

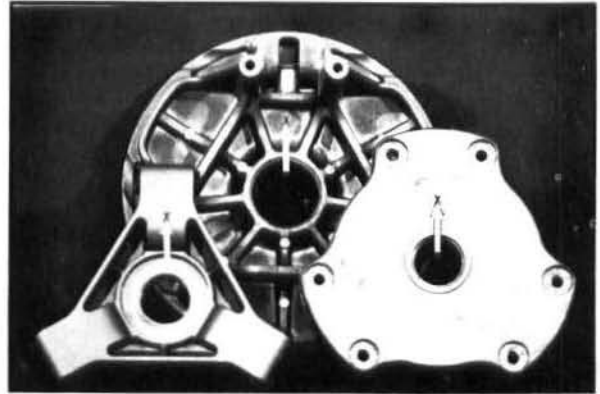
TORQUE-O-MATIC DRIVE Spider Indexing

3. Install spider washer(s) and spider. The spider must be rotated clockwise into the moveable sheave to maintain relative clutch balance after reassembly.

Re-indexing the spider 1/3 turn clockwise, or 1 leg, will allow the realignment of the moveable and stationary sheaves as previously marked. For example:

- .020" or .032" washer removed - re-index spider clockwise 1/3 turn
- .050" or .064" washer removed - re-index spider clockwise 1/3 turn
- Two .050" or .064" washers removed - re-index clockwise 2/3 turn

NOTE: Alignment marks should be within 1" (2.5 cm) after final assembly and torquing.



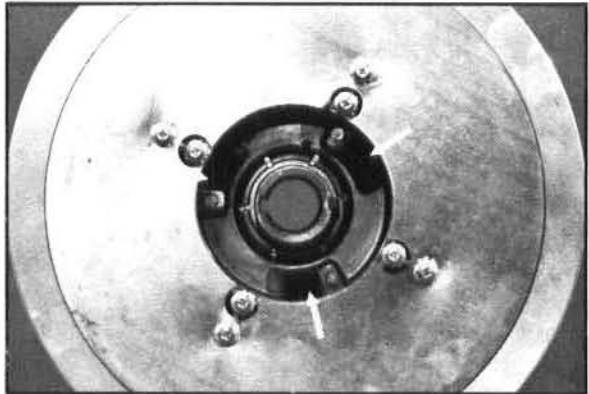
TORQUE-O-MATIC DRIVE

Aluminum Driven Clutch Service - P85

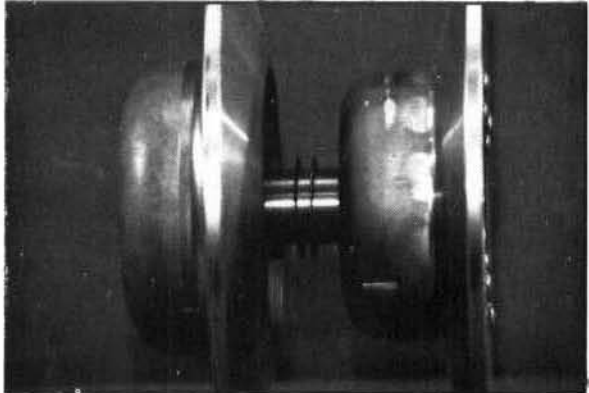
1. Remove snap ring and washer.



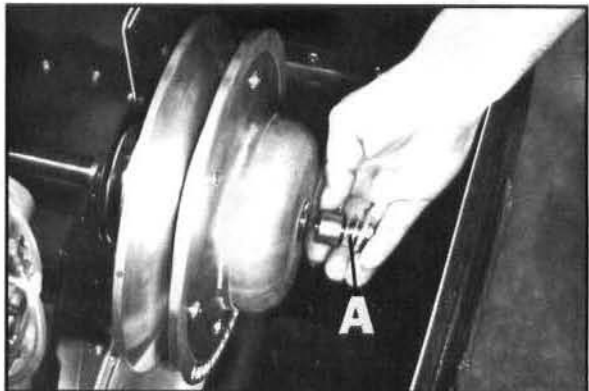
2. Inspect ramp buttons and bushing for wear.
3. Note condition of moveable sheave bushing. Install helix into bushing. It should slide freely without binding.
4. Polish helix with a fine emery cloth to remove any sharp edges which may cause sticking.



5. Clean all parts.
6. Reassemble stationary and moveable sheaves. Note the placement of the two thrust washers shown. These washers may be used to adjust the effective belt tension measurements as described earlier. Removal of a thrust washer increases neutral belt tension. **NOTE:** Addition or subtraction of these washers affects clutch alignment.



7. When driven offset is properly adjusted, the washers (A) (PN 7555734) are used to adjust for free float on drive. Without a slight free float, the jackshaft bearings could be side loaded, causing premature bearing failure. Torque bolt to 12 ft. lbs. (1.66 kg/m).



Helix Angles And Effects

The driven clutch helix was selected for overall performance in relation to the other driven system components. In fine tuning situations requiring a slight adjustment of engine operating RPM or improved backshift, we recommend trying a helix change before changing other components.

Polaris has several helix angles available for the aluminum drive clutch. Refer to the chart below for specific angle effects and identification.

| Helix | RPM Effect | Identification |
|---|------------|---|
| 34° PN 5630168 | Increasing | Number 34 marked on back side of helix |
| 36° PN 5630185 | Decreasing | Number 36 marked on back side of helix |
| 42° - 36° - 34° Combination PN 5131013 | N/A | Identification T-1 marked on back side of helix |

The helix spring should always be adjusted within its limits before a helix change is performed. The normal rate of change between helix angle steps is 250 RPM under full throttle. This is approximately the same result as in going from the No. 1 to No. 4 spring position. **NOTE:** Increasing spring tension increases engine RPM. RPM changes may not be evident if other drive or driven clutch components are substandard.

8. Reassemble clutch, installing spring into helix. On all models the production helix spring hole location is No. 2. Tension the spring 1/3 turn. Install helix key, thrust washer and snap ring.
9. With drive belt removed, insert a pin punch or drill bit into a balance hole on the moveable sheave. Using a good quality force gauge, record poundage at the point where the sheave just begins to break away. A desirable range for the Polaris OEM spring is from 9 to 13 lbs. To obtain this range, it may be necessary to move the spring to the No. 3 position. **NOTE:** This range may not be desirable under some riding conditions, such as slow trail riding. The higher spring tension will slow the upshift, decreasing fuel economy.

