

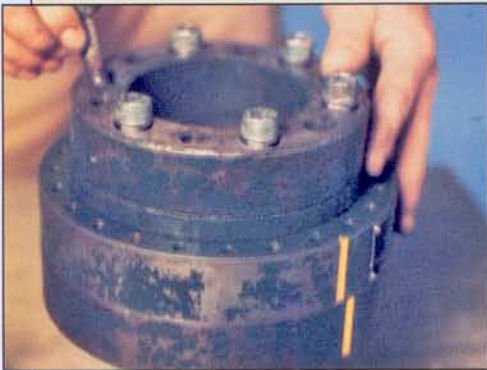
# Care of the Mechanical Torque Indicator

## TIPS of the trade

*Proper maintenance important for optimum performance*

**F**or installing anchors to a predetermined torque value, the Chance mechanical torque indicator is an invaluable tool. Using the indicator, you get a positive indication of an anchor's holding capacity in any type soil.

The Torque Indicator also prevents excessive anchor loading, thereby helping prevent damage to the anchor system. Follow these simple maintenance procedures for trouble-free service.



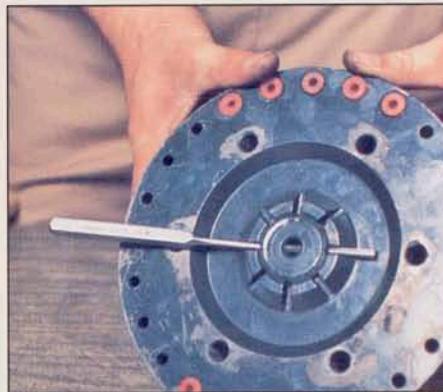
**1**

*Remove the spacer by loosening the six cap screws used to attach it to the Torque Indicator. Wipe the spacer clean. Use a cloth and cleaning solvent. Note the twenty-four shear pin holes around the circumference of the Indicator. When holes do not contain shear pins during anchor installation, the holes should be covered with the special plastic plugs provided by Chance. The plugs keep out dirt and help prevent scarring of the cutting surfaces.*



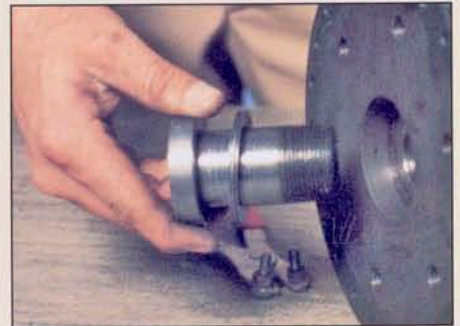
**2**

*Remove the space plate. Clean the plate using a cloth and cleaning solvent.*



**3**

*Use a hammer and punch to loosen the Indicator roll pin. Continue to tap the roll pin from its normal position until it is completely removed.*



**4**

*Use a spanner wrench to loosen the center retaining bolt. Remove the bolt from the central shaft.*



**5**

*Slip the needle thrust bearing and thrust races off the center retaining bolt and inspect them for wear. Replace these pieces if needed or clean them for reuse later.*



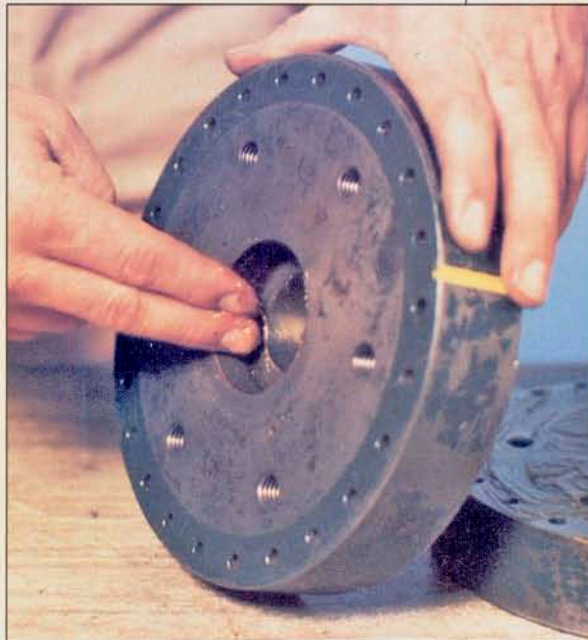
**6**

*Clean the bolt using a cloth and solvent as before.*



**7**

*Take the upper and lower shear halves of the indicator and separate them. Lay each half on the work bench with the cutting surfaces facing up. Clean the cutting surfaces of each half thoroughly with a cloth and cleaning solvent. Inspect the surfaces for wear. Remove rust spots or small burrs by polishing the areas with Emory paper. If excessive wear is found such as large gouges or rough spots that can't be removed with Emory paper, or if the halves are dull, they need to be sharpened by surface grinding. A local machine shop can perform this service.*



**8**

*After inspecting the shear halves followed by polishing, resurfacing or replacement, put a nominal amount of axle grease on the cutting surface of each shear half. Spread the grease over the entire cutting surface leaving a light coat of the lubricant. Also put grease around the core of each shear half.*



**9**

*Take the center retaining bolt and spread a light film of axle grease around the shaft.*



**10**

*Put the shear halves back together with the greased cutting surfaces facing each other.*



**11**

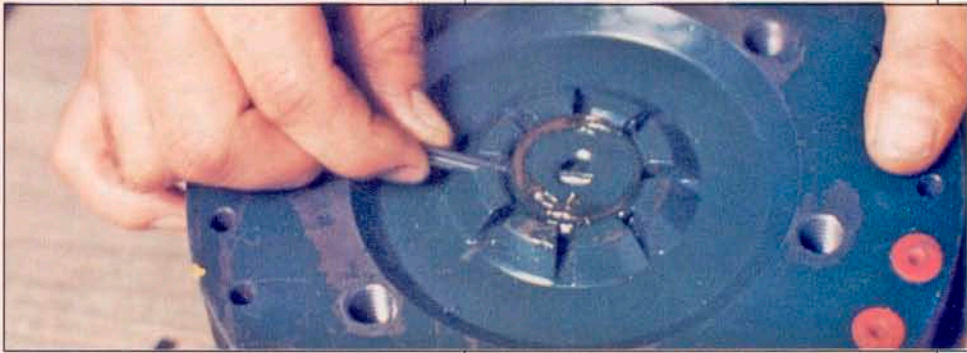
*Take the needle thrust bearing and thrust races and rub a small amount of axle grease on each.*





**12**

*Place each of the three pieces around the shaft of the center retaining bolt. Once the needle thrust bearing and thrust races are in place, take the center retaining bolt and place its shaft through the core of the upper and lower shear halves.*



**15**

*Reinsert the roll pin.*



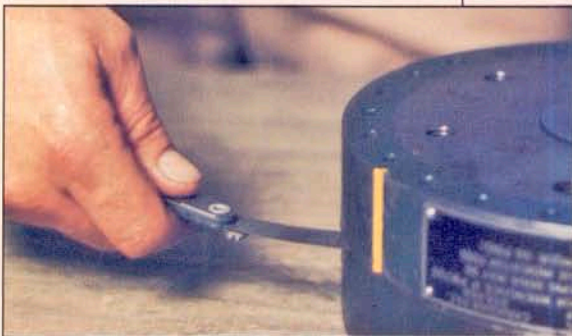
**13**

*Tighten the center retaining bolt with a spanner wrench until snug. Then loosen the center retaining bolt slightly by moving it back one roll pin slot.*



**16**

*Use a hammer and punch to put the roll pin back in its proper position.*



**14**

*Using a feeler gauge, check the space between the shear halves to see if there is the required .005-inch clearance to allow for the free turning of the shear halves.*



**17**

*Place the spacer plate back in position.*





**18**

*Place the spacer on top of the spacer plate.*



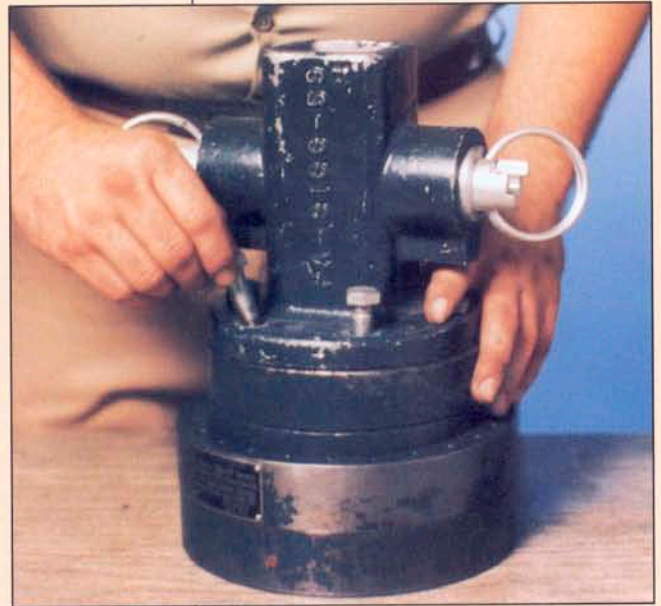
**19**

*Put the six high collar lockwashers and cap screws in place around the spacer.*



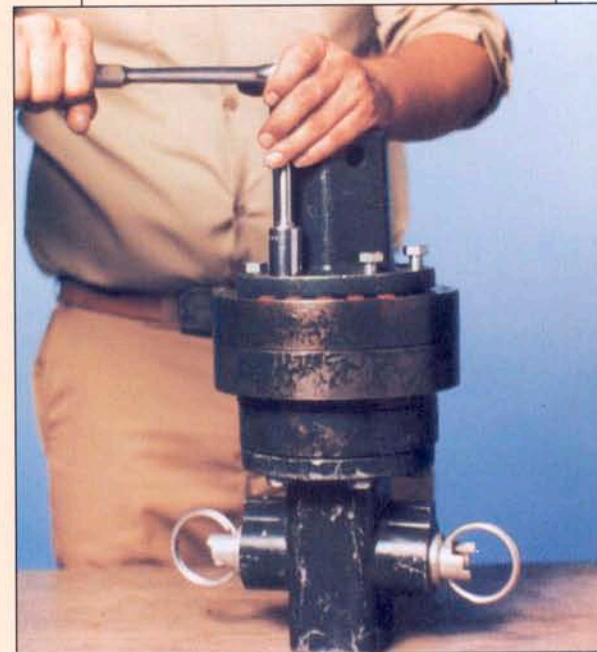
**20**

*Tighten the screws to 60 ft.-lbs. to secure the spacer and spacer plate to the torque indicator.*



**21**

*Bolt the locking dog assembly to the torque indicator and tighten the bolts to 60 ft.-lbs.*



**22**

*Follow the same procedure with the kelly bar adapter. □*

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