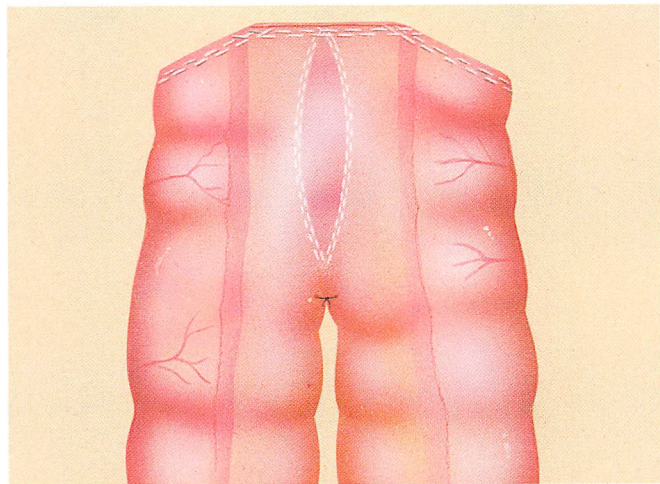


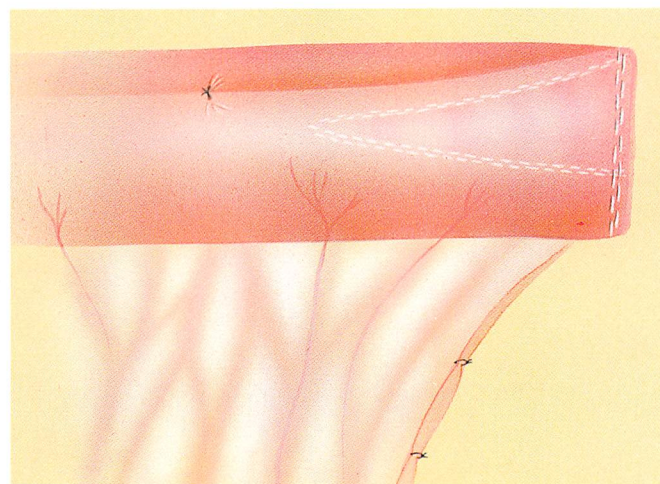
# Functional End-to-End Anastomosis

In this section, two techniques for creating a functional end-to-end anastomosis are described and illustrated.



## Closed Technique

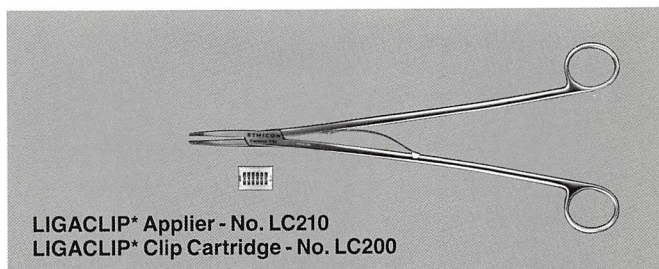
The appropriate segment of small or large bowel is resected with two applications of either the PROXIMATE\* Linear Cutter (PLC50), or the PROXIMATE\* Reloadable Linear Stapler (RL60). The stoma is created with one application of the PLC50, and the common opening is closed with one application of the RL60. Therefore, the anastomosis may be performed with either three firings of the PLC50 plus one of the RL60 or with three firings of the RL60 plus one of the PLC50.



## One-Stage Technique

After the appropriate segment of bowel is mobilized, the stoma is created with one application of the PROXIMATE Linear Cutter (PLC50). The common opening is closed and the resection completed with one application of the PROXIMATE Linear Stapler (RL60).

Instruments and reloading units commonly used in this procedure



LIGACLIP\* Applier - No. LC210  
LIGACLIP\* Clip Cartridge - No. LC200



PROXIMATE\* Linear Cutter - PLC50  
PROXIMATE\* Linear Cutter Reloading Unit - PLCRU



PROXIMATE\* Reloadable Linear Stapler - RL60  
PROXIMATE\* Reloading Unit - RU60



PROXIMATE\* Plus Disposable Skin Stapler - PPW35

SEE PACKAGE INSERT FOR FULL PRODUCT INFORMATION.



## Closed Technique

### Resecting the Bowel

In this technique, the appropriate segment of small or large bowel is resected with two applications of either the PLC50 Linear Cutter or the RL60 Reloadable Linear Stapler.

#### *Technique with the PLC50*

After transecting the mesentery and creating windows adjacent to the proposed transection sites, place the opened PLC50 Linear Cutter across the bowel in a scissor-like fashion from either the mesenteric (Figure 1) or the anti-mesenteric border. Close the instrument and apply the staples by pushing the firing knob forward while holding the instrument as you would a syringe. A double staggered staple line is placed on the specimen side and a second double staggered staple line is placed on the patient side; simultaneously, a knife in the PLC50 transects the bowel between the two double staple lines.

To complete the resection, reload the PLC50 (Technical Detail A), reapply the instrument and fire the stapler. With this technique, both the patient and specimen ends of the bowel are stapled closed prior to transection, thereby reducing the possibility of intra-peritoneal contamination.

#### *Technique with the RL60*

Using a window created in the mesentery adjacent to the proposed transection site, place the opened jaws of the RL60 Linear Stapler around the bowel from either the mesenteric (Figure 2) or the antimesenteric border. Push the retaining pin into place, close the jaws to the desired staple height (Technical Detail B), release the safety and fire the stapler. Prior to removing the instrument, place a clamp on the specimen side and transect the bowel with a scalpel, using the cutting guide on the stapler anvil.

To complete the resection, reload the RL60 (see Technical Detail C), reposition the instrument, fire the stapler and transect the bowel as described above. With this technique, the double staggered staple lines are placed only on the patient side; there are no staples in the specimen.

Fig. 1

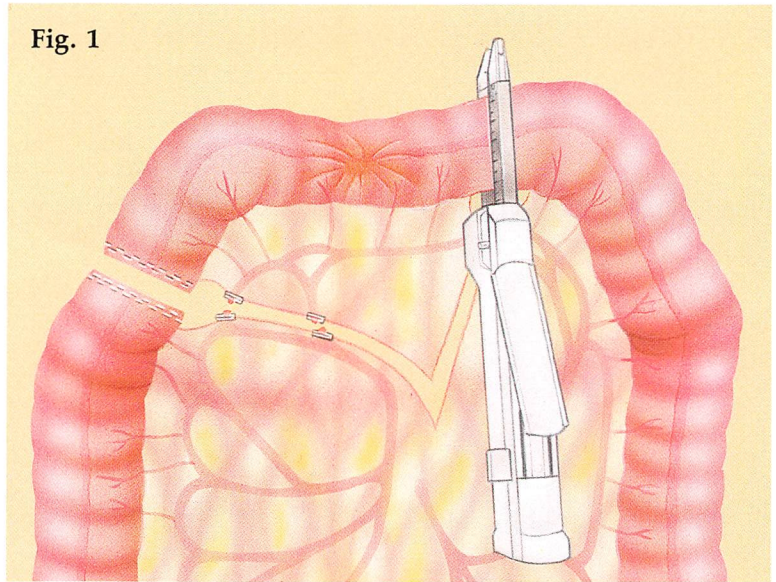
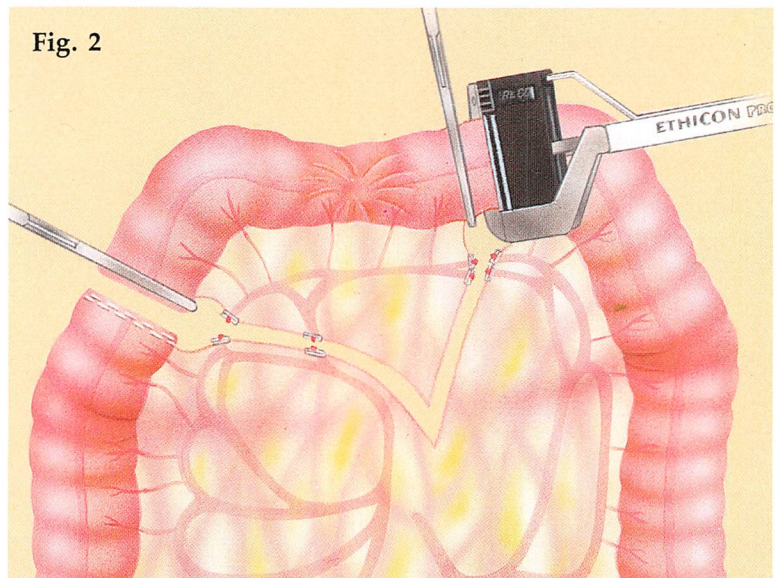


Fig. 2



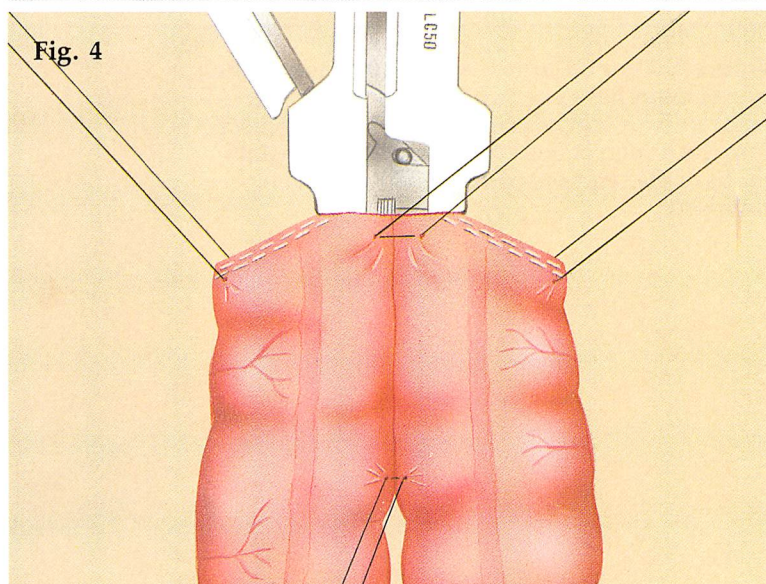
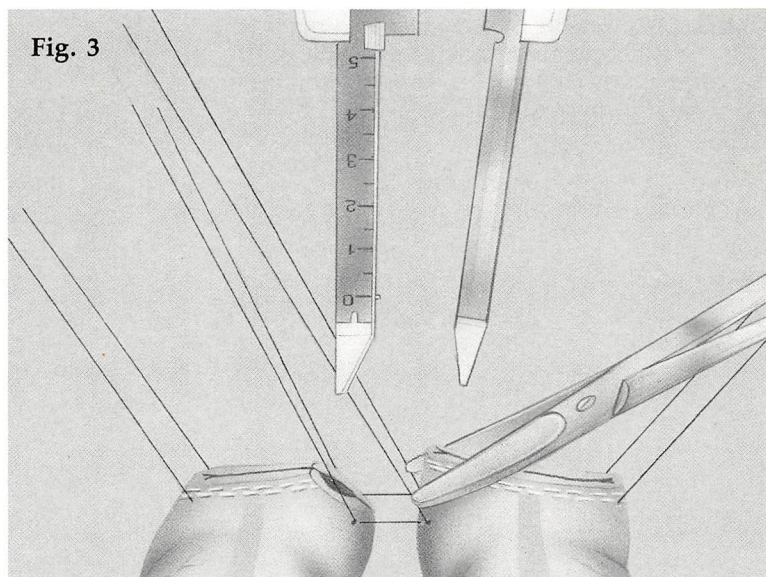


## Creating the Anastomosis

An anastomosis is created by one application of the PLC50 Linear Cutter. Excise the anti-mesenteric corners of the staple line closures of both bowel limbs (Figure 3). Approximate the anti-mesenteric borders of the limbs and insert one fork of the instrument into each bowel lumen (Figure 4).

After the bowel edges have been aligned evenly on the PLC50 forks, simply join and lock the two instrument halves together and fire the stapler. To facilitate the alignment of tissue on the PLC50 forks, the instrument's locking lever can be placed in the intermediate "detent" position (see Technical Detail D). Two double staggered staple lines join the bowel walls; simultaneously, the knife blade in the instrument divides the walls between the two staple lines, creating a stoma.

Pull back the firing knob, open the PLC50 and withdraw the forks. Carefully inspect the anastomotic staple lines for hemostasis. If necessary, cauterize or ligate bleeders.

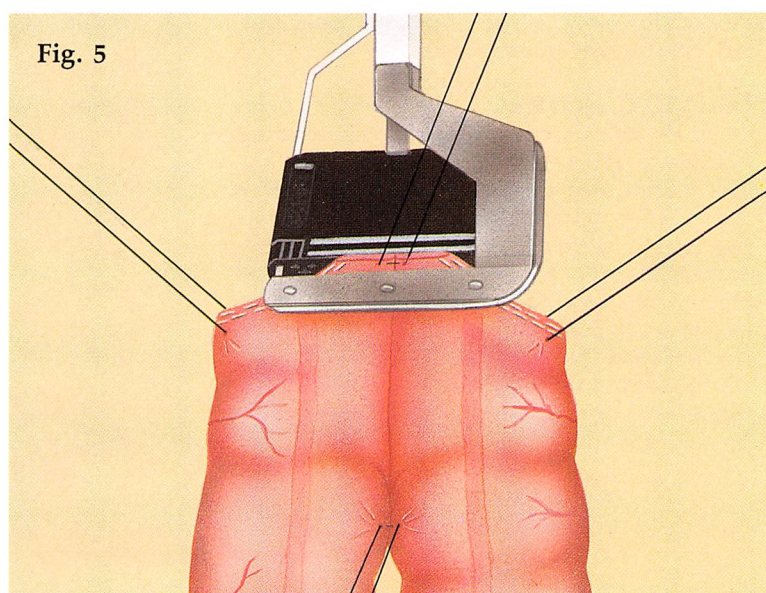


## Closing the Common Opening

The now common opening in the bowel is closed with one application of the RL60 Linear Stapler (Figure 5). While distracting the PLC50 staple lines, align the tissue edges of the common opening in an everted manner with traction sutures or clamps.

Slip the opened jaws of the RL60 around the approximated tissue, making sure that all tissue layers are incorporated and that the linear staple line will intersect both ends of the anastomotic staple lines. Push the retaining pin into place, close the jaws, release the safety and fire the stapler.

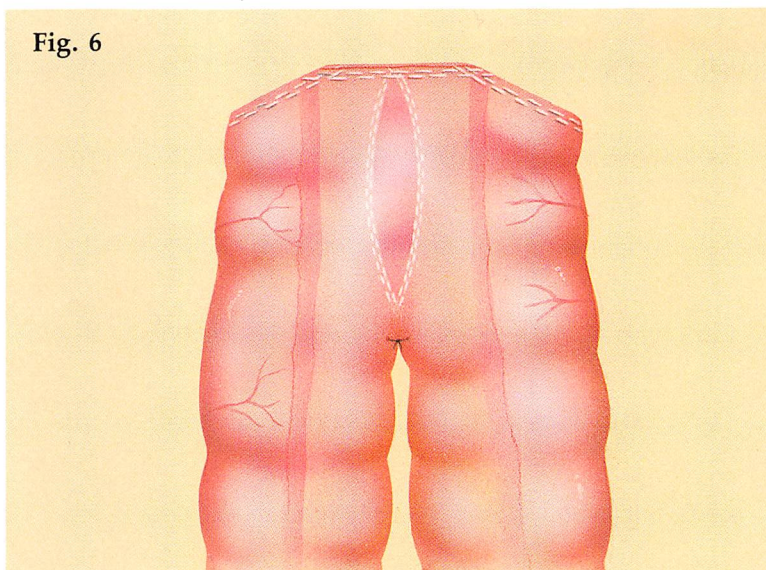
Prior to removing the stapler, use the cutting guide on the edge of the stapler anvil as a guide to excise the redundant tissue protruding through the jaws.





## Completed Reconstruction

The completed intestinal anastomosis is illustrated in Figure 6, with the anterior wall made transparent to illustrate the completed anastomosis. Note the reinforcing suture at the apex of the anastomosis.



## One-Stage Technique

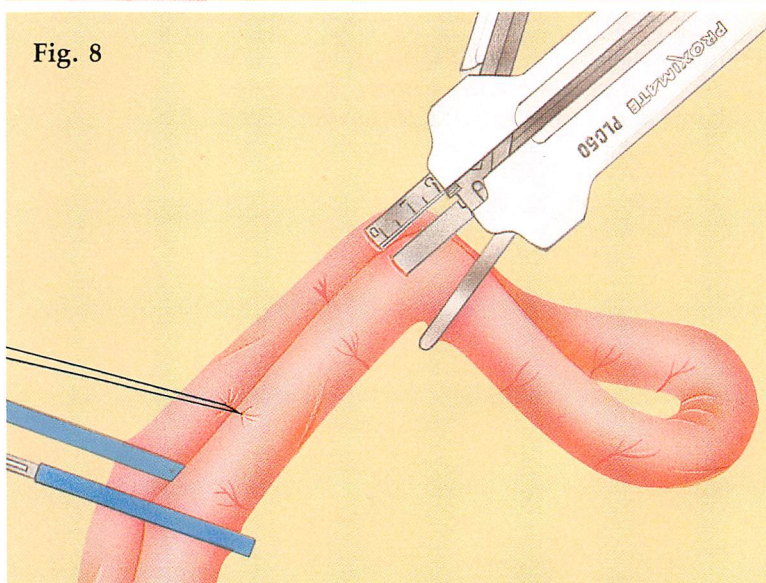
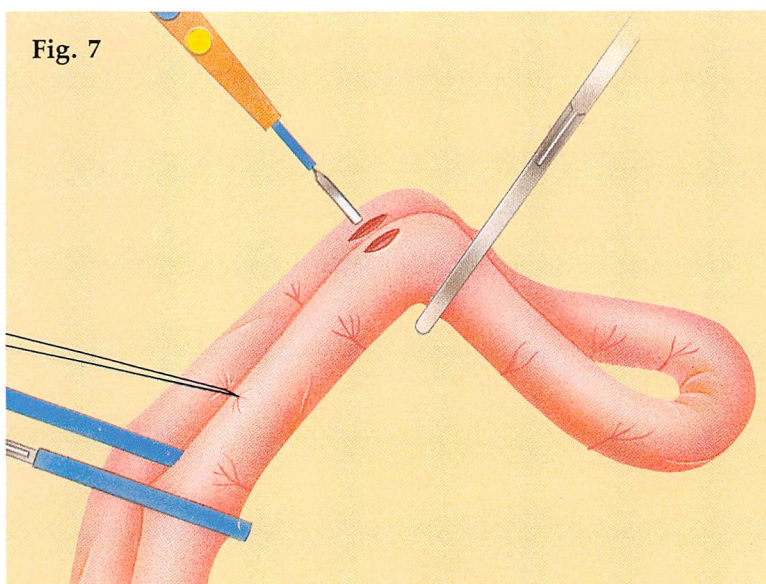
After the appropriate segment of bowel is mobilized, the anastomosis is created with one application of the PLC50 Linear Cutter, and the resection and closure of the common opening completed with one application of the RL60 Linear Stapler.

## Creating the Anastomosis

After approximating the antimesenteric borders of the bowel loops, place a Kocher clamp across both loops at the transition between viable and nonviable tissue. Make a small opening (just large enough to accommodate the individual forks of the PLC50) into the lumen of both the proximal and distal limbs with either an electrocautery or scalpel (Figure 7).

Insert one fork of the PLC50 into each lumen (Figure 8), align the openings evenly on the forks with traction sutures or clamps, close the instrument and fire the stapler. Two double staggered staple lines join the bowel walls; simultaneously, the knife blade in the instrument divides the walls between the two staple lines, creating a stoma.

Pull back the firing knob, open the PLC50 and withdraw the forks. Carefully inspect the anastomotic staple lines for hemostasis. If necessary, cauterize or ligate bleeders.





## Resecting and Closing the Bowel

The now common opening in the bowel limbs is closed with one application of the RL60 Linear Stapler. Grasp the antimesenteric border of the intestine as shown in Figure 9. The common opening should be held open with the anastomotic staple lines distracted.

Slip the opened jaws of the RL60 around both the proximal and distal bowel limbs (Figure 10), being certain to incorporate both anastomotic staple lines and all tissue layers. Push the retaining pin into place, close the jaws to the desired closed staple height, release the safety and fire the stapler. Prior to removing the stapler, use heavy scissors along the instrument edge as a guide to transect the redundant bowel loop.

Fig. 9

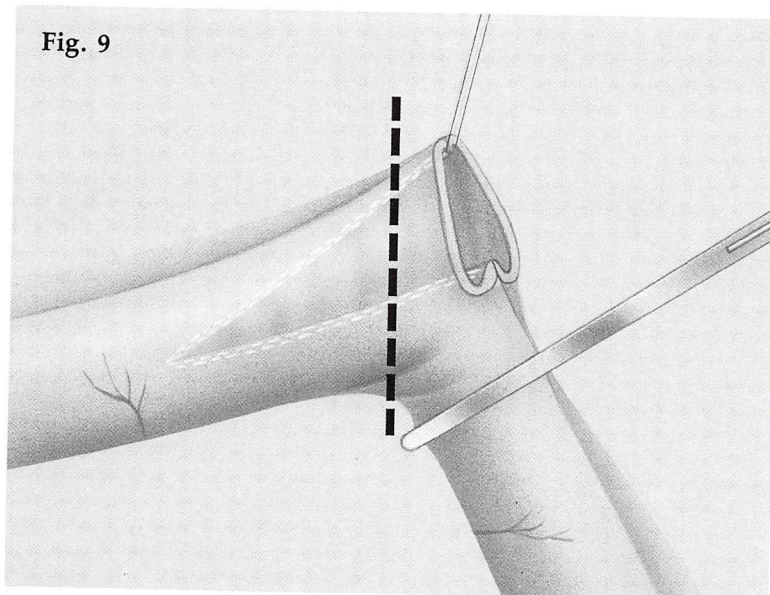
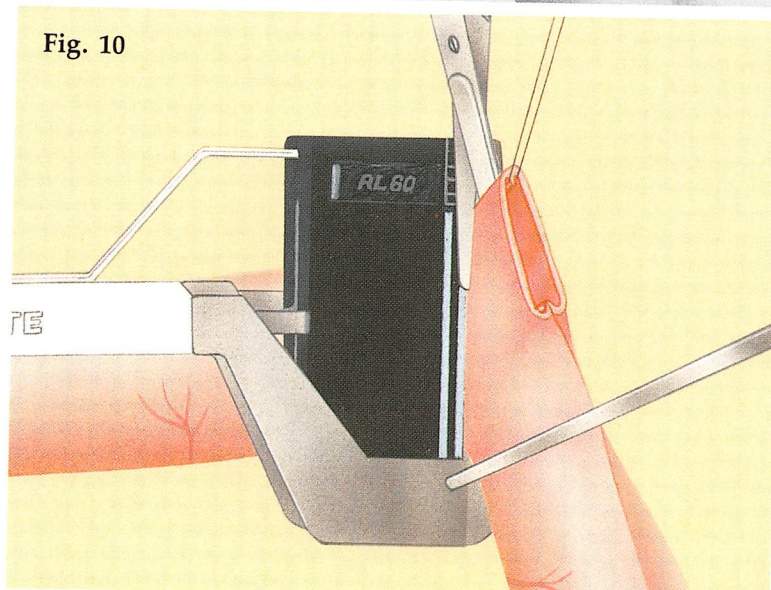


Fig. 10



## Completed Reconstruction

The completed intestinal anastomosis is illustrated in Figure 11, with the anterior wall rendered transparent to show the reconstruction. Note the reinforcing suture placed at the apex of the anastomosis.

Fig. 11

