

The Two-Direction Front End Winch For *Your* Willys 4WD

Model 100 King Winch is OUR answer to YOUR request for a cab controlled, POWER TAKE-OFF DRIVEN UNIT tough enough to work with that sturdy four wheel drive truck.

KOENIG IRON WORKS

2214 Washington Avenue

Houston 10, Texas

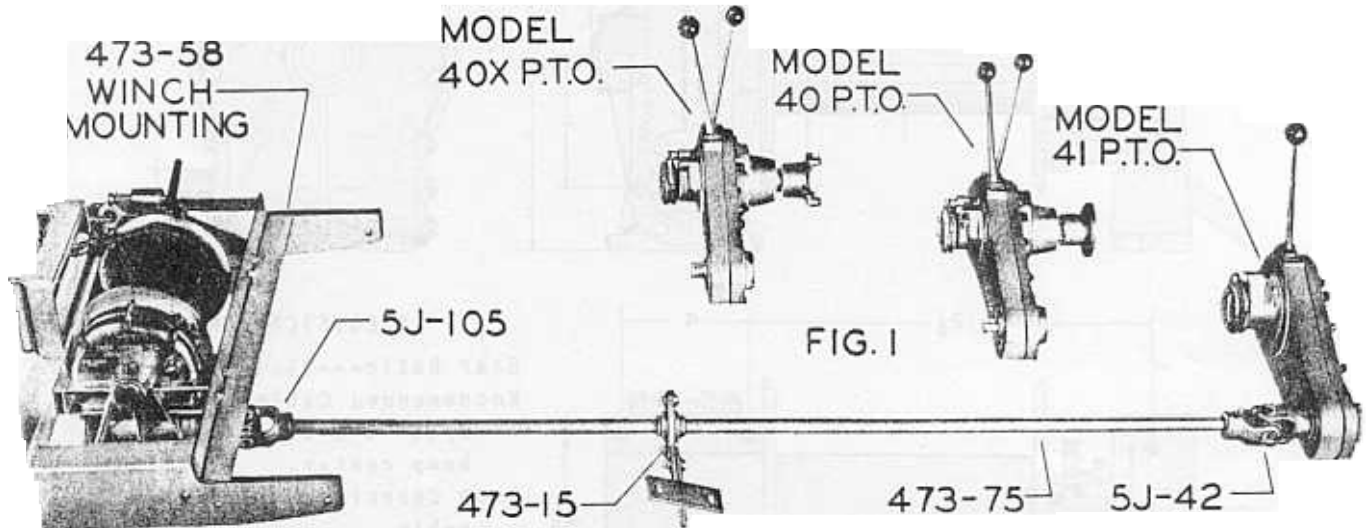
FEATURES

- The approved standard Model 100 King Winch is utilized.
- Power take-off fits on Jeep truck transfer case—uses the three forward and one reverse speeds of the truck transmission.
- Front drive to the winch is made by using an oil-tight chain drive transfer case.
- This affords more positive drive than possible through crankshaft hook-up.
- Directional cab control and front-of-truck dis-engagement of drum clutch are made standard equipment.
- Heavy channel iron bumper affords maximum unit protection.
- Lower winch position assures good driveshaft clearance. Tail pipe must be bent slightly at flange and muffler moved back four inches.
- Sturdy platform side-arms are secured with eight 1/2-in. bolts through truck frame.
- List price covers all unit accessories such as power take-off, cab controls, special bumper, Federal Excise Tax and 150 feet of 5/16-in. cable with hook.
- Approved by the Willys-Overland Engineering Department.

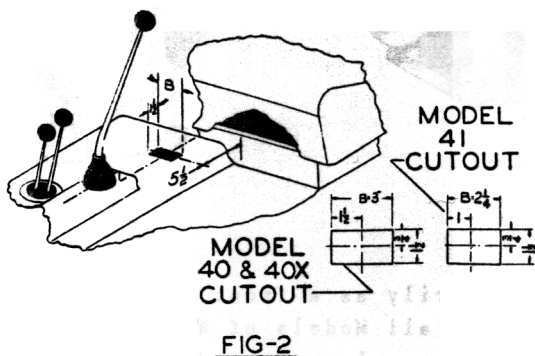
All King Winches Adaptable to Willys Vehicles Sold Exclusively Through Willys Distributors and Dealers.

INSTALLATION INSTRUCTIONS FOR KING WINCH MODELS 841RT, 840RT AND 840X FOR WILLYS 4x4 TRUCK — 4x4 UTILITY WAGON — 4x4 UTILITY DELIVERY

All three of these winch models are identical EXCEPT THE POWER TAKE-OFF. Model 841RT uses Model 41 P.T.O. which provides power to the WINCH ONLY. Model 840RT uses Model 40 P.T.O. which provides power to the winch as well as power for other equipment — this P.T.O. has flange-type coupling toward rear. Model 840X uses Model 40X P.T.O. which provides power to the winch as well as power for other equipment — this P.T.O. has Spicer Yoke (Willys #908437) toward rear.



1. Uncrate the winch assembly and check all parts according to assembly parts list.
2. Remove the front bumper.
3. While it is not absolutely necessary, it is advised to remove the bottom horizontal grille bar of the vehicle grille. This will provide additional clearance for the winch cable. This horizontal grille bar must be removed when the winch assembly has a cable drum guard.
4. Remove the power take-off lever hole cover in vehicle floor. On vehicles that do not have this opening in the floor, an opening must be cut with a sharp chisel or acetylene torch according to Fig. 2.
5. Remove the power take-off opening cover plate from the transfer case.
6. Remove the power take-off shift lever or levers (1 for Model 841RT or 2 for Models 840RT and 840X) by removing the four WO48-238 screw, lift the lever assembly from the power take-off.
7. Remove the 5 WO48-234 plugs from the power take-off (These are standard square head $\frac{3}{8}$ " pipe plugs).
8. Place the WO48-218 gasket in place on the power take-off. This gasket can easily be held in place by first applying a small amount of gasket cement on the power take-off behind this gasket.
9. Place the power take-off in position.
10. The power take-off is bolted to the transfer case by 5 $\frac{3}{8}$ "x1" Allen Head cap screws with Hi-collar washers (parts No. WO48-245 and WO48-248). Be sure to start all 5 cap screws before tightening any of them. It is advised to use a $\frac{5}{16}$ " hexagon drive approximately 3" long and a speed wrench with universal joint to install these 5 cap screws. Care should be taken not to drop one of these cap screws and/or washers in the power take-off housing as it would probably require completely dis-assembling the power take-off in order to remove these parts.
11. After the 5 WO48-245 cap screws have been securely tightened, reinstall the power take-off shift lever or levers.
12. Replace and tighten the 5 WO48-234 plugs.



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13. Check the shifting action of the WO48-204 sliding ring. On Model 840RT and 840X this ring is shifted by the lever on the right-hand side (when sitting in the driver's position). It will probably be necessary to start the engine to properly line up the WO48-204 sliding ring and the mating part in the transfer case.
14. Remove the tape from the power take-off shaft, the winch shaft, and drive shaft. Examine these to be sure they are free of nicks. Test install the universal joints to be sure they are not too tight.
15. Install the rear universal joint (part 5J-42) placing it as far on the power take-off shaft as it will go. DO NOT tighten set screws.
16. Attach the 473-15 bracket to the vehicle frame with 2 5/16x3/4" cap screws, nuts, flat washers and lock washers as shown in Fig. 1. DO NOT tighten the bolts at this time.
17. Insert a 1/4x1" Woodruff Key in one end of the 473-75 drive shaft. This end will then be the end inserted in the rear universal joint 5J-42. Slip the 473-15 bearing bracket over drive shaft. (Part 473-75). The part with two slotted holes of the bearing bracket fits the underside of the vehicle frame. (See Fig. 1), leaving all bolts loose.
18. Insert the 473-75 drive shaft all the way into the rear universal joint 5J-42. Be sure drive shaft is on top of the front axle.
19. Insert a 1/4x1" Woodruff Key in front end of drive shaft and install the front universal joint. (Part 5J-105), placing it on the shaft as far as it will go.
20. Place winch mounting in vehicle frame. Connect front universal joint to winch worm shaft. Insert two 7/16"x1 1/2" bolts in each side of vehicle frame thru winch mounting. Place lock washer and nut on bolts and tighten securely.
21. Center the universal joint yokes over the keys in the 473-75 drive shaft, winch worm shaft and power take-off shaft. Tighten all set screws securely.
22. Tighten the bolts holding the 473-15 bearing bracket to the under side of the vehicle frame. Tighten the two adjustment bolts to clamp the 875 bearing.
23. Install the winch cable. It is advised to place the coil of cable on a rotating drum or stand to prevent kinking. If this is not available, un-wind the coil of cable by rolling it along the shop floor. Insert the end opposite the hook through the 4-way rollers in the bumper and through the hole in winch drum until the end is approximately 6" above the winch drum flange. Remove one of the 3/8"x7/8" cap screws holding the cable clamp to winch drum, loosen the other 3/8"x7/8" cap screw until it is almost out of the winch drum. Pull the cable under the clamp back thru the hole in winch drum until the end of cable is even with the top of the cable clamp. Tighten the cap screws in cable clamp. Cut off the cap screws smooth with inside of winch drum with a sharp chisel or hacksaw.
24. Grease all zert fittings on the winch and the 473-15 bearing with chassis lubricant. Oil the winch drum clutch and shifting mechanism with lubricating oil. Check the oil in winch housing. If low fill to 1" below plug level with EP140 gear oil or equal.
25. Wind cable on top of winch drum. Care should be taken to wind the cable evenly and as tightly as possible. If enough room is available, attach the hook to a solid anchor, pull the emergency brake slightly and wind the cable on the drum by allowing the winch to pull the vehicle across the shop floor. After all the cable is on the drum, place the hook on the bumper flange. Disengage the drum clutch by pulling up on the drum clutch lever. (Part 199). The drag brake will prevent the cable from un-winding.
26. The power take-off is lubricated by the transfer case oil. The oil will flow from the transfer case into the power take-off when the vehicle is driven or the power take-off is used. After the unit has been used once, check the oil level in the transfer case — if low, fill to the correct level with the Willys recommended oil for your climate.
27. If desired, a very neat finish can be made at the point where the power take-off levers or lever extend through the vehicle floor by installing a rubber grommet. The grommet can be obtained from your Willys dealer — for Models 840RT or 840X winch use Willys parts 801058 grommet and 663793 retaining plate. For Model 841RT winch use Willys parts 666610 grommet and 640708 retaining plate.

INSTALLATION ASSEMBLY PARTS FOR KING WINCH MODELS 841RT, 840RT AND 840X

| PART No. | DESCRIPTION | PART No. | DESCRIPTION |
|----------|--|----------|---|
| 473-15 | Bearing and bracket | WO48-218 | P.T.O. gasket |
| 473-58 | Winch mounting | 15312 | 5/16" cable 150' long |
| 473-75 | Drive shaft | | Model 41 P.T.O. with 841RT installation |
| 5J-42 | Rear universal joint (7/8"-1/4" KW x 1"-1/4" KW) | | Model 40 P.T.O. with 840RT installation |
| 5J-105 | Front universal joint (7/8"-1/4" KW x 7/8"-3/16" KW)* | | Model 40X P.T.O. with 840X installation |

473-8 Bag of Bolts — Containing the following:

| | | | |
|-------------------|-------------------------|-------------------|-------------------------|
| 4 - 7/16 x 1 1/2" | N. F. Cap Screws | 4 - 7/16" | N. F. Nuts |
| 2 - 3/8" x 1" | N. F. Cap Screws | 2 - 3/8" | N. F. Nuts |
| 5 - 3/8" x 1" | N. C. Socket Cap Screws | 4 - 3/8" x 3/8" | N. C. Socket Set Screws |
| 5 - 3/8" | Hi-Collar Lock Washers | 2 - #15 1/4" x 1" | Woodruff Keys |
| 4 - 7/16" | Lock Washers | 1 - WO48-208 | Knob for 841RT |
| 2 - 3/8" | Lock Washers | 2 - WO48-208 | Knobs for 840RT or 840X |
| 2 - 3/8" | Flat Washers | | |

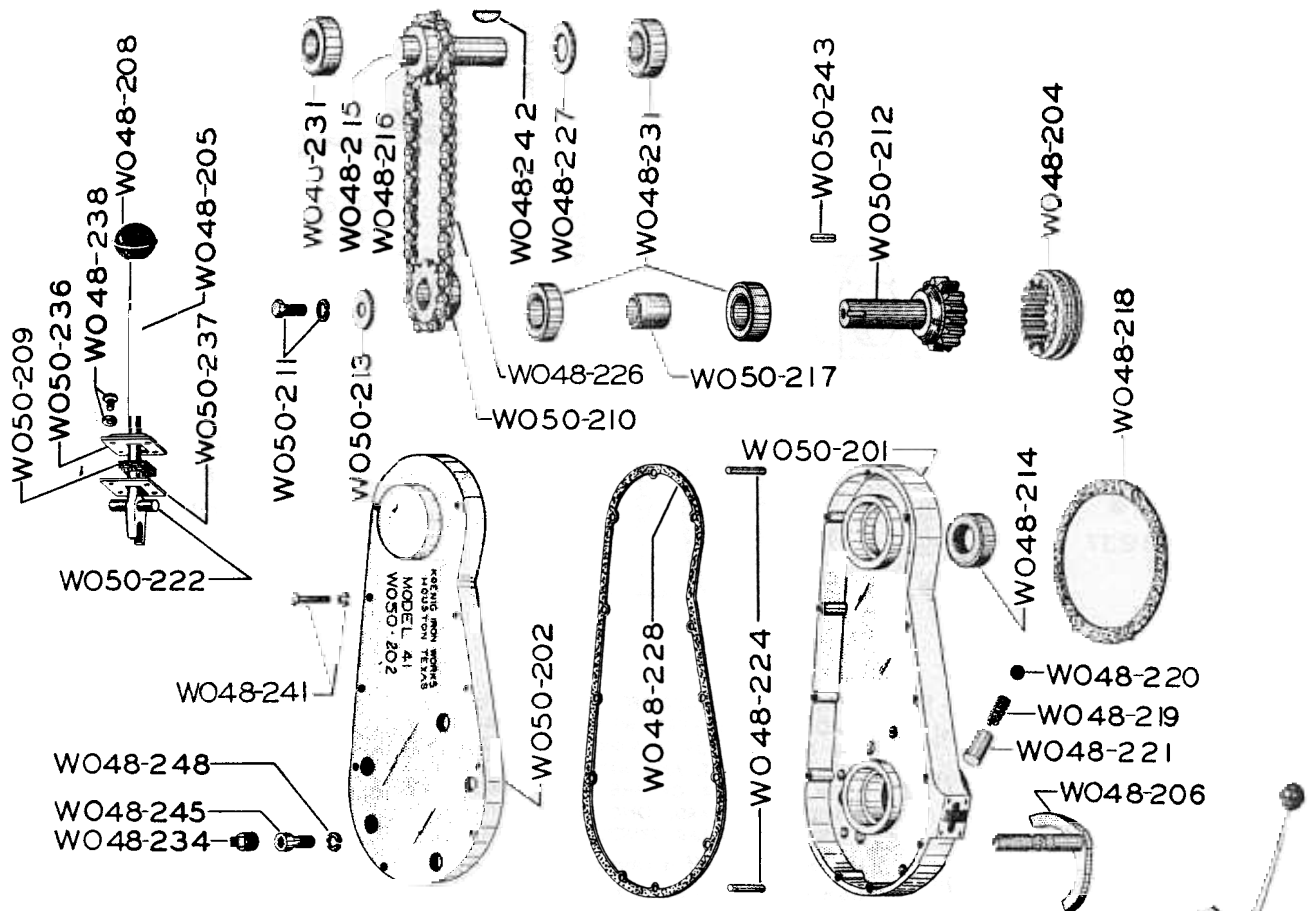
OPERATING INSTRUCTIONS FOR KING WINCH MODELS 841RT, 840RT & 840X FOR WILLYS 4x4 TRUCKS, 4x4 UTILITY WAGONS AND 4x4 UTILITY DELIVERY

- When the winch is to be used for the first time, be sure that the drum clutch lever, Part No. 199, is up, which assures the clutch being disengaged from the drum. Then pull the cable out and attach to whatever object is to be raised or is to be used as an anchor for pulling the truck. Pull out the No. 197 pin which will release the No. 199 lever, thereby engaging the clutch with the drum. Should the clutch not fully engage, slightly rotate the drum by hand until the pins enter the slots in the drum clutch.
- The rest of the operation of this winch is done from the cab of the truck. Place the transfer case shifter into neutral. Then the regular gear shift lever of the transmission and the truck clutch are used to operate the winch. Use the low gear of the transmission for winching as much as possible. To reverse the winch or lower the load, simply place the transmission shifter in reverse position and release the truck clutch.
- In case the winch is a Model 840RT or 840X using our Model 40 or 40X power take-off, first engage the right-hand power take-off lever. This will engage the power take-off to the transfer case and will rotate the rear coupling on the power take-off, thereby driving whatever mechanism is used on the rear of the truck without rotating the winch mechanism. Next engage the left-hand lever on the power take-off and release the truck clutch which will put the winch in operation.
- In case the winch model is our 841RT using the Model 41 power take-off, merely engage the only lever on this power take-off and release the engine clutch.
- When it is desirable to stop the winch when in either forward or reverse, merely depress the truck clutch and move the transmission shifter lever to neutral.
- Whenever the winch is not in use and the cable is wound completely on the drum, BE SURE that the drum clutch is disengaged by moving the drum clutch (Part 199) lever to an up position. Also when the winch is not to be used, disengage the power take-off.

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MODEL 41 POWER TAKE-OFF FOR ALL WILLYS 4x4 TRUCKS, UTILITY WAGON, AND UTILITY DELIVERY

Included in Model 841RT King Winch Assembly



| PART No. | DESCRIPTION |
|----------|-------------------------------|
| WO50-201 | Housing—front half |
| WO50-202 | Housing—Rear half |
| WO50-203 | Housing Assembly |
| WO48-204 | Sliding Ring |
| WO48-205 | Lever |
| WO48-206 | Shifter |
| WO48-208 | Knob |
| WO50-209 | Felt Oil Retainer |
| WO50-210 | 15 Tooth Sprocket |
| WO50-211 | Retaining Bolt and Washer |
| WO50-212 | Main P.T.O. Shaft |
| WO50-213 | Retaining Washer |
| WO48-214 | Oil Seal |
| WO48-215 | P.T.O. Shaft |
| WO48-216 | 16 Tooth Sprocket |
| WO50-217 | Main Shaft Spacer |
| WO48-218 | Gasket—P.T.O. to Transmission |
| WO48-219 | Spring |
| WO48-220 | Ball |
| WO48-221 | Bushing |
| WO50-222 | Pin |
| WO48-224 | Dowel Pin (2 req.) |

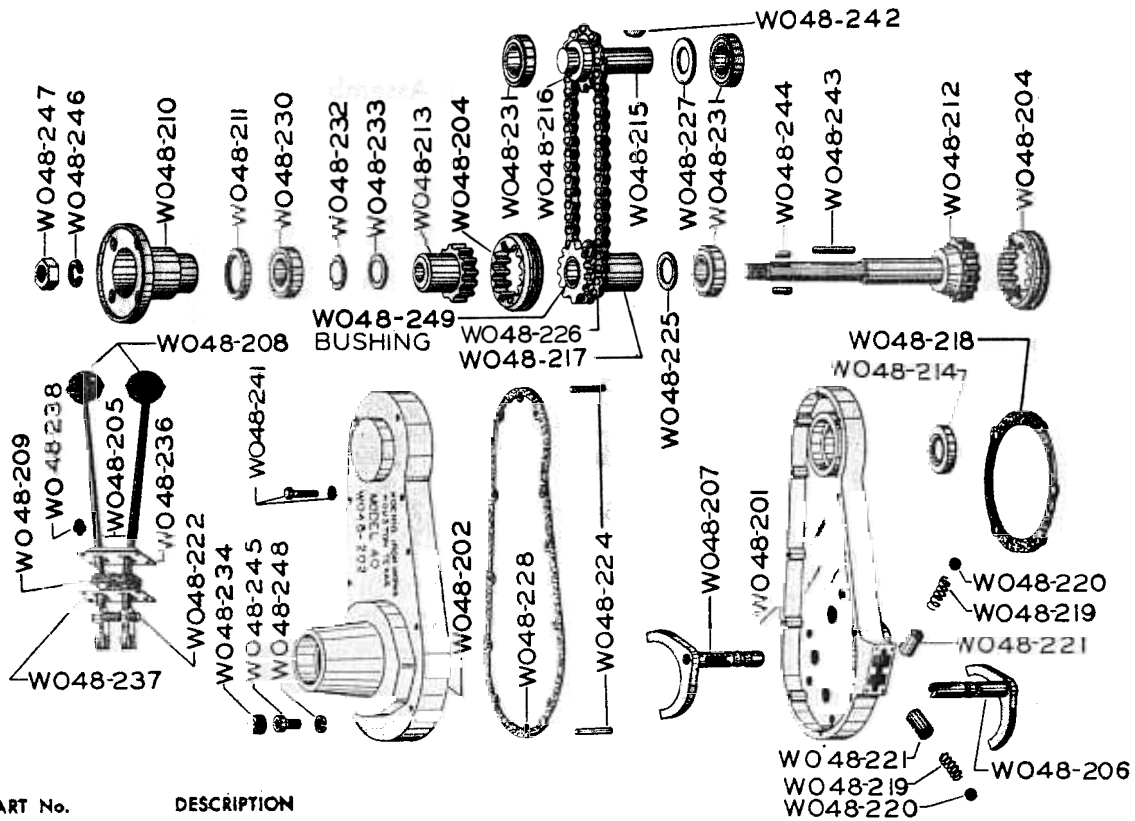
THIS POWER TAKE-OFF IS FURNISHED WITH MODEL 841RT KING WINCH ASSEMBLY, AND IS SUITABLE FOR DRIVING THE KING WINCH OR OTHER EQUIPMENT ON THE FRONT ONLY OF THE WILLYS TRUCK. HAS THREE SPEEDS FORWARD, ONE SPEED REVERSE (BY USE OF REGULAR TRUCK TRANSMISSION).

| PART No. | DESCRIPTION |
|----------|----------------------------------|
| WO48-226 | Roller Chain and Link |
| WO48-227 | P.T.O. Shaft Spacer |
| WO48-228 | Housing Gasket |
| WO48-231 | Ball Bearing (4 req.) |
| WO48-234 | 3/8" Pipe Plug (5 req.) |
| WO50-236 | Top Shifter Plate |
| WO50-237 | Bottom Shifter Plate |
| WO48-238 | Shifter Plate Screw (4 req.) |
| WO48-239 | Connecting Link |
| WO48-240 | Set Screw for WO48-216 |
| WO48-241 | Cap Screw (10 req.) |
| WO48-242 | Woodruff Key No. 15 (2 req.) |
| WO50-243 | Key for WO50-210 |
| WO48-245 | Socket Cap Screw (5 req.) |
| WO48-248 | Lock Washer — Hi-Coller (5 req.) |

This power take-off is lubricated from transfer case by oil...

MODEL 40 POWER TAKE-OFF FOR ALL WILLYS 4x4 TRUCKS, UTILITY WAGON AND UTILITY DELIVERY

Included in Model 840RT King Winch Assembly



PART No. DESCRIPTION

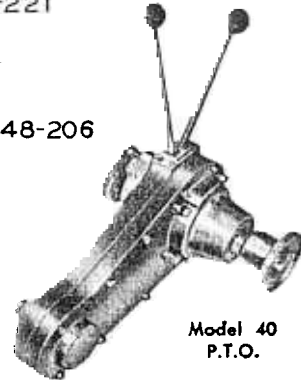
WO48-201 Housing—Front half
 WO48-202 Housing—Rear half
 WO48-203 Housing Assembly
 WO48-204 Sliding Ring (2 req.)
 WO48-205 Lever (2 req.)
 WO48-206 Shifter—to engine
 WO48-207 Shifter—for winch
 WO48-208 Knob (2 req.)
 WO48-209 Felt oil retainer for levers
 WO48-210 Coupling
 WO48-211 Oil Seal—2" OD x 1½" ID
 WO48-212 Main P.T.O. Shaft
 WO48-213 Clutch Gear Hub
 WO48-214 Oil Seal—1⅞" OD x 1" ID
 WO48-215 P.T.O. Shaft—1" x 3¼"
 WO48-216 Sprocket—16 tooth
 WO48-217 Clutch Sprocket Hub
 WO48-218 Gasket—Between P.T.O. and transmission
 WO48-219 Spring (2 req.)
 WO48-220 Ball (2 req.)
 WO48-221 Bushing for shifter ball and spring (2 req.)
 WO48-222 Pin
 WO48-224 Dowel Pin (2 req.)
 WO48-225 Thrust Washer—1" x 1⅜" x .040"
 WO48-226 Roller Chain and connecting link
 WO48-227 P.T.O. Shaft Spacer—1" x 1⅜" x .189"

THIS POWER TAKE-OFF IS FURNISHED WITH MODEL 840RT KING WINCH ASSEMBLY, AND IS SUITABLE FOR DRIVING THE KING WINCH ON THE FRONT, AND ANY OTHER EQUIPMENT ON THE REAR OF THE TRUCK. HAS THREE SPEEDS FORWARD, ONE SPEED REVERSE (BY USE OF REGULAR TRUCK TRANSMISSION).

This power take-off is lubricated from transfer case by oil passage holes. Check oil level in transfer case after operating a short time.

PART No. DESCRIPTION

WO48-228 Gasket—Between Housing
 WO48-230 Ball bearing—⅞" ID
 WO48-231 Ball Bearing—1" ID (3 req.)
 WO48-232 Shim—.010" thick brass (2 req.)
 WO48-233 Shim—.046" thick (2 req.)
 WO48-234 ⅜" pipe plug (5 req.)
 WO48-236 Shifter plate—top
 WO48-237 Shifter plate—bottom
 WO48-238 Shifter Plate Screws and Washers (4 req.)
 WO48-239 Connecting Link
 WO48-240 Set screw for WO48-216 sprocket
 WO48-241 Cap Screw (10 req.)
 WO48-242 Woodruff Key—#15 (2 req.)
 WO48-243 Key—for WO48-213
 WO48-244 Key for WO48-210 (2 req.)
 WO48-245 Socket cap screw (5 req.)
 WO48-246 Lock Washer
 WO48-247 Nut—⅝" N. F.
 WO48-248 Lock Washer—⅝" Hi-Coller (5 req.)
 WO48-249 Bronze bushing—1" x 1¼" x 1¼" (2 req.)

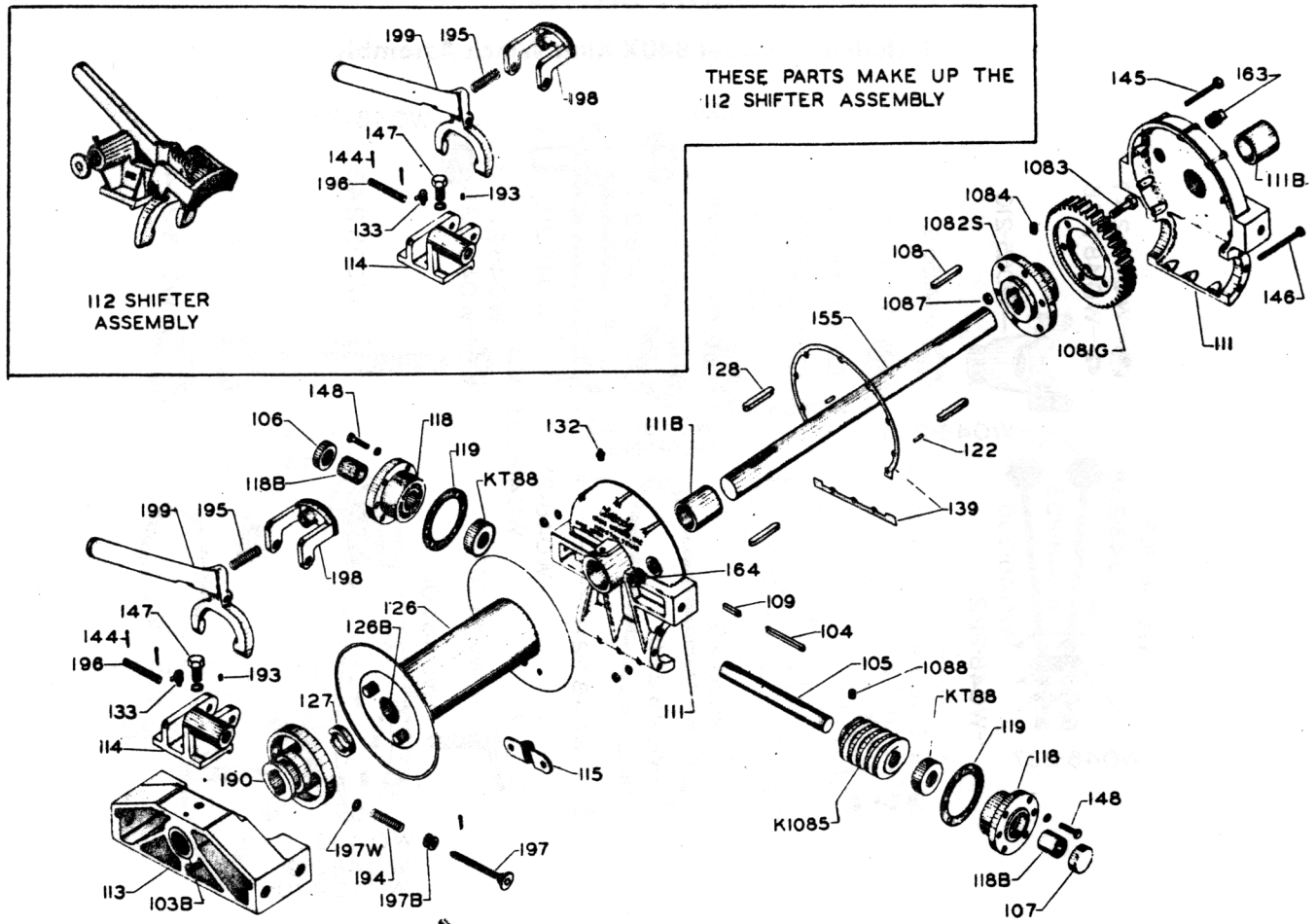


Model 40 P.T.O.

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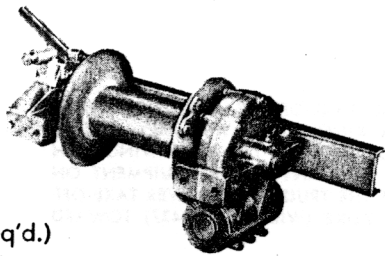
KING WINCH PARTS FOR MODELS 841RT, 840RT, AND 840X



THESE PARTS MAKE UP THE 112 SHIFTER ASSEMBLY

112 SHIFTER ASSEMBLY

| Part No. | Description |
|----------|--|
| 103B | Bushing |
| 104 | Worm Key |
| 105 | Worm Shaft |
| 106 | Oil Seal |
| 107 | Plug |
| 108 | Spider Key (2 Req'd.) |
| 109 | Worm Shaft Key |
| 111 | Housing w/Bushing (2 Req'd.) |
| 111B | Bushing (2 Req'd.) |
| 112 | Shifter Assembly (See note on drawing) |
| 113 | Drum Shaft Bracket |
| 114 | Shifter Bracket |
| 115 | Cable Clamp |
| 118 | Bearing Holder w/Bushing (2 Req'd.) |
| 118B | Bushing (2 Req'd.) |
| 119 | Gasket (4 Req'd.) |
| 122 | Dowel Pin (2 Req'd.) |
| 126 | Drum w/Bushings |
| 126B | Bushings (2 Req'd.) |
| 127 | Drum Set Collar |
| 128 | Clutch Key (2 Req'd.) |
| 132 | Zert Fitting (2 Req'd.) |
| 133 | Zert Fitting |
| 139 | Gasket (2 Pieces) |
| 144 | Cotter Pin (3 Req'd.) |
| 145 | Housing Bolt (7 Req'd.) |

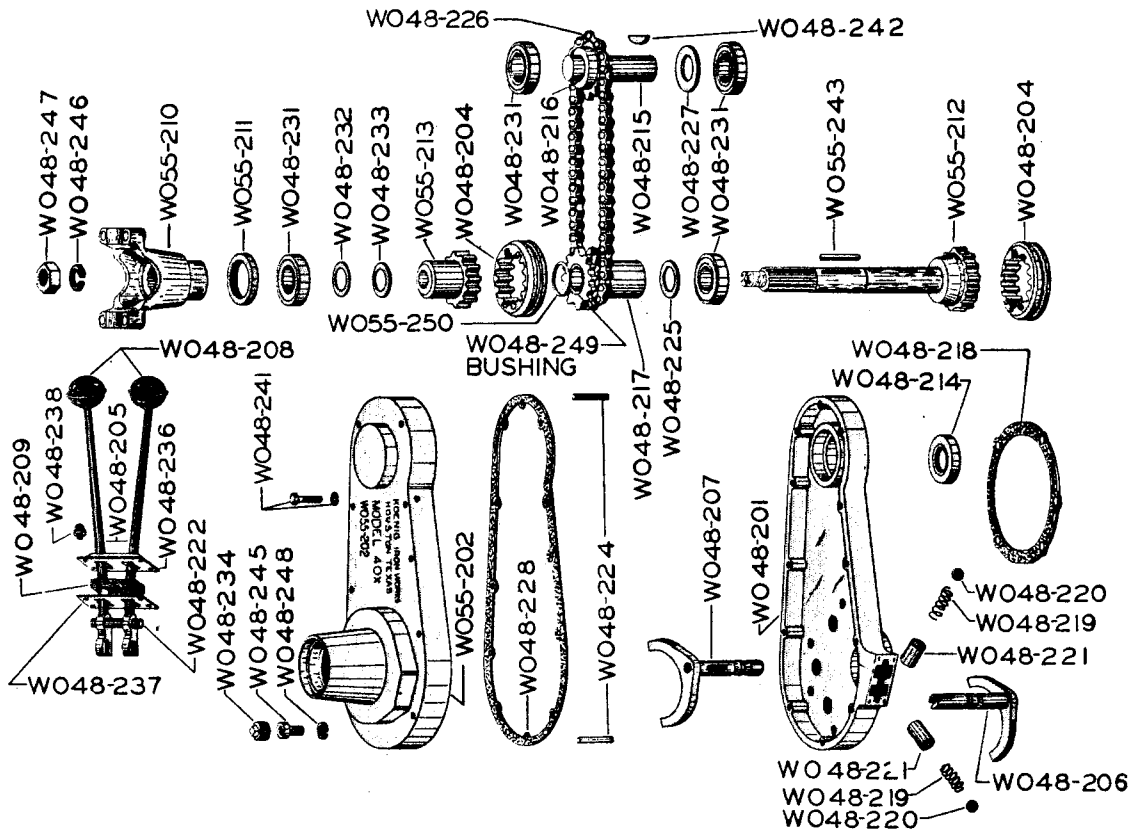


| Part No. | Description |
|----------|---------------------------------|
| 146 | Housing Bolt (3 Req'd.) |
| 147 | Shifter Bracket Bolt |
| 148 | Bearing Holder Bolt (12 Req'd.) |
| 155 | Drum Shaft w/Keys |
| 163 | Grease Plug |
| 164 | Countersunk Grease Plug |
| 190 | Drum Clutch |
| 193 | Set Screw for 197 |
| 194 | Spring |
| 195 | Brake Spring |
| 196 | Pin |
| 197 | Pin |
| 197B | Bushing |
| 197W | Washer |
| 198 | Brake Shoe |
| 199 | Shifter Lever |
| KT88 | Thrust Bearing (2 Req'd.) |
| 1081G | Right Hand Gear |
| 1082S | Spider |
| 1083 | Bolt (6 Req'd.) |
| 1084 | Set Screw for Spider |
| K1085 | Right Hand Worm |
| 1087 | Lock Nut (6 Req'd.) |
| 1088 | Set Screw for Worm |

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MODEL 40X POWER TAKE-OFF FOR ALL WILLYS 4x4 TRUCKS, UTILITY WAGON AND UTILITY DELIVERY

Included in Model 840X King Winch Assembly



| PART No. | DESCRIPTION |
|----------|--|
| WO48-201 | Housing—Front half |
| WO55-202 | Housing—Rear half |
| WO55-203 | Housing Assembly |
| WO48-204 | Sliding Ring (2 req.) |
| WO48-205 | Lever (2 req.) |
| WO48-206 | Shifter—to engine |
| WO48-207 | Shifter—for winch |
| WO48-208 | Knob (2 req.) |
| WO48-209 | Felt oil retainer for levers |
| WO55-210 | Coupling |
| WO55-211 | Oil Seal—2 1/16" OD x 1 1/2" ID |
| WO55-212 | Main P.T.O. Shaft |
| WO55-213 | Clutch Gear Hub |
| WO48-214 | Oil Seal—1 7/8" OD x 1" ID |
| WO48-215 | P.T.O. Shaft—1" x 3/4" |
| WO48-216 | Sprocket—16 tooth |
| WO48-217 | Clutch Sprocket Hub |
| WO48-218 | Gasket—Between P.T.O. and transmission |
| WO48-219 | Spring (2 req.) |
| WO48-220 | Ball (2 req.) |
| WO48-221 | Bushing for shifter ball and spring (2 req.) |
| WO48-222 | Pin |
| WO48-224 | Dowel Pin (2 req.) |
| WO48-225 | Thrust Washer—1" x 1 3/8" x .040" |
| WO48-226 | Roller Chain and connecting link |
| WO48-227 | P.T.O. Shaft Spacer—1" x 1 3/4" x .189" |

THIS POWER TAKE-OFF IS FURNISHED WITH MODEL 840X KING WINCH ASSEMBLY, AND IS SUITABLE FOR DRIVING THE KING WINCH ON THE FRONT, AND ANY OTHER EQUIPMENT ON THE REAR OF THE TRUCK. THIS POWER TAKE-OFF HAS SPICER YOKE (WILLYS #908437) TOWARD REAR.

| PART No. | DESCRIPTION |
|----------|--|
| WO48-228 | Gasket—Between Housing |
| WO48-231 | Ball bearing—1" ID (4 req.) |
| WO48-232 | Shim—.010" thick brass (2 req.) |
| WO48-233 | Shim—.046" thick (2 req.) |
| WO48-234 | 3/8" pipe plug (5 req.) |
| WO48-236 | Shifter plate—top |
| WO48-237 | Shifter plate—bottom |
| WO48-238 | Shifter Plate Screws and Washers (4 req.) |
| WO48-239 | Connecting Link |
| WO48-240 | Set screw for WO48-216 sprocket |
| WO48-241 | Cap Screw (10 req.) |
| WO48-242 | Woodruff Key—#15 (2 req.) |
| WO55-243 | Key—for WO55-213 |
| WO48-245 | Socket cap screw (5 req.) |
| WO48-246 | Lock Washer |
| WO48-247 | Nut—5/8" N. F. |
| WO48-248 | Lock Washer—3/8" Hi-Collar (5 req.) |
| WO48-249 | Bronze bushing—1" x 1 1/4" x 1/4" (2 req.) |
| WO55-250 | Lock Ring |



MODEL 40X P.T.O.