



8690FH



8690FSK



8690CK



8690CS



8690TN

H.K.Porter® 8690 Series
Ratchet Type Cutters

COOPER Tools

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8690 Series Disassembly and Assembly

The following disassembly and assembly procedures apply to all models except where noted.

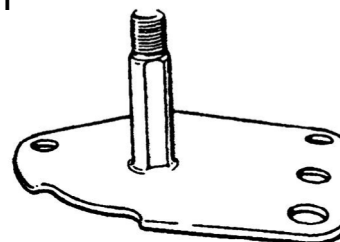
Disassembly:

1. Secure the tool in a vise by the right handle (handle without the ratchet) with the left handle parallel to the floor and the head pointing away from you.
2. **TN model:** Cut the rubber handle grip (P0380M) from the handle. Be careful not to damage the plastic sleeve.
3. **FH, FSK, CK, and CS models:** In the end of the left handle (the ratcheting handle), insert a hook type tool through the access hole in the end of the handle grip, hook the spring, pull the spring slightly towards you, twist 90 degrees and unhook the spring (P8678FS) from the pin. Note: removal of the handle grip is no longer required as a result of the added access hole to the new grip.
- 3a. **TN model:** Unhook the spring extension (P8679TN) from the pin on the ratchet handle using a hook type tool.
4. Loosen nut (T3171) from bolt (P8635FS) using 7/16" wrenches.
5. Remove the bolt and snubber (P8654FS).
6. Remove the tool from the vise.
7. Unhook the two closing springs (P8658FH).
8. Remove the closing spring bolt (P8634FS), nut (T3171) and snubber (P8654FS).
9. Remove the cutterhead from the handles using 9/16" wrenches. *Important: Note the difference in length between the two sets of bolts.*
10. Remove the right handle assembly, with the chain and spring still attached, from the left handle.
11. Remove the nut (P2666K) from the sprocket pivot bolt (P8692FS) using a 9/16" wrench.
12. Remove the sprocket pivot bolt (P8692FS).
13. Remove the two side plates (P8621FS), sprocket (P8624FS), bushing (P8642FS), detent pawl (P8637FS), and spring (P8677FS).
14. Remove the two crank plate bushings (P8646FS).
15. Clean all parts thoroughly with solvent.

Assembly:

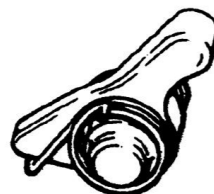
1. Assemble the pivot bolt (P8692FS) to one of the side plates (P8621FS). Match the flat on the bolt with the flat in the plate hole. Lay this assembly on the bench with the bolt head down and the notched edge of the plate nearest to you. **See Illustration 1.**

Illustration 1



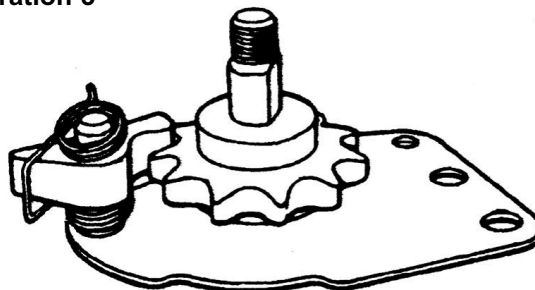
2. Apply a light film of grease to the shank of the pivot bolt.
3. Slide the sprocket (P8624FS) onto the pivot bolt.
4. Apply grease to the detent spacer bushing (P8642FS) and slide into the detent pawl. Place the detent spring (P8677FS) onto the pin making sure the spring ends have not been bent out of shape. The cross arm of the spring goes under the flat side of the narrow shaped point of the detent pawl. **See Illustration 2.**

Illustration 2



5. Assemble one end of the detent spacer bushing (P8642FS) into the hole on the side plate (P8621FS) and engage the rounded end of the pawl with the sprocket (P8624FS). **See Illustration 3.**

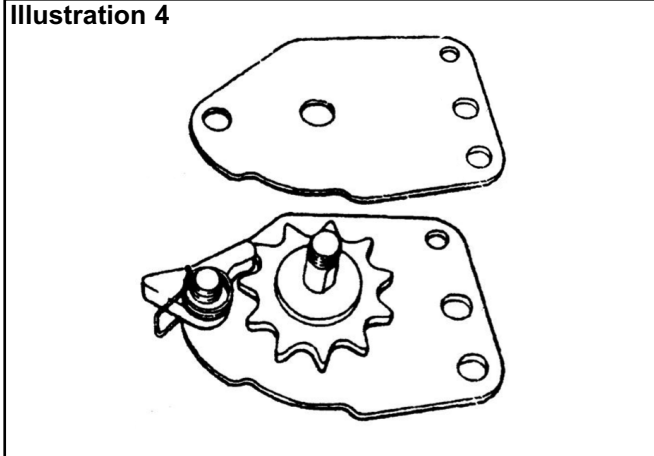
Illustration 3



8690 Series Disassembly and Assembly

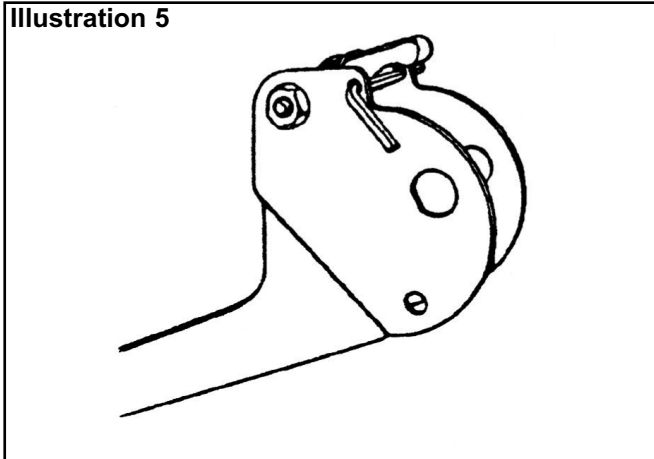
6. Match up the second side plate (P8621FS) with the first and place it over the detent spacer and pivot bolt. Do not insert the spring ends into the plates at this point. **See Illustration 4.**

Illustration 4



7. Hold the left handle (P8606FH or P8606TN) in a vise with the drive pawl facing up and the handle pointing to your left. Pull the drive pawl up, moving counter clockwise, and insert a 1/8" rod or nail through the small holes in the plates near the drive pawl to hold it in a horizontal position. **See Illustration 5.**

Illustration 5

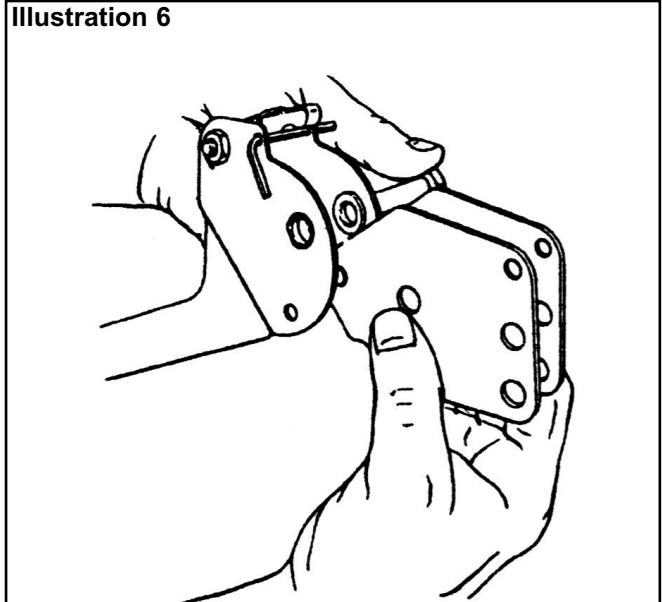


8. Place a small amount of grease on each of the two crank plate bushings (P8646FS) at the shoulder and insert them into the pivot bolt hole with the shoulders on the inside. The grease will hold them in position.

9. Hold the side plate assembly firmly with the notched edges of the plate facing down. While holding tightly between your fingers, remove the pivot bolt.

10. Carefully insert the plate assembly into the left handle between the bushings (P8646FS). Align the pivot bolt holes and slide the pivot bolt into position from the far side of the handle. **See Illustration 6.**

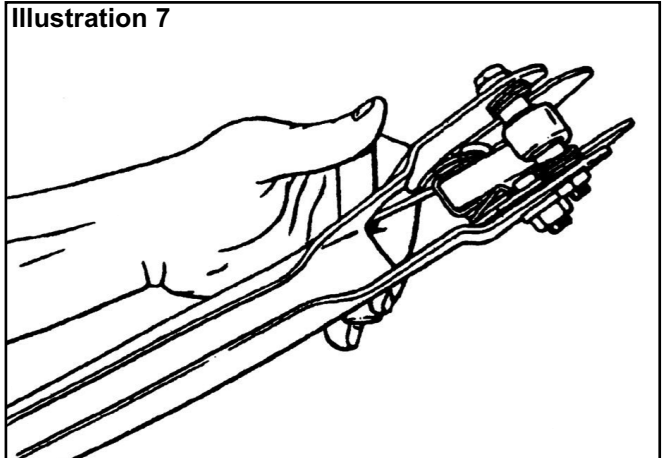
Illustration 6



11. Assemble spacer (P8644FS) and nut (P2666K) to the pivot bolt and tighten up snug. *Note: This assembly must pivot freely.*

12. With a small hook tool, reach up from the bottom of the assembly, between the plates, and hook the ends of the detent spring into their respective holes. **See Illustration 7.** Make sure the spring loops are not caught between the pin and side plate.

Illustration 7



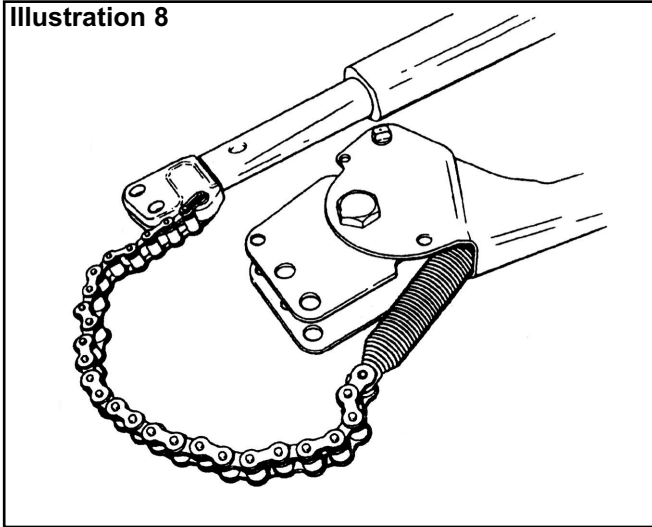
13. Remove the 1/8" pin from under the pawl and engage the drive pawl with the sprocket (P8624FS).

14. Remove the handle from the vise.

15. Hook the longer loop on the chain spring (P8678FS) onto the free end of the chain (P8653FS). Lay the left and right handles on the bench with the drive pawl on the left handle and the chain on the right handle facing each other. Feed the spring on the chain over the sprocket and into the left handle. **See Illustration 8.**

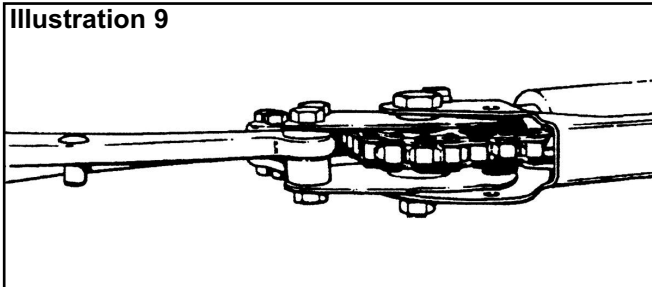
8690 Series Disassembly and Assembly

Illustration 8



16. With the handles remaining in this position, assemble the cutting head to the left handle. The thicker washer (P8645FS) goes on the bottom between the handle and the jaw. The thinner washer (P8644FS) goes on top. **See Illustration 9.** Use the longer bolt (P8628FS) and nut (P2666K) and tighten securely.

Illustration 9



17. Assemble the other side of the head to the right handle using bolts (P0135SK) and nut (P2666K). Tighten securely.

18. Hook the open end of the closing spring (P8658FH) into the holes in the handle (P8606FH or P8606TN). Make sure the closed loops are against the side plates (P8621FS).

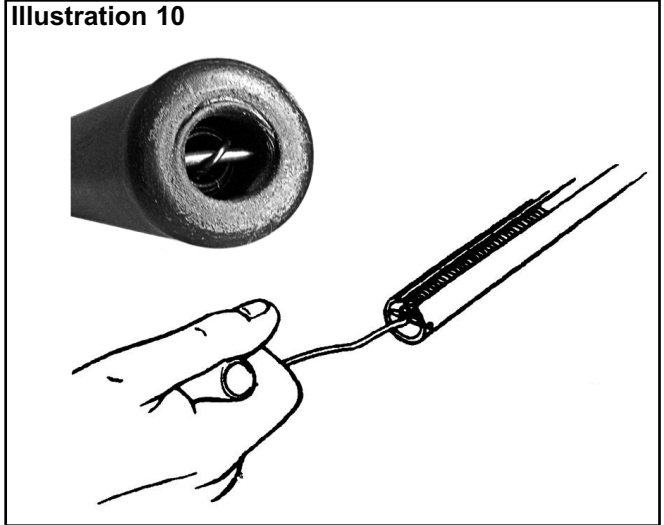
19. Insert bolt (P8634FS) through the closed loop on one of the springs (P8658FH) and insert through the 1/4" hole in the side plate (P8621FS). At the same time assemble the snubber (P8654FS) and slide the bolt through the snubber.

20. Assemble the other spring (P8658FH) onto the bolt and secure with nut.

21. Tighten the nut approximately one thread beyond the end of the bolt.

22. **FH, FSK, CK, and CS models:** Using a hook type tool, insert the tool through the access hole in the end of the handle grip. Secure the spring (P8678FS) and pull it towards the opening, rotating slightly to allow the spring to clear the pin. Hook the chain spring over the pin. See Illustration 10.

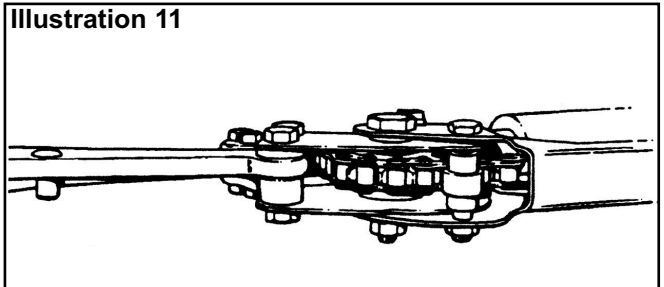
Illustration 10



22a. **TN model:** Hook the chain spring (P8678FS) and pull the spring to near bottom of the handle and attach the spring extension (P8679TN) to the chain at one end and the handle pin at the other end.

23. Assemble snubber (P8654FS) and bolt (P8635FS) to the handle. Assemble nut (T3171) and tighten so as not to bind the assembly. **See Illustration 11.**

Illustration 11



24. **FH, FSK, CK and CS models:** Check operation of the tool by opening and closing.

24a. **TN model:** Check operation of the tool by opening and closing. If operation is satisfactory, assemble a new grip (P0380M) onto handle.

8690 Series Disassembly and Assembly

Note: In the event the handle grip (P8681FH) was removed and a new handle grip (P8680CK) with an access hole in the bottom is being installed, perform the following procedure to install the new handle grip.

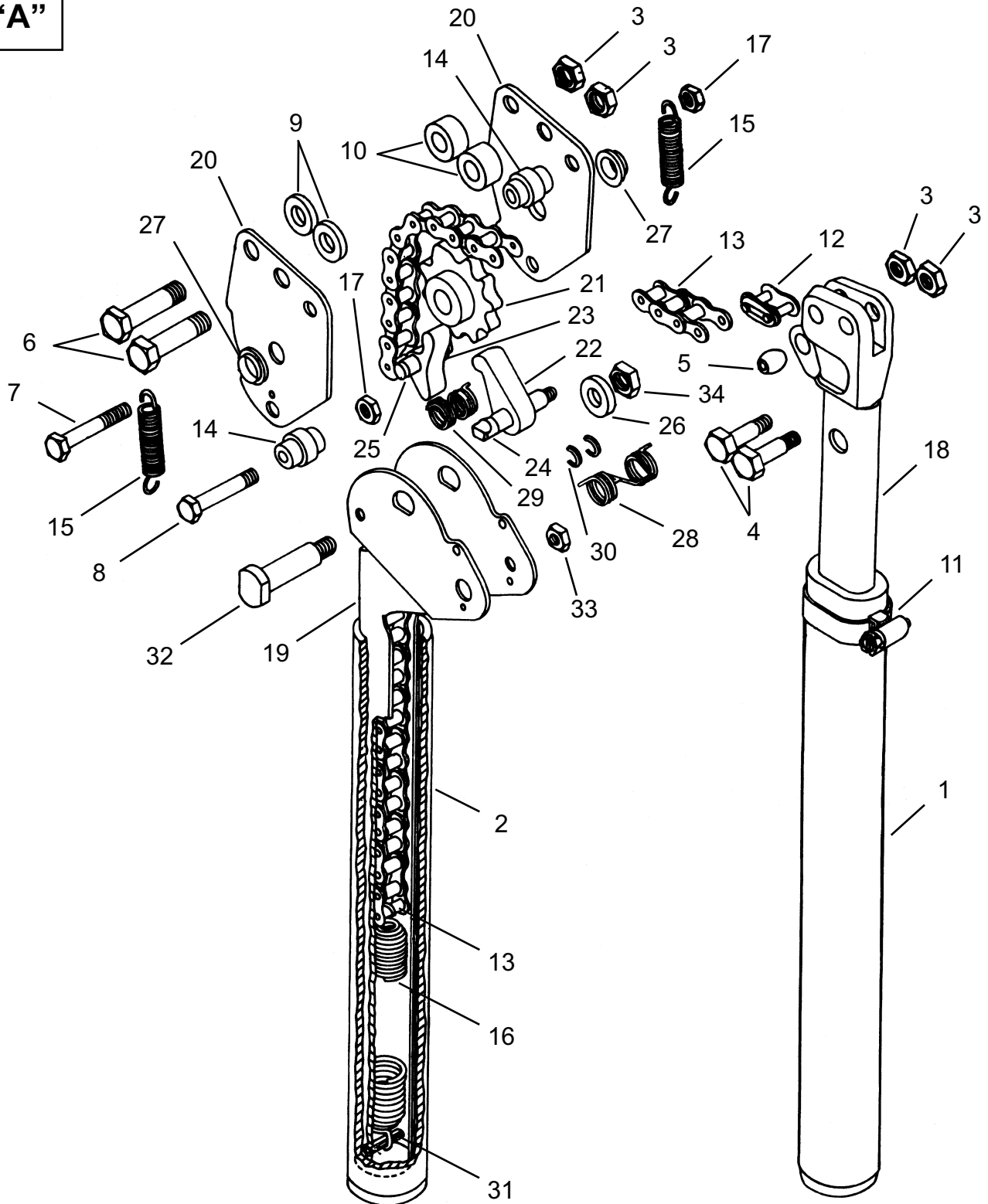
a) Mix a mild solution of liquid dishwashing soap and water in a small cup. A mild rubber or plastic lubricant may be used as an alternative. However, it must be one that evaporates (dries completely) to avoid handle grip slippage prior to use of the tool.

b) Place a mat or similar protective device on the floor to prevent damage to the tool or floor. Place the tool vertically, head end down, onto the mat with the handle straight up. Thoroughly wet the exterior of the metal handle, where the grip will be installed, with the soapy solution or lubricant. Thoroughly wet the inside of the handle grip as well with the same solution. Quickly slide the handle grip on as far as you can push by hand. Using a soft-faced rubber mallet, continue installing the handle grip until it bottoms out on the handle.

CAUTION: Use care not to damage the handle grip, with the mallet, during assembly.

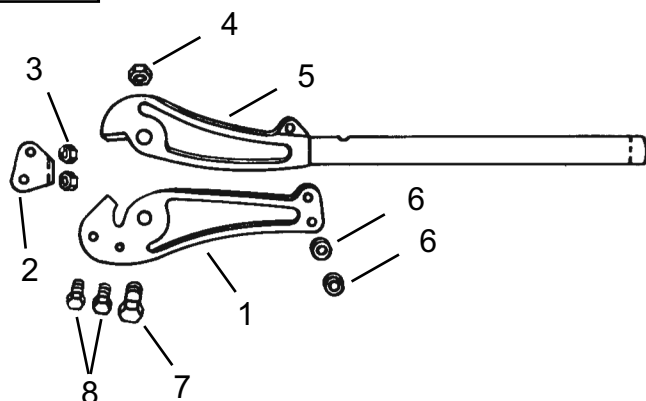
c) Make certain the handle grip is fully assembled onto the handle. Allow the tool assembly to dry prior to use to avoid slippage. A clamp is not required to secure the handle grip to the handle.

"A"

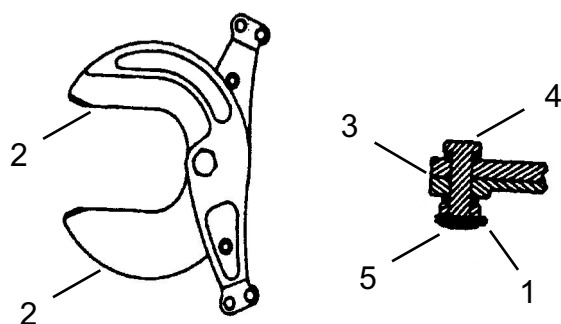


8690 series Handle Assembly

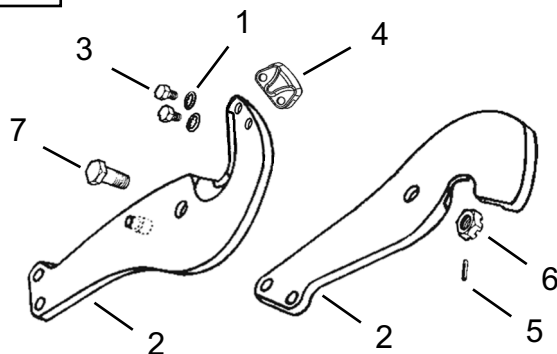
| Illustration "A": 8690 Series Ratchet Type Cutters Handle Assembly | | | | | | | |
|--|-----|------------------|--------------------|--------------------|-------------------|------------------|------------------------------------|
| Ref | Qty | Model Number | | | | | Description |
| | | 8690CK | 8690CS | 8690FH | 8690FSK | 8690TN | |
| | | Overall Length | | | | | |
| | | 28" (711 mm) | 29.75" (756 mm) | 29.25" (743 mm) | 27.5" (699 mm) | 36" 914 mm) | |
| | | Part Number | | | | | |
| 1 | 1 | P8681FH | P8681FH | P8681FH | P8681FH | Illustration "G" | Handle Grip |
| 2 | 1 | P8680CK | P8680CK | P8680CK | P8680CK | Illustration "G" | Handle Grip |
| 3 | 4 | P2666K | P2666K | P2666K | P2666K | P2666K | Nut (8690CK: Qty. = 2) |
| 4 | 2 | ----- | P0135SK | P0135SK | P0135CK | P0135SK | Bolt (Hex Head) |
| 5 | 1 | P8719CS | P8719CS | P8719CS | P8719CS | P8719CS | Bushing |
| 6 | 2 | P8628FS | P8628FS | P8628FS | P8628FS | P8628FS | Bolt (Hex Head) |
| 7 | 1 | P8634FS | P8634FS | P8634FS | P8634FS | P8634FS | Bolt |
| 8 | 1 | P8635FS | P8635FS | P8635FS | P8635FS | P8635FS | Bolt |
| 9 | 2 | ----- | P8644FS | P8644FS | P8644FS | P8644FS | Spacer |
| 10 | 2 | ----- | P8645FS | P8645FS | P8645FS | P8645FS | Spacer |
| 11 | 1 | P8648FS | ----- | ----- | ----- | ----- | Clamp |
| 12 | 1 | P8652FS | P8652FS | P8652FS | P8652FS | P8652FS | Chain Link |
| 13 | 1 | P8653FS | P8653FS | P8653FS | P8653FS | P8653TN | Chain |
| 14 | 2 | P8654FS | P8654FS | P8654FS | P8654FS | P8654FS | Snubber |
| 15 | 2 | P8658FH | P8658FH | P8658FH | P8658FH | P8658FH | Spring |
| 16 | 1 | P8678FS | P8678FS | P8678FS | P8678FS | P8678FS | Spring |
| 17 | 2 | T3171 | T3171 | T3171 | T3171 | T3171 | Nut |
| 18 | 1 | Illustration "B" | P8605F | P8605F | P8605F | Illustration "G" | Handle (Right) |
| -- | -- | P8661FH | P8661FH | P8661FH | P8661FH | P8661TN | Handle Assembly (Includes 18 - 33) |
| 19 | 1 | P8606FH | P8606FH | P8606FH | P8606FH | Illustration "G" | Handle (Left) |
| 20 | 2 | P8621FS | P8621FS | P8621FS | P8621FS | P8621FS | Side Plate |
| 21 | 1 | P8624FS | P8624FS | P8624FS | P8624FS | P8624FS | Sprocket |
| 22 | 1 | P8636FS | P8636FS | P8636FS | P8636FS | P8636FS | Pawl |
| 23 | 1 | P8637FS | P8637FS | P8637FS | P8637FS | P8637FS | Pawl |
| 24 | 1 | P8641FH | P8641FH | P8641FH | P8641FH | P8641FH | Pin |
| 25 | 1 | P8642FS | P8642FS | P8642FS | P8642FS | P8642FS | Bushing |
| 26 | 1 | P8644FS | P8644FS | P8644FS | P8644FS | P8644FS | Spacer |
| 27 | 2 | P8646FS | P8646FS | P8646FS | P8646FS | P8646FS | Bushing |
| 28 | 1 | P8674FS | P8674FS | P8674FS | P8674FS | P8674FS | Spring |
| 29 | 1 | P8677FS | P8677FS | P8677FS | P8677FS | P8677FS | Spring |
| 30 | 2 | P8683FH | P8683FH | P8683FH | P8683FH | P8683FH | Retainer |
| 31 | 1 | P8685FH | P8685FH | P8685FH | P8685FH | P8685FH | Pin |
| 32 | 1 | P8692FS | P8692FS | P8692FS | P8692FS | P8692FS | Bolt |
| 33 | 1 | T3171 | T3171 | T3171 | T3171 | T3171 | Nut |
| 34 | 1 | P2666K | P2666K | P2666K | P2666K | P2666K | Nut |
| -- | -- | Illustration "B" | Illustration "C" | Illustration "D" | Illustration "E" | Illustration "F" | Cutter Head Assembly |

"B"**8613CK Cutterhead****Illustration "B": 8613CK Cutterhead**

| Ref | Qty | Part No. | Description |
|-----|-----|----------|---------------------------|
| 1 | 2 | P8620CK | Cheek |
| 2 | 1 | P8611CK | Blade |
| 3 | 2 | P2666K | Nut |
| 4 | 1 | P6466 | Pivot Bolt Nut |
| 5 | 1 | P8610CK | Blade and Handle Assembly |
| 6 | 2 | P8643CK | Spacer |
| 7 | 1 | P8692CK | Pivot Bolt |
| 8 | 2 | P0135CK | Bolt |

"C"**8613CS Cutterhead****Illustration "C": 8613CS Cutterhead**

| Ref | Qty | Part No. | Description |
|-----|-----|----------|----------------|
| 1 | 1 | P1747CN | Cotter Pin |
| 2 | 2 | P8610CS | Blade |
| 3 | 2 | P8779CS | Spring Washer |
| 4 | 1 | P8992CN | Pivot Bolt |
| 5 | 1 | P8993CN | Pivot Bolt Nut |

"D"**8613FH Cutterhead****Illustration "D": 8613FH Cutterhead**

| Ref | Qty | Part No. | Description |
|-----|-----|----------|-----------------|
| 1 | 2 | P0052GCW | Lockwasher |
| 2 | 2 | P8611FH | Blade |
| 3 | 2 | P8627FH | Bolt |
| 4 | 1 | P8650FH | Keeper Assembly |
| 5 | 1 | P1487WM | Dowel Pin |
| 6 | 1 | P2693G | Pivot Bolt Nut |
| 7 | 1 | P8666FH | Pivot Bolt |

“E”

8613FSK Cutterhead

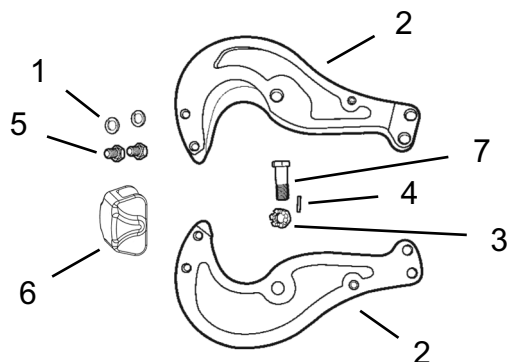


Illustration "E": 8613FSK Cutterhead

| Ref | Qty | Part No. | Description |
|-----|-----|----------|-----------------|
| 1 | 2 | P0052GCW | Lockwasher |
| 2 | 2 | P8610FSK | Blade |
| 3 | 1 | P0193TQ | Pivot Bolt Nut |
| 4 | 1 | P0194TQ | Cotter Pin |
| 5 | 2 | P8627FH | Bolt |
| 6 | 1 | P8650FSK | Keeper Assembly |
| 7 | 1 | P8666FSK | Pivot Bolt |

“F”

8613TN Cutterhead

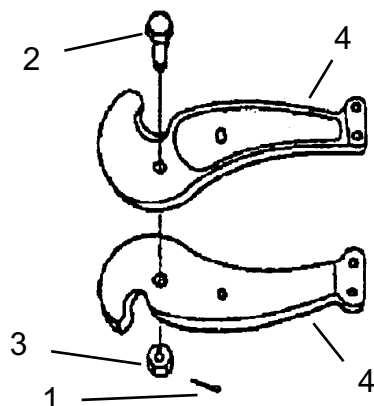


Illustration "F": 8613TN Cutterhead

| Ref | Qty | Part No. | Description |
|-----|-----|----------|----------------|
| 1 | 1 | P1747CN | Cotter Pin |
| 2 | 1 | P7192Q | Pivot Bolt |
| 3 | 1 | P8993CN | Pivot Bolt Nut |
| 4 | 2 | P8610TN | Blade |

“G”

Model 8690TN Handle

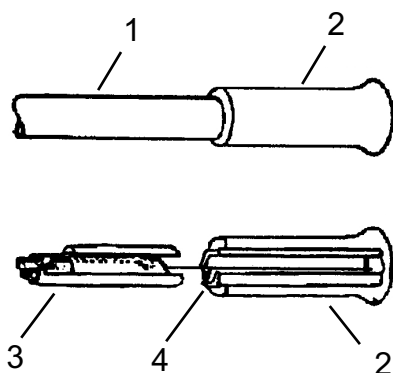


Illustration "G": Model 8690TN Handle

| Ref | Qty | Part No. | Description |
|-----|-----|----------|--------------------------|
| 1 | 1 | P8605TN | Handle (Right) |
| 2 | 2 | P0380M | Grip |
| 3 | 1 | P8606TN | Handle (Left) |
| 4 | 1 | P8679TN | Spring Extension |
| 5 | 1 | P8682TN | Black Sleeve (not shown) |

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