Back to the GRIND

In exclusive research, superintendents and equipment techs offer their insights on reel and blade maintenance.

While quality of cut is the primary motivator for reel and blade maintenance, superintendents and equipment technicians seem to subscribe to a philosophy that is more gut instinct than regimented planning.

For example, three quarters (75 percent) of turfheads and equipment technicians asked told GCI they grind "whenever it needs it," and not based on a set number of hours (3 percent), days in operation (2 percent) or weeks of use (3 percent).

When they do the majority spin and relief grind (63 percent), with only 38 percent solely spin grinding. In addition, according to the survey, 68 percent of respondents indicated they lap.

And while nearly everyone you ask has a particular opinion regarding their unique approach to grinding and sharpening, more than three quarters (77 percent) indicated they were open to hearing other opinions and philosophies on the subject.

This is the first of a two-part analysis examining this research. The first provides a wider view of the findings, examining the data as a whole as well as a broader outlook of reel and blade maintenance philosophies.

In the August issue, we'll dial down on this data, providing a breakdown of some of the key findings based on operating budget, private vs. nonprivate facility, as well as geography.

It's important to note that GCI, in partnership with Foley United, developed a reel and blade maintenance questionnaire that was distributed to GCI's readership in the United States via the online survey portal, SurveyMonkey. In addition, GCI editors conducted follow up interviews for insight and views on the following data.

Among those who participated in the research, nearly three quarters (73 percent) were golf course superintendents and 15 percent were equipment technicians. More than half (62 percent) of respondents worked at non-private courses and reported an annual operating budget of less than $500,000 (48 percent). According to the data, respondents used a variety of brands for reel and bedknife grinding, the majority of which included Foley, Neary, Bernhard, and Peerless (in no particular order). – The editors

The following research project examining reel and blade maintenance trends was sponsored by Foley United.

How do you determine when to grind?

![Chart showing the percentage of respondents by their approach to determining when to grind.]

Editor's note: "Other" responses included end of season, annual, and winter, as well as when the labor is available to perform the task.

Are you grinding more, the same or less today than you were five years ago?

![Chart showing the percentage of respondents by their approach to determining when to grind.]

Three years from now, do you anticipate grinding more, the same, or less than you are today?

![Chart showing the percentage of respondents by their approach to determining when to grind.]

Grind time

Very few superintendents and technicians follow a regimented schedule to grind their reels. The majority (75 percent) take an educated guess about when it's time to grind. So what determines this? Many say it's a noticeable decline in the quality of cut (typically tearing of the grass blade), and/or course conditions (recent topdressing), as well as basing it on regular visual inspections. Nearly a fifth (17 percent) subscribe to an end-of-season or during-winter regimen for grinding and sharpening.

Likewise, respondents didn't see much of a deviation in the frequency of their reel maintenance activities. For example, more than half (57 percent) said they grind the same amount today as they were five years ago, and more than three quarters (78 percent) believed they'd maintain this same frequency in five years.
What really matters

The cut is king, according to survey respondents. Nearly all ranked quality of cut as the most important aspect associated with reel maintenance. Next to quality of cut, importance was placed on frequency of service (time between grinding, adjusting, lapping) and overall cost of the machine.

Superintendents and technicians placed the least amount of importance on manufacturer established cutting unit maintenance methods, which was closely followed by the amount of time it takes to grind a reel.

### Regarding reel maintenance, rate the following in order of importance.

<table>
<thead>
<tr>
<th></th>
<th>Most important</th>
<th>Least important</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SCALE</strong></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Quality of cut</td>
<td>97%</td>
<td>2%</td>
</tr>
<tr>
<td>Amount of time it takes to grind a reel</td>
<td>9%</td>
<td>32%</td>
</tr>
<tr>
<td>Ease of changing reels</td>
<td>9%</td>
<td>41%</td>
</tr>
<tr>
<td>Amount of time between service, grinding, adjusting, lapping, overhaul, etc.</td>
<td>21%</td>
<td>47%</td>
</tr>
<tr>
<td>Cost of replacement parts</td>
<td>20%</td>
<td>28%</td>
</tr>
<tr>
<td>Frequency of grinding</td>
<td>16%</td>
<td>35%</td>
</tr>
<tr>
<td>Manufacturer established cutting unit maintenance methods</td>
<td>9%</td>
<td>23%</td>
</tr>
<tr>
<td>Overall cost of the machine</td>
<td>18%</td>
<td>35%</td>
</tr>
</tbody>
</table>

- **Quality of cut**
  - 1% Neutral
  - 99% Most important
  - 0% Least important

- **Cost of replacement parts**
  - 48% Most important
  - 36% Neutral
  - 16% Least important

- **Amount of time it takes to grind a reel**
  - 41% Most important
  - 31% Neutral
  - 28% Least important

- **Frequency of grinding**
  - 51% Most important
  - 33% Neutral
  - 16% Least important

- **Ease of changing reels**
  - 50% Most important
  - 33% Neutral
  - 17% Least important

- **Manufacturer established cutting unit maintenance methods**
  - 32% Most important
  - 36% Neutral
  - 32% Least important

- **Amount of time between service, grinding, adjusting, lapping, overhaul, etc.**
  - 65% Most important
  - 25% Neutral
  - 7% Least important

- **Overall cost of the machine**
  - 53% Most important
  - 31% Neutral
  - 16% Least important
Philosophies
Surprisingly, superintendents and technicians aren't married to how they maintain their reel cutting units. In fact, more than three quarters say they're open to other options or definitely need to change or update their grinding practices. However, nearly a fifth (19 percent) of respondents have no intentions of changing their routines in the foreseeable future.

So where did respondents learn these reel maintenance practices? The majority point to on-the-job training, with 45 percent learning from the course's equipment technician and 40 percent from the course superintendent (presumably while they were an up-and-coming assistant). Very few, though, relied on online training resources (websites or YouTube).

How committed are you to your current grinding practice, regimen or philosophy?
- 2% I don't know
- 2% Definitely need to change my practices
- 19% Would not change
- 77% Open to hearing other opinions

Who taught you, or where did you learn, how to maintain reel cutting units?

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>45%</td>
<td>Course's equipment technician</td>
</tr>
<tr>
<td>40%</td>
<td>Superintendent</td>
</tr>
<tr>
<td>39%</td>
<td>Educational seminar</td>
</tr>
<tr>
<td>35%</td>
<td>Equipment dealer's mechanic/technician</td>
</tr>
<tr>
<td>32%</td>
<td>Manufacturer</td>
</tr>
<tr>
<td>21%</td>
<td>In turf school</td>
</tr>
<tr>
<td>17%</td>
<td>Other</td>
</tr>
<tr>
<td>15%</td>
<td>Read it in a trade publication</td>
</tr>
<tr>
<td>10%</td>
<td>I do not maintain our reels, someone else does.</td>
</tr>
<tr>
<td>5%</td>
<td>Website online</td>
</tr>
<tr>
<td>2%</td>
<td>YouTube</td>
</tr>
</tbody>
</table>

Editor's note: "Other" responses included self-taught, a friend or family member, and trial-and-error.

Keep it in-house
Superintendents and equipment technicians aren't keen on the idea of contracting out their reel maintenance duties. An overwhelming majority of respondents (90 percent) indicated they keep these duties strictly in-house. Likewise, 81 percent said they would not consider contracting this out in the future.

When asked why, respondents primarily cited the cost and waste of facility resources in contracting out reel maintenance duties. In addition, some respondents touted their technicians' and/or mechanics' grinding and sharpening prowess.

Are you contracting out your grinding needs?
- 10% Yes
- 90% No

If you answered "No," would you consider contracting grinding out in the future?
- 19% Yes
- 81% No

Grinding away
Nearly half of superintendents and technicians (48%) believe the average life expectancy on reel and bedknife grinding equipment is between 10 and 15 years. Likewise, 35% of survey respondents believe this equipment should last more than 15 years.

- GCI/Foley United research
Do You...?

...subscribe to the "no contact/no relief" or "light contact with light relief" grinding philosophy?
- 22% No contact/no relief philosophy
- 69% Light contact with relief philosophy
- 2% Don't know
- 7% Other

...spin grind only?
- 38% Yes
- 62% No

...spin and relief grind?
- 63% Yes
- 37% No

...lap?
- 68% Yes
- 32% No

...believe automation of the spin grind process will help reduce labor and increase productivity in the workshop?
- 73% Yes
- 8% No
- 19% Don't know

specs
Nearly all of the respondents (83 percent) said they grind new bedknives. However, the jury is out on whether following the manufacturer’s specifications had an impact on maintaining and/or extending reel life in between service.

Do you grind new bedknives?
- 83% Yes
- 17% No

Do reels stay on/cut longer when maintained to the manufacturer specifications?
- 47% Yes
- 11% No
- 42% Don’t know

#1
When asked to describe their No. 1 frustration with reel maintenance, the majority of superintendents and technicians cited the time required – including grinding, sharpening, set up and adjustments – to complete the process.