

Surgical table rebuilding

A cost containment option

by Gary Sitcer

One of the operating room's most expensive items is the surgical table. Today, a new table costs anywhere from \$18,000 to \$35,000. Buying new tables to replace old tables that no longer give reliable service can be an expensive proposition, costing hundreds of thousands of dollars.

Material managers looking for a way to combat the rising cost of providing health care should consider refurbishing as an alternative to purchasing new equipment.

Refurbishing, also known as rebuilding or reconditioning, is a process that goes beyond an ordinary repair. A rebuilt piece of equipment not only has had its obvious defects eliminated, but has also been taken apart and refurbished from the ground up. The end result: equipment with the safety, performance, appearance, and reliability equal to new.

Surgical tables are good candidates for rebuilding. Technology for most OR tables has not changed dramatically in the past 30 years, and any new features or capabilities, such as improved floor locks, x-ray tops, crutch socket conversions, or modification to allow C-arm use, can easily and cost-effectively be added to the older tables during the rebuilding process.

Refurbishing vs. repair

Material managers must understand the difference between repair vs. rebuilding of surgical tables and other equipment and should be careful about dealing with service firms which claim to refurbish or rebuild when in fact they merely patch or fix.

An article in *Second Source* (November, 1988), a magazine covering the medical equipment service industry, interprets the FDA's definition of a repair as "the act of fixing or replacing broken parts and returning a piece of equipment to operation."

The builder, on the other hand, goes beyond repairing the specific item found wrong with the table. According to *Second Source*,

the FDA's concept of a builder is a firm or individual who "tries to anticipate future problems and make a repair or upgrade in an attempt to eliminate these potential problems."

Refurbishing considerations

The major reasons why old surgical tables are replaced include OR down-time due to table breakdowns, frequency and cost of repair, lack of manufacturer support and service, changing clinical requirements, and new capabilities or technology.

As previously mentioned, most new capabilities can be added during the refurbishing process. And by restoring the surgical table to its original condition and performance, refurbishing eliminates repairs and OR down-time.

Cost: The fee for rebuilding a table is usually about one-fourth the cost of buying a brand new table.

As an example, St. Mary's Hospital in Rochester, MN, had 22 of its existing OR tables rebuilt in 1986¹. The cost of rebuilding the 22 tables was \$99,000, or \$4,500 per table. The cost of purchasing new tables would have been \$396,000 or approximately \$18,000 per table. St. Mary's savings: \$297,000.

If you are adding OR suites and need additional tables you might want to consider purchasing rebuilt tables instead of new tables. A rebuilt table can be bought for approximately half the cost of buying the equivalent table new, yet the performance, reliability, and life expectancy of the two tables is virtually identical. The University of Washington Medical Center in Seattle saved more than \$140,000 when it replaced eleven 30-year-old tables with rebuilt tables instead of buying new ones¹.

Support: There is always some risk that parts for older models may become difficult to find. Builders are committed to supporting all makes and models of the tables they sell—and rebuild—into the next century. This reduces the risk of obsolescence and protects your existing (and significant) investment in OR tables.

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When should a table be rebuilt? Although an inspection and evaluation from a qualified rebuilder is the best way to determine the condition of the table and what servicing if any is required, your maintenance or biomedical engineers can perform a simple inspection to look for basic signs of wear.

For example, it may be time to refurbish if the table doesn't hold its height under a weight load, or if the table top wobbles. Other signs of trouble include broken controls and indicators, peeling chrome, hard-shifting or wobbly gears, corrosion in the main lift, overall corrosion, oil leaks, hydraulic or electrical problems, and floor locks that slip or bind. Your maintenance and engineering staff will know when it no longer pays to repair a table. This is the time to look for a qualified rebuilder.

Choosing a rebuilder

There are a number of firms today offering repair and refurbishing of surgical tables. When evaluating a rebuilder, here are some of the issues you should address to make sure your equipment is really getting rebuilt, and not simply repaired:

- 1) How long has the firm been in business? How many tables have they rebuilt? How many hospitals and surgicenters have they served? How many are repeat customers? You want a firm with an established track record of longevity and proven success.
- 2) Who have they rebuilt tables for? Look for referrals to major hospitals in your area. Call these clients and ask whether they are happy with the service provided. Get several references and follow up with phone calls.
- 3) Is the firm FDA-listed? The rebuilder should be registered with the FDA and should comply with FDA Compliance Policy #712428, which covers such areas as record keeping, testing, and complaints.
- 4) Do they stand behind their work? Look for a minimum unconditional one-year warranty on parts and labor. If something isn't right with your table, the rebuilder should correct the defect at his expense.
- 5) How diverse is the service? What types of tables do they service? Surgical only? Or cysto, ortho, ER, exam, and OB? Which manufacturers? Which models? Obviously, if your existing inventory of tables is a mixed group of different makes and models, the

more diverse the rebuilder is, the better. You want to establish a relationship that will last.

- 6) Does the rebuilder or refurbisher have a substantial inventory of table parts and accessories including armboards, supports, restraint straps, stirrups, conductive cushions, leg holders, and removable x-ray permeable tops? Keep in mind that if the service firm doesn't have the part on hand, they can't repair your table in a timely manner.
- 7) Will the rebuilder give you a loaner you can use while your table is in their shop being refurbished? This is critical. If the rebuilder doesn't supply a loaner, can you afford the resulting OR down-time? Insist that your rebuilder supply loaners.
- 8) How thorough is the firm's rebuilding process? Is it truly a rebuilding, or is it merely a repair? Make sure your rebuilder does most if not all of the items listed in the sidebar, *Checklist for Surgical Table Rebuilding*.
- 9) Price. The cost is important; after all, one of the key benefits of rebuilding is that it contains and controls OR expenditures. But you should get several quotations and investigate further if one is much lower than the others.
- 10) Does the firm have product liability insurance?

Implementing a plan

Chances are, a portion of tables in your hospital require some sort of attention—either refurbishing, major repair, or merely some minor adjustment. Others may be in peak condition and require no adjustment of any type.

Ideally, you want to keep tabs on the condition of these tables so that you catch problems before they can compromise OR performance or safety.

How do you go about it?

The first step is to speak with OR personnel, surgeons, nurses, supervisors, and with maintenance technicians and biomed, engineers to determine the status of existing tables—especially if there appear to be any immediate candidates for repair or refurbishing.

You should also familiarize these people with the advantages and cost savings associated with rebuilding, pointing out that the rebuilding process achieves quality and performance equivalent to new but at a fraction of the cost.

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Checklist for surgical table rebuilding

Before selecting a firm to rebuild your OR tables, make sure they perform most or all of the steps critical to the rebuilding process, as outlined below:

- Rebuild the main lift. Remove, disassemble, clean, relubricate, and replace seals and worn and broken parts.
- Rebuild the hydraulic system. Remove, disassemble, clean, and replace rings and seals. Replace valves and pistons.
- Rebuild the floor lock system. Replace worn or broken shafts and pivots, conductive casters, and rubber stop pads.
- Rebuild the transmission. Replace worn gears, shifters, and bearings. Perform complete relubrication. Adjust for smooth, firm control.
- Adjust control indicators as required.
- Repaint surfaces. Sand, prime, and paint all painted surfaces.
- Replace or refinish stainless steel stops.
- Rechrome all plated parts and hardware.
- Overhaul electrical system, where needed. Replace all relays, capacitors, switches, solenoids, and defective wiring. Test to ensure compliance with leakage and grounding requirements.
- Refinish headrest.
- Adjust to original manufacturer's specifications.
- Perform extensive quality assurance testing.
- Add conductive cushions.
- Return rebuilt table to client with one-year unconditional warranty on parts and labor.

In addition to sending out tables for repair or refurbishing, you may want to contract with the rebuilder for a planned preventive maintenance program that provides regular inspections and on-site servicing. This keeps all tables in safe condition, ensures reliable performance, and minimizes problems in the OR.

Conclusion

In the healthcare materiel management field, especially with today's emphasis on budgets and cost containment, buying a brand new table every time an existing table fails may not make good economic or medical sense. Rebuilding offers a sensible alternative that achieves significant cost savings while maintaining the level of quality and performance provided to the clinical staff and the patient in the OR. ☺

References

1. "Refurbishing OR Tables Saves Over \$100,000 Dollars", *Hospital Materials Management Newsletter*, Materials Management & Group Purchasing, Vol. 14, No. 8, August, 1989.

The author

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