears gives smooth engine operation at high rates of speed for flat country driving.

Note how the Ruckstell Axle becomes an integral part of the Ford car.
PASSENGER AXLE PARTS
PLATE No. 1
**Part No.**

**Description**

**Price Each**

**Quantity Price**

P-11 1 Ball, shift lever handle ............................................... $0.35
P-14A 1 Bracket, shift lever support ............................................. 1.25
P-29 2 Pin, catter, 3/32", 7/8" long. (Used in shift tube clevis pins)........ 1.25
P-38 2 Tube, shift ................................................................. .75
P-40 1 Coupling, shift tube ..................................................... .30
P-43 6 Bolt, 5/16", S.A.E., hex head, 1/8" long. (Used to attach differential casing halves) ..... .05
P-46 2 Pin, clevis, 5/16" dia., 13/16" long. (Used to attach shift tube) ........ .03
P-87 3 Pinion, idler ............................................................... 1.20
P-88 3 Pin, locking gear driving. (Used in P-160 Assembly) ................... .65
P-89 3 Pin, center, for idler gear ............................................... .25
P-93 1 Gear, internal ring ....................................................... 5.90
P-94 1 Lever, bell crank. (Used in shift lock Assembly) ........................... 9.50
P-100 1 Wire, iron, 5/8" dia., No. 18 B. & S. gauge. (For P-128 screws) ........... 100 Ft. .25
P-105 4 Washer, 7/16" lock. (Used under P-1032 nut on P-98A bell crank, under P-1021 cap screws which attach shifter housing, and under P-1032 nut on P-1014A shift lever arm) .10
P-109 2 Rivet, 5/8", dia., 3/16" long, steel, headless. (For shift tube) ........ 2 for .05
P-113 1 Yokc, shift ................................................................. .90
P-117 1 Plunger, shift lock ....................................................... .40
P-122 1 Fork, shift ................................................................. 1.80
P-127 1 Casket, shift lock housing ............................................... .03
P-138 10 Screw, master gear support, 5/16", S.A.E., hex, head, 2/8" long. Spec. steel .15
P-133 6 Pin, catter, 1/16", steel, 3/8" long. (Used in P-43 bolts) ............... 2 for .05
P-135 6 Nut, 5/16", S.A.E., hex, castellated. (Used on P-43 bolts) ............... .05
P-136 2 Washer, 5/8", lock. (Used under Ford bolts which attach P-14A bracket) 2 for .05
P-138 2 Pin, shift fork ............................................................ .05
P-139 1 Support, master gear, left hand (bracket) ................................ 4.35
P-141 1 Casing, differential, hand ............................................. 2.85
P-143 2 Pin, thrust washer retaining. (Used in P-159 Assembly) ................. 2 for .05
P-144 1 Gear, center ............................................................... 2.65
P-145 1 Plate, gear locking (with 6 holes) ..................................... 3.00
P-146 1 Gear, sliding clutch ..................................................... 4.50
P-147 1 Plate, gear clutch (with 2 notches) .................................... 2.80
P-154A 1 Housing, shifter ....................................................... 1.80
P-151A 1 Plug, shifter housing .................................................. 6.50
P-156A 1 Housing Assembly, axle (parts not sold separately) .................... 12.00
P-157 1 Fork Assembly, shift .................................................... 3.20
P-158A 1 Shift Lock Assembly .................................................... 6.25
P-159 1 Support Assembly, master gear, right hand ................................ 5.15
P-160 1 Casing Assembly, differential, left hand ................................ 4.00
P-161B 1 Lever, shift ............................................................... 1.40
P-163 1 Spring, shift lock plunger .............................................. .05
P-164A 1 Screw, set, special, 7/16", S.A.E., 1 3/16" long. (Used in P-156 axle housing to lock P-147 gear clutch plate) .................. 1.50
P-171A 1 Washer, differential thrust, fiber .................................... 1.15
P-174 10 Washer, master gear cap screw ........................................ 2 for .05
P-182 1 U" bolt, shift tube clamp ............................................... .15
P-159A 2 Nut, 5/16", S.A.E. ( Used on P-182 "U" bolt) ............................ 2 for .05
P-189A 1 Shift lever and bracket assembly ...................................... 4.00
P-193A 2 Spring, bell crank tension. (One used in P-189A shift lever assembly and one used in P-158A shift lock assembly) .......................... 1.00
P-199 3 Washer, felt. (Two used in P-189A shift lever assembly and one used in P-158A shift lock assembly) .................................. 1.00
P-200 2 Retainer, felt washer. (One used in P-189A shift lever assembly and one used in P-158A shift lock assembly) .......................... 1.00
P-202 1 Casing Assembly, complete differential .................................. 7.45
P-206 1 Support Assembly, shift tube .......................................... 4.50
P-208 1 Brace shift lever bracket ............................................... 0.05
P-209 1 Screw, 5/16", U, S. round filler head. (Used to secure shift lever bracket P-208 to Ford transmission housing) .................... 9.50
P-210 1 Screw, 5/16", S.A.E., hex, head, 1 5/6 long. (Used to attach P-208 shift lever bracket brace to P-14A shift lever bracket) ............... 1.50
P-211 1 Bearing, radial ball, Stron. No. 5012 .................................. 5.00
P-212 2 Washer, 5/16" lock. (Used under P-213 nut and under P-209 screw) ...... 10
P-213 1 Nut, 5/16", S.A.E. hex. (Used on P-219 bolt) .......................... 0.05
P-224 1 Guide Assembly, shift tube ............................................ 0.25
P-104A 1 Arm, shift lever ........................................................ 1.00
P-107 1 Ferrule, shift tube ..................................................... .10
P-102 2 Screw, cap, 7/16", S.A.E., hex, head, 1 1/6 long. (Used to attach P-158A shift lock assembly to P-156 axle housing) ............ 1.00
P-103A 1 Screw, set, special, 7/16", S.A.E., 1 5/6 long. (Used to attach shift lock assembly and lock P-147 gear clutch plate) ............ 1.50
P-103A 4 Nut, 5/16", S.A.E. (One used on P-1014A shift lever arm, one used on P-98A bell crank, one used to lock P-164A set screw, and one used to lock P-1031A set screw) ............ 0.05
P-43 1 Pinion, bevel, special, 3 1/13 to 1 ratio {Sold in pairs only} ............ 9.50

**The Guarantee of the **Ruckstell Axle** is void if other than Standard Ford or Ruckstell Bevel Gears are used.**
TRUCK AXLE PARTS
PLATE No. 2
### TRUCK TYPE—AXLES No. 503,101 UP

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Required</th>
<th>Description</th>
<th>Price Each</th>
<th>Quantity Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>31</td>
<td>3</td>
<td>Pinion, idler</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>1013</td>
<td>1</td>
<td>Fork, shift</td>
<td>1.80</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>Arm, shift lever</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>Ferrule, shift tube</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>1020</td>
<td>1</td>
<td>Spacer, internal ring gear</td>
<td>4.10</td>
<td></td>
</tr>
<tr>
<td>1021</td>
<td>4</td>
<td>Screw, cap, 7/16&quot; S.A.E., hex, head, 1&quot; long</td>
<td>1.90</td>
<td></td>
</tr>
<tr>
<td>1024</td>
<td>8</td>
<td>Nut, special, 3/8&quot; S.A.E. hex. castellated</td>
<td>0.70</td>
<td></td>
</tr>
<tr>
<td>1025</td>
<td>3</td>
<td>Pin, center</td>
<td>0.65</td>
<td></td>
</tr>
<tr>
<td>1026</td>
<td>1</td>
<td>Bearing, radial ball</td>
<td>13.75</td>
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<tr>
<td>1027A</td>
<td>8</td>
<td>Bolt, special 3/8&quot; S.A.E., 1 3/16&quot; long</td>
<td>0.65</td>
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<tr>
<td>1028</td>
<td>1</td>
<td>Yoke, shift</td>
<td>1.25</td>
<td></td>
</tr>
<tr>
<td>1031</td>
<td>2</td>
<td>Screw, set, 7/16&quot; S.A.E., special, 1 3/16&quot; long</td>
<td>0.15</td>
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<tr>
<td>1032</td>
<td>8</td>
<td>Nut, 7/16&quot; S.A.E., plain hex</td>
<td>0.05</td>
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</tr>
<tr>
<td>1034A</td>
<td>1</td>
<td>Coupling, shift tube</td>
<td>6.00</td>
<td></td>
</tr>
<tr>
<td>1035</td>
<td>2</td>
<td>&quot;U&quot; bolt, shift tube clamp</td>
<td>0.30</td>
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<tr>
<td>1039</td>
<td>1</td>
<td>Gasket, shift housing</td>
<td>0.03</td>
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</tr>
<tr>
<td>1040A</td>
<td>3</td>
<td>Bolt, special, 17/16&quot; S.A.E., 1 11/16&quot; long</td>
<td>0.10</td>
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<tr>
<td>1046A</td>
<td>3</td>
<td>Bolt, special, 7/16&quot; S.A.E., 4 7/8&quot; long</td>
<td>0.20</td>
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<tr>
<td>1047A</td>
<td>1</td>
<td>Housing, shift</td>
<td>1.15</td>
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<tr>
<td>1051</td>
<td>6</td>
<td>Nut, 7/16&quot; S.A.E., hex., castellated</td>
<td>0.06</td>
<td></td>
</tr>
<tr>
<td>1054</td>
<td>1</td>
<td>Axle housing assembly</td>
<td>28.60</td>
<td></td>
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<tr>
<td>1056</td>
<td>1</td>
<td>Fork, shift, assembly</td>
<td>3.40</td>
<td></td>
</tr>
<tr>
<td>1069A</td>
<td>1</td>
<td>Shift lock assembly</td>
<td>6.25</td>
<td></td>
</tr>
<tr>
<td>1070</td>
<td>1</td>
<td>Tube, shift</td>
<td>0.75</td>
<td></td>
</tr>
<tr>
<td>1072</td>
<td>1</td>
<td>Plunger, shift lock</td>
<td>0.45</td>
<td></td>
</tr>
<tr>
<td>1067</td>
<td>1</td>
<td>Washer, differential thrust (fiber)</td>
<td>0.15</td>
<td></td>
</tr>
<tr>
<td>1070</td>
<td>3</td>
<td>Pin, center gear thrust</td>
<td>0.07</td>
<td></td>
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<tr>
<td>1088A</td>
<td>1</td>
<td>Casing Assembly, differential, left hand</td>
<td>1.15</td>
<td></td>
</tr>
<tr>
<td>1089A</td>
<td>1</td>
<td>Guide Assembly, differential</td>
<td>17.00</td>
<td></td>
</tr>
<tr>
<td>1095</td>
<td>8</td>
<td>Washer, steel, 25/64&quot;. I. D., 3/4&quot; O. D., 1/16&quot; thick</td>
<td>0.15</td>
<td></td>
</tr>
</tbody>
</table>

The Guarantee of the **RUCKSTELL AXLE** is void if other than Standard Ford or Ruckstell Parts are used.
RUCKSTELL SERVICE

Every Ruckstell Axle should give perfect service to its owner. If there is anything wrong with your axle, or if you are not absolutely pleased with its operation, inform the dealer who installed it for you and have him correct the trouble. We stand behind the Ruckstell Axle in every way, and our policy is to see that every Ruckstell owner gets 100 per cent service from his axle.

ALWAYS GIVE AXLE NUMBER WHEN ORDERING PARTS

GENUINE Ruckstell Axle PARTS SHOULD BE OBTAINED FROM YOUR AUTHORIZED FORD DEALER

WARRANTY

We fully guarantee new Ruckstell two-speed Axles to be free from defects in material and workmanship for a period of ninety days from date of installation. We will replace, free of charge, any part proven defective within the guarantee period, which shall be returned to us for credit or replacement, together with the owner's name, date of installation, date of removal of part, name of dealer from whom purchased, and AXLE NUMBER, and which, upon examination, we shall find to be defective. The free replacement of a part or parts does not include transportation charges to and from our factory, nor the cost of its installation.

THIS GUARANTEE IS VOID IF OTHER THAN GENUINE FORD OR RUCKSTELL PARTS ARE USED.