

QUICK LOADING SYSTEM - SPOOL TRIMMER HEAD



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PROBLEM SOLVED !

RELOADING NEW TRIMMER LINE ON TO TRIMMER HEAD SPOOL

The majority of weed trimmer machines that a person purchases will come equipped with a Semi-Auto (bump & feed) Spool Trimmer Head Cutting Tool that requires having to reload the storage spool with new nylon cutting line once all the line has worn down or breaks off during the use of the machine for cutting all types of vegetation.

Anybody that has ever owned a handheld weed trimmer machine has experienced the hassle and frustration of having to disassemble the trimmer head to remove the spool and rewind new line onto the spool and re-assemble it.

The manufactures sold spools pre-wound with line separately because alot of people didn't wind the line properly on the spools.

Now, with a "Easy Load" Spool trimmer head there is no disassembly just cut a length of line, insert one end through one eyelet and feed it through the spool until the end exits the opposite eyelet, pull line through until there is equal lengths of line on each side of the trimmer head and turn the knob until the line is wound up onto the spool, leaving at least 5-6" extending out from both eyelets "you're done" and now you're ready to get back to finishing up.

Reloading new line on to the spool is now both Quick and Easy and almost anybody can do it ! No need to buy pre-wound line on spools !

BEST TRIMMER LINE LOADING SYSTEM

There will always be more than one way to accomplish something but when it comes to making a comparison ultimately there be only one that will stand out from the others making it "the best".

That being said, since the introduction of the 1st "Easy Load" Spool trimmer head product "Speed Spool" launched onto the market by MTD RYOBI 1996 then STIHL came out with two Autocut C5-2 & C25-2 around 1999, then PROULX around 2008 product "U-Turn".

These trimmer heads use a "**Friction Fit Line Anchoring system**" – using 2 separate lines and insert end of line in to each of 2 eyelets. 2005 SHINDAIWA launches commercial type "Speed Feed" trimmer head. The head was different, "straight through" guide channel aligned with eyelets center flange. 2008 Ryobi launched "Reel Easy" having a "through curved guide" invented by Alliss.

The "**Straight Through**" guide channel is the best and the "**Curve Through**" guide channel is 2nd best for quick and easy loading line onto a trimmer head spool.

In these recent patents that have been granted to Alliss owner of First-To-Invent, LLC they include using both straight and curved guide channel via using interchangeable guide channel modules in top, middle and bottom flange and the patents include obtaining exclusive patent rights to straight through guide for top and bottom flange of a "Easy Load" Spool.



BI-DIRECTIONAL TRIMMER LINE DISPENSING



Generally all “Easy Load” Spool Trimmer Heads include a one way ratchet mechanism used for both indexing and winding line onto the spool to prevent the spool from rotating in the reverse direction from the winding direction to prevent the line from unraveling.

The majority of Weed Trimmer Machines (gas powered) manufacture two basic models:

- (A) Straight Shaft (Drive Shaft rotates “Counter Clockwise”)
- (B) Curved Shaft (Drive Shaft rotates “Clockwise”)

So that a manufacture did not have to make a separate trimmer head for each of these two basic models Alliss conceived of a spool that was symmetrical and could be inverted so that the same trimmer head could be used on either a Straight Shaft or a Curved Shaft trimmer machine and obtained US Patent 7,412,768 in 2008 including Foreign Patents.

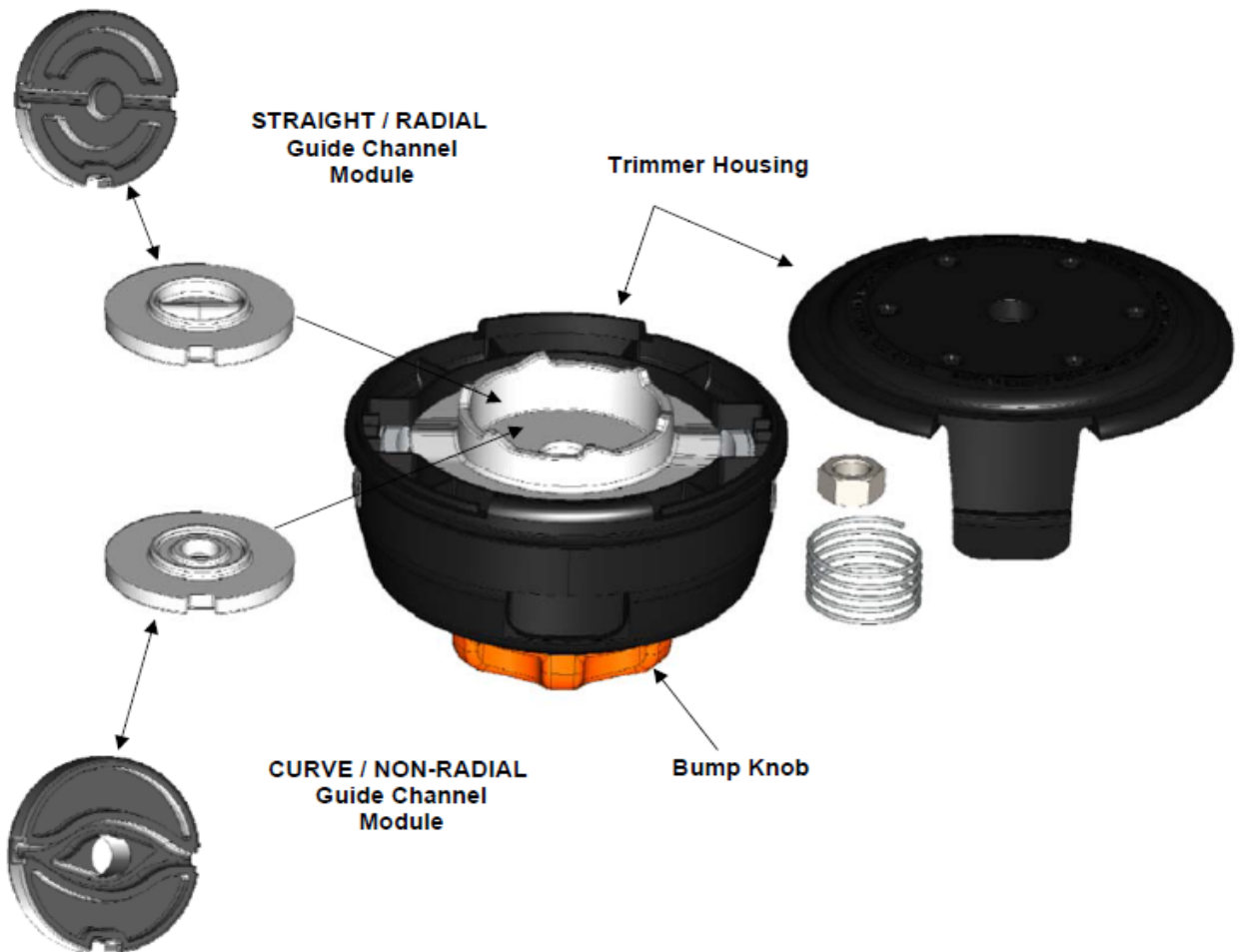
A year later in 2009 Alliss conceived and through experimentation made a discovery that “all” trimmer heads with a one way ratchet mechanism was located between the housing and the spool and spool was not attached directly to the trimmer machine drive shaft, trimmer line would dispense line properly and consistently when attached to either a machine having a drive shaft that rotated clockwise and or counter clockwise. The parent application 12/4428,453 was filed in 2009 and US Patent 8,910,387 issued 2014.

US Patent 9,516,807 and 9,924,631 are CIP applications that related back to the ‘387 patent.

This patented Bi-directional Dispensing feature is applicable and beneficial to major OEMs of trimmer machines (high volume) of both straight /curved shaft models and to OEMs that manufacturer Universal Fit After Market Replacement “Easy Load” spool trimmer heads.

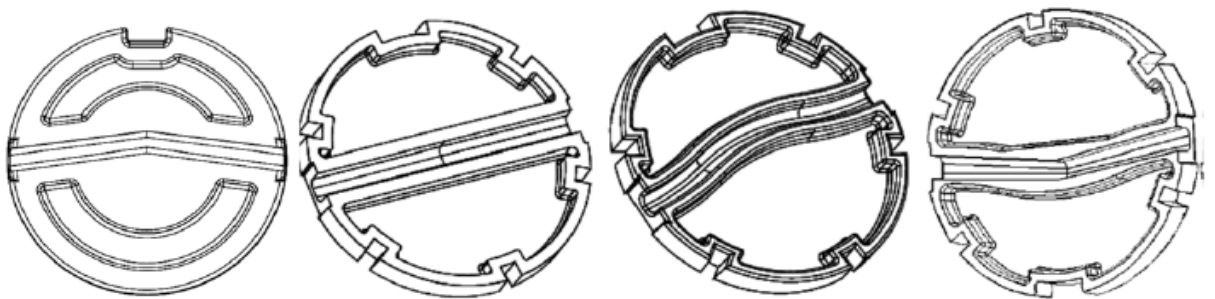
BI-DIRECTIONAL "EASY LOAD" SPOOL TRIMMER HEAD

Interchangeable - Guide Channel Modules



PATENTED "INTERCHANGEABLE" GUIDE CHANNEL MODULES

- Quick & Easy Change Out - Machines having a Short Drive Shaft or Long Drive Shaft
- Modules can be Incorporated in Top - Middle - Bottom Flanges of a Spool
- No Limit to Engineering & Design & Applications



"EVOLUTION"

WEED TRIMMER HEAD - TRIMMER LINE STORAGE SPOOLS

PAST TO THE PRESENT

(2) FLANGE - SINGLE CHAMBER

- Early 70's to Present
- Remove from t-head for re-winding
- Difficult to rewind and reassemble
- Sale of prewound line spool "common"
- Prior Art



(3) FLANGE - DUAL CHAMBER

- Early 80's to Present
- Remove from t-head for re-winding
- Difficult to rewind and reassemble
- Sale of pre-wound line spool "common"
- Prior Art



(2) FLANGE - SINGLE CHAMBER

- Early 90's to Present
- 1st Generation "Easy Load" t-head
- Inventor - Griffini US 5,765,287
- Insert and remove a guide tube for loading line prior to winding



(3) FLANGE - DUAL CHAMBER

- Late 90's to Present
- 2nd Generation "Easy Load" trimmer head
- Inventors - Everts & Stark
- Friction Fit anchoring system-insert 2 lengths of line center flange prior to winding



(2) FLANGE - SINGLE CHAMBER

- Early 2000's to Present
- 3rd Generation "Easy Load" trimmer head
- Inventor - Proulx US 7,275,324
- Friction Fit anchoring system-insert 2 lengths of line top flange prior to winding



"EVOLUTION"

WEED TRIMMER HEAD - TRIMMER LINE STORAGE SPOOLS

PAST TO THE PRESENT

(3) FLANGE - DUAL CHAMBER

- Early 2000's to Present
- 4th Generation "Easy Load" trimmer head
- Inventors - Alliss & Phaltzgraff
- Through radial & non-radial guide channel anchoring system-insert 1 length of line through center flange prior to winding



(2) FLANGE - SINGLE CHAMBER

- Late 2000's to Present
- 5th Generation "Easy Load" trimmer head
- Inventor - Alliss US Patent 9,924,631 (2018)
- Through radial guide channel anchoring system-insert (1) length of line through top flange prior to winding



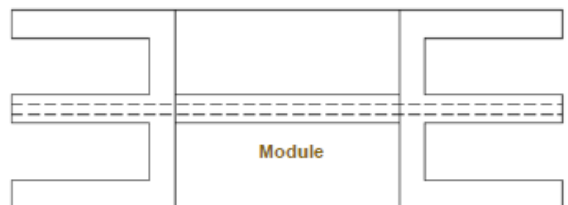
(2) FLANGE - SINGLE CHAMBER

- Late 2000's to Present
- 5th Generation "Easy Load" trimmer head
- Inventor - Alliss US Patent 9,924,631 (2018)
- Through radial guide channel anchoring system-insert (1) length of line through bottom flange prior to winding



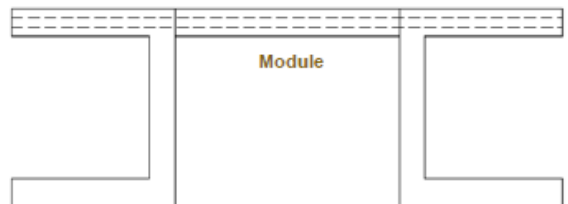
(3) FLANGE - DUAL CHAMBER

- Late 2000's to Present
- 5th Generation "Easy Load" trimmer head
- Inventor - Alliss Patents 9,516,807 & 9,924,631
- Through radial & non-radial interchangeable module guide channel anchoring system-insert (1) length of line through center flange prior to winding



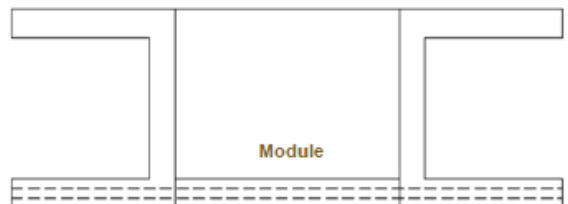
(2) FLANGE - SINGLE CHAMBER

- Late 2000's to Present
- 5th Generation "Easy Load" trimmer head
- Inventor - Alliss Patents 9,516,807 & 9,924,631
- Through radial & non-radial interchangeable module guide channel anchoring system-insert (1) length of line through "top" flange prior to winding



(2) FLANGE - SINGLE CHAMBER

- Late 2000's to Present
- 5th Generation "Easy Load" trimmer head
- Inventor - Alliss Patents 9,516,807 & 9,924,631
- Through radial & non-radial interchangeable module guide channel anchoring system-insert (1) length of line through "bottom" flange prior to winding



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