

Decrease Your Head Index Time With A New 4" Spline Shaft And Hub Conversion!

Uniloy is proud to promote our Bigger, **Better Spline Shaft and Hub Assembly!**

- The Spline Shaft is 44% thicker
- There are 47% more teeth between the Spline Shaft and Hub
- There is 23% more vertical spline engagement
- The force carried per tooth has been reduced by 54%
- The new Spline Shaft is a one piece design vs. the separate Flange and Spline Shaft of the original design

The machine models that this improved design is available for are:

| | |
|-----|------|
| 90J | 135S |
| 122 | 150 |
| 128 | 189 |
| 135 | 189S |

Benefits of These Design Improvements

(1.) Decreased Head Index Time - By As Much As 1 Second!

Total machine dry cycle time is a combination of Clamp Open, Head Index, and Clamp Close times. The "smoothness" of these movements dictate how fast they can occur. In other words, machine dry cycle time can be reduced to the point where the clamps aren't slamming and the head is not chattering. We have found that the "smoothness" of the improved design Spline Shaft and Hub allow for the following results:

| | Head Index Time With New Shaft & Hub | Typical Head Index Times Currently |
|-------------------------------------|--------------------------------------|------------------------------------|
| Models 90J, 122, 128, 135, 150, 189 | .9 Second | 1.4 to 1.7 Seconds |
| Models 135S, 189S | 1.0 Second | 1.8 to 2.0 Seconds |

Obviously, your current Head Index Time is dependent upon the condition of our current Spline Shaft and Hub. By the way, Clamp Open time should be 1.0 second and Clamp Close time should be 1.2 seconds. If you are currently running longer times than these, its probably time to have your cylinder cushions refurbished.

(2.) A Longer Life For These Components

By increasing the diameter of the Spline Shaft, increasing the number and engagement of the teeth, and making the Spline Shaft a one piece construction, the useful life of this important and expensive assembly has also been increased.

Spline Shaft and Hub Specification Comparison

| | <u>New Assembly</u> | <u>Original Assembly</u> |
|--|---------------------|--------------------------|
| Spline Diameter | 4.325" | 3.000" |
| Number of Teeth | 25 | 17 |
| Spline Pitch | 6/12 | 6/12 |
| Pressure Angle (degrees) | 30 | 30 |
| Spline engagement in "Up" Position | 4.62" | 3.75" |
| Force Factor (Force Factor x Torque = Force Per Tooth) | 0.018 | 0.039 |



Part Numbers For Conversion Parts and Replaced Parts

| | | | |
|---------------------|-----|-----|-----|
| Clamp Stroke | 7" | 5" | 7" |
| Stack Height | 10" | 10" | 14" |

Conversion Parts Required

| | | | |
|--|----------|----------|----------|
| New Spline Shaft and Hub Assembly (matched set) | 10427771 | 10408429 | 10898901 |
| New Hub Bushing Bottom Bearing Block | 10427770 | 10408505 | 10710163 |
| Trabon Bypass Block (only needed if machine has Trabon Lube) | 10427963 | 10427963 | 10427963 |

Additional Parts to Consider When Installing a New Spline Shaft

| | | | |
|---|----------|----------|----------|
| Locating Pin | 10410855 | 10410855 | 65204 |
| Stop Buttons (need three) | 10410836 | 10410836 | 10410836 |
| Index plate locating Pin Bushing (need three) | 10410952 | 10410952 | 10410952 |
| Lower Shaft Bushing/Bearing | 10412813 | 10412813 | 10412813 |

Old Spline Shaft and Hub Information - For Reference Only

| | | | |
|---|----------|----------|-------|
| Existing Spline Shaft and Hub Assembly | 10416625 | 10503899 | 65159 |
| Existing Hub Bushing Bottom Bearing Block | 10412780 | 10412780 | 65187 |

Notes:

1. The new hub bushing bottom bearing block has an oil filled bronze bushing, which does not require Trabon lubrication and therefore does not have a Trabon lube connection. This is why the Trabon bypass block is required.
2. The spline shaft is a one piece 4150 steel forging, Rc 28-32.

Sales and Service

For more information on this product offering or any other machine upgrade, please contact your local Uniloy Parts Sales Representative. Trained Uniloy Service Technicians are available to assist in the installation of these packages at your facility.