BYH-4(Trident Pro)
Shaping Handpiece Operating instructions

— Caution: —

These precision double row bearings are fitted to the handpiece and must not be substituted with general bearings.

— When fixing a repair kit to the handpiece never place it in a vice. All work should be carried out while holding it in your hands.

— Please ensure the handpiece is out of gear before losening the tension nut.

— Never disassemble the rotary parts inside bearing units that need replacing.

— The bearing units are secured in the appropriate outer bearing holder where correct tension cannot be applied.

— Ensure the ferule is fixed to the handpiece when using a flexible shaft.

— Lubrication

Apply oil every half an hour

Place a few drops of clean high-grade oil onto the comb and cutters, tension pin cup, gear and around the ball (through the oil hole on the top of the handpiece). Loosen the tension nut and place the handpiece in a vertical position, place some oil into the tension sleeve, then lift up the ferule body and collect some oil inside to oil the center post cup (Fig 1).

— No lubrication for bearings

Sealed bearings are used in the handpiece and do not need oiling or greasing.

— Caution: Do not over oil or grease between the tension nut and tension sleeve as this will cause loss of tension.

— Selecting the appropriate Combs and Cutters

Shaping combs and cutters play a major part in shaping. It is very important to select the appropriate comb for the job. When selecting the right comb it is important to consider the shapes, bend and width of the comb (Fig 3).

— Under normal短度 conditioning conditions:

1. Short (Taper Comb)

The short comb is used initially when shaping in its straight and the sharpening is in progress.

2. Medium (Taper Comb)

The medium comb is used for the majority of corneal shaping and is suitable for most patients.

3. Long (Taper Comb)

The long comb is particularly suitable for the deeper baffle area and is used when the baffle is already or for early reshaping.

— Fixing a comb and nutber

Place a comb and nutber on the handpiece. Slightly tighten the comb screws until you can just move the comb on the baffle. Loosen the entire baffle to 1.5 to 2.0 mm below the screw of the comb. Tighten the comb screws with a screwdriver provided (Fig 4).

— Screw

The screw ensuring spring is fitted to the ferule body by a screw and must not be loose.

1. Adjusting by hand

Loosen the center post nut and rear the center post in or out to set the distance from the top of the upper surface of the ball nut on the ferule body to 3.0mm. Loosening the center post nut (As shown in Fig 5).

2. Adjusting using the post gauge (the post gauge is designed specifically to adjust the level of the center post).

Loosen the Ferule and the center post gauge is in position. Loosen the inner nut, place the nut gauge to the center post. Slightly tighten the inner nut (Fig 6).

— Fitting the tension retaining ring

When fitting the tension retaining spring in the threaded bush, make sure the large curve of the spring forms directly in a clockwise direction when looking down on the handpiece. Place the spring over the threaded bush and insert the small curved end into the hole. Ensure the spring is pushed partly into the groove of the threaded bush.

— Caution: Absence of the tension retaining spring will contribute to loss of tension and damage the handpiece.

— Removing the inner and outer joints

Remove the oil hole cap and place a screwdriver through the hole to stop the comb spindle from turning. Loosen the nuts using a suitable nut wrench. You can then remove the inner and outer post from the handle by hand.

— Lubricating the back joint caps

The back joint is not only the key to the direction and outer post, but also base much of the weight of the handpiece movement. Lubricate the screws with grease and remove the back joint post cap is placed one nut away from the back joint and push it past the joint. Remove the joint post cap (Fig 7).

— Caution: Ensure the joint spring is not loose, replacing immediately if it is loose.

— Thread cap

The thread cap (2B) is replaceable after long usage time or when signs of wear appear. To remove the thread cap, turn to remove the two nuts on the retaining ring. Then use a tool to hold the two bolts on the thread cap, turn the thread cap anti-clockwise to remove. Will need some bearings as 1.0t was used on the thread cap during assembly.

— Pair of the chinkes feet

Ensure that each of the chinkes feet are firmly fixed to the ferule. Remove the chinkes feet once a week. Clean the chinkes feet and the front of the ferule body thoroughly. Turn the chinkes feet on their side and pull out by hand or by places. Always apply a small amount of grease into the setting holes on the ferule body when replacing the chinkes feet.

When the cone and tip on the outer half of the chinkes feet is worn out, it must be replaced as soon as possible.

— Tension pressure

Each end of the tension pin is different in size. Ensure the longer end fits into the tension pin cup and the smaller end into the tension pin screw. Increase the pressure on the outer and outer fitting into the tension pin. If the tension pin is tightened excessively the handpiece body and combers will overwork and quickly weaken. The longer end of the baffle and nutber to not cut off correctly. If the handpiece is not fitting correctly the tension pin must be replaced with a bolt for ground comber and cutter.

— Caution: The tension nut must be replaced by a tool before removing the long tension pin, tension pin cup and tension sleeves.

— Screw

The screw ensuring spring is fitted to the ferule body by a screw and must not be loose.

— Remove and replace the fork body assembly and the roller

Method of removal:

The fork body assembly can be removed without removing the center post.

First unfasten the tension nut, then remove the tension nut and tension sleeve. Remove the safety screw and remove the tension nut and remove the fork body with the roller.

Replacing fork body:

Remove the oil hole cap on the top of the handpiece. Place a small amount of grease onto roller. (Roller should be lubed out so that the roller is not facing the crumple spindle) Place the roller in the fork body and put the roller back in place (As shown in Fig 8).

— 1. Adjustable by hand:

Loosen the center post nut and rear the center post in or out to set the distance from the top of the upper surface of the ball nut on the ferule body to 3.0mm. Loosening the center post nut (As shown in Fig 5).

— 2. Adjusting using the post gauge (the post gauge is designed specifically to adjust the level of the center post):

Loosen the Ferule and the center post gauge is in position. Loosen the inner nut, place the nut gauge to the center post. Slightly tighten the inner nut (Fig 6).

— Caution: Absence of the tension retaining spring will contribute to loss of tension and damage the handpiece.

— Removing the inner and outer joints

Remove the oil hole cap and place a screwdriver through the hole to stop the comb spindle from turning. Loosen the nuts using a suitable nut wrench. You can then remove the inner and outer post from the handle by hand.

— Lubricating the back joint caps

The back joint is not only the key to the direction and outer post, but also base much of the weight of the handpiece movement. Lubricate the screws with grease and remove the back joint post cap is placed one nut away from the back joint and push it past the joint. Remove the joint post cap (Fig 7).

— Caution: Ensure the joint spring is not loose, replacing immediately if it is loose.

— Thread cap

The thread cap (2B) is replaceable after long usage time or when signs of wear appear. To remove the thread cap, turn to remove the two nuts on the retaining ring. Then use a tool to hold the two bolts on the thread cap, turn the thread cap anti-clockwise to remove. Will need some bearings as 1.0t was used on the thread cap during assembly.

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