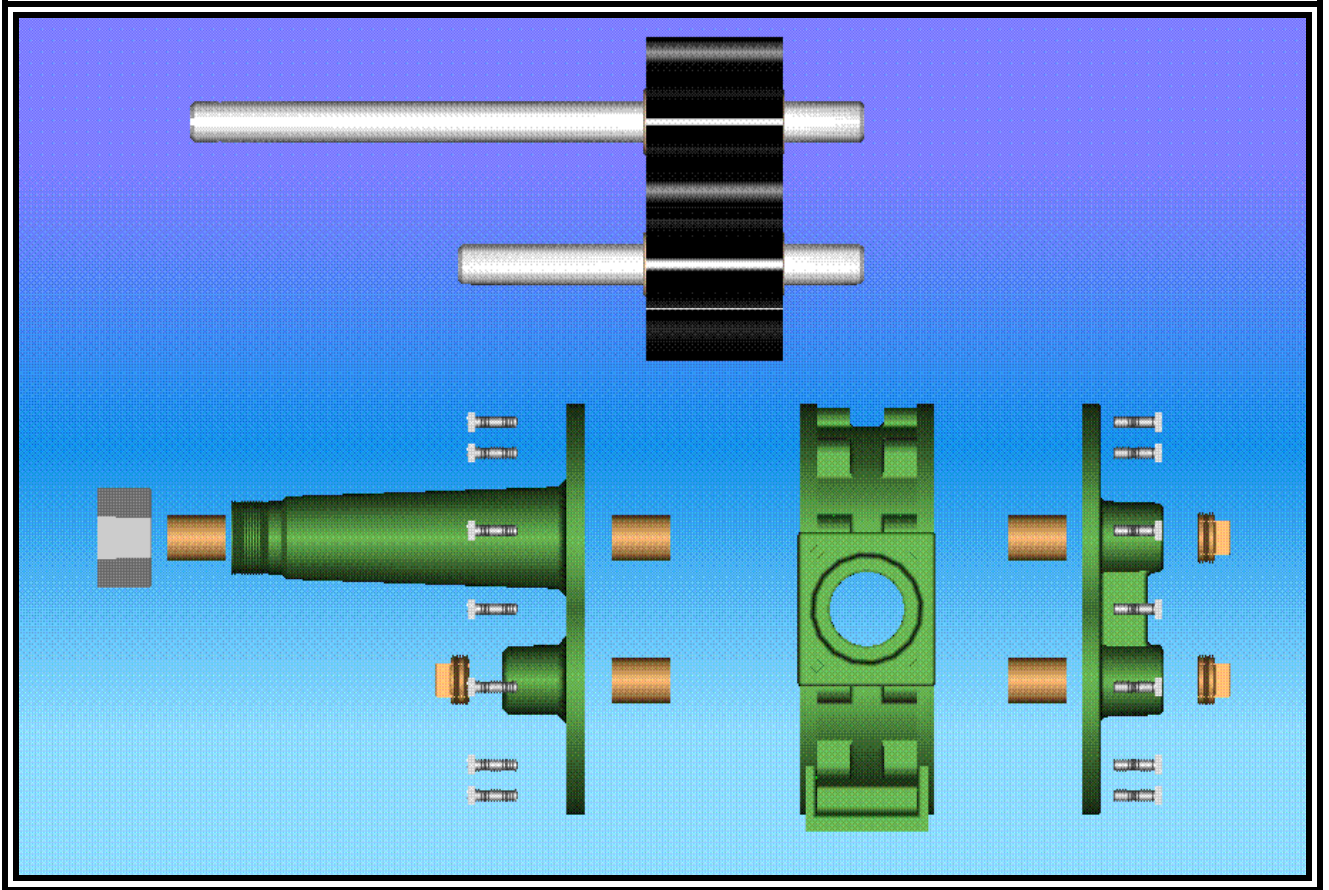


### 2" BOWIE PUMP PARTS

| Ref # | Part #  | Description                  | No Req | Ref # | Part #  | Description           | No Req | Ref # | Part # | Description                  | No Req |
|-------|---------|------------------------------|--------|-------|---------|-----------------------|--------|-------|--------|------------------------------|--------|
| 1     | 301     | Packing Nuts                 | 1      | 5     | 2305A   | Reg Drive Shaft       | 1      | 13    | 313    | Rubber Graphited Packing Rng | 1      |
| 2     | 302     | Std Front Plate              | 1      | 5     | 2305SSA | S Steel Drive Shaft   | 1      | 13    | 313T   | Teflon Packing               | 3      |
| 3     | 2303    | Center Case                  | 1      | 6     | 306     | Pump Gasket           | 8      | 14    | 314    | End Plate Bolt               | 24     |
| 4     | 2304    | HyCar Gear w/Reg Idler sft   | 1      | 7*    | 307     | Std Back Plate        | 1      | 15    | 315    | Taper Pin                    | 4      |
| 4     | 2304C   | Steel Gear w/Reg Idler Sft   | 1      | 7     | 307A    | Bypass Back Plate     | 1      | 16    | 316    | Grease Fitting               | 1      |
| 4*    | 2304SS  | HyCar Gear w/SS Idler Sft    | 1      | 8     | 308B    | End Plug              | 3      | 17    | 317    | Lock Screw                   | 1      |
| 4     | 2304A   | Reg Idle Shaft               | 1      | 8*    | 308BF   | End Plug w/Ftg        | 3      | 18    | 318    | Drain Plug                   | 2      |
| 4     | 2304SSA | Stainless Steel Idler Shaft  | 1      | 9*    | 309B    | Bronze Bushing        | 5      | 19    | 319    | Bypass Nut                   | 1      |
| 4     | 304K    | Gear Key                     | 2      | 9     | 309T    | Teflon Bushing        | 5      | 20    | 320    | Bypass Gland                 | 1      |
| 4     | 2304G   | "3" Gear Only"               | 2      | 10    | 2310    | Adapter Flange        | 2      | 21    | 321    | Bypass Spring                | 1      |
| 5     | 2305    | Std Gear w/Reg Drive Shaft   | 1      | 10A   | 2310A   | Mounting Flange       | 1      | 22    | 322    | Bypass Ball                  | 1      |
| 5     | 2305C   | Steel Gear w/Reg Drive Shaft | 1      | 11    | 2311    | Adapter Flange Gasket | 2      | 23    | 323    | Bypass Nut                   | 1      |
| 5*    | 2305SS  | Std Gear w/SS Drive Shaft    | 1      | 12    | 2312    | Adapter Flange Bolt   | 8      |       |        |                              |        |

\* Standard with above pump models



# 300 Series Bowie Pumps

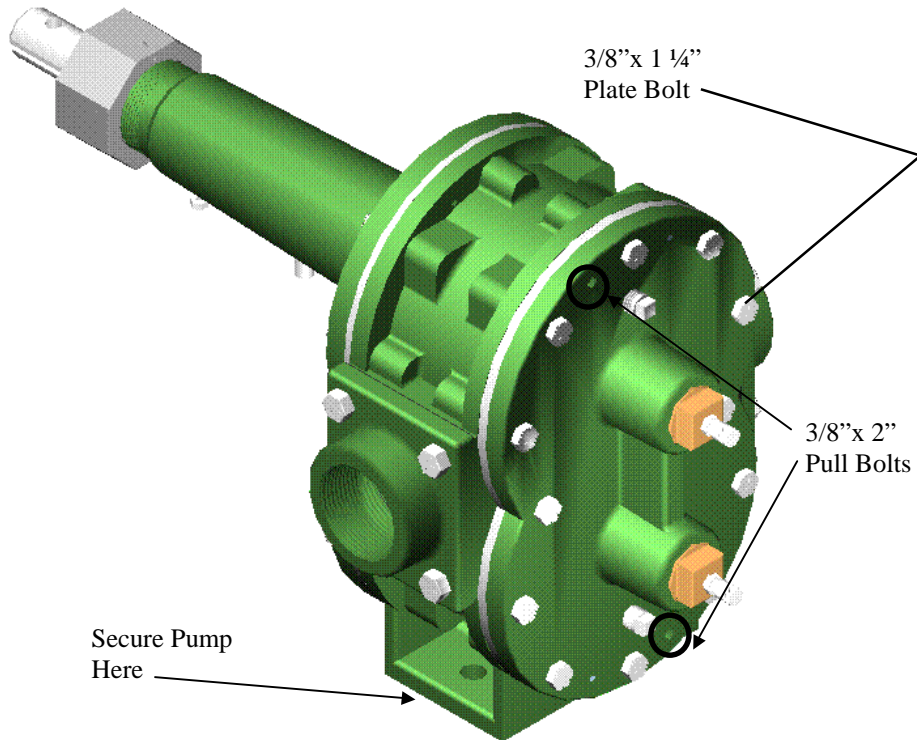
|                     | <i>Page</i> |
|---------------------|-------------|
| Disassembly         | 6           |
| Assembly            | 7           |
| Parts Stock Numbers | 8           |
| Footprints          | 9           |

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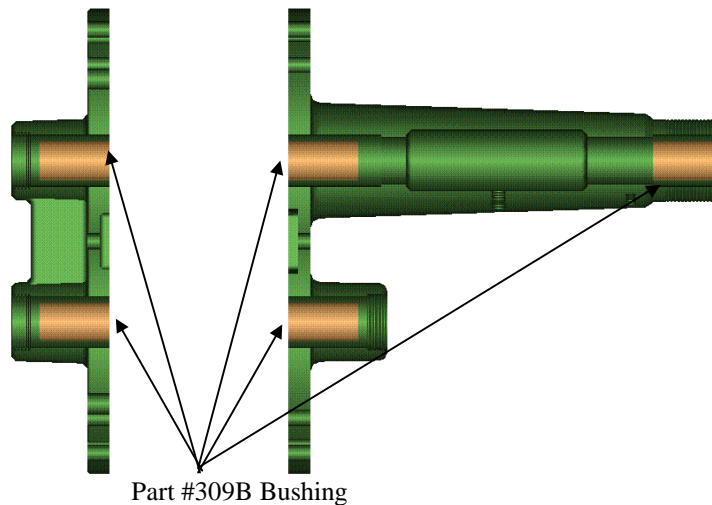
## DISASSEMBLY OF 300 SERIES PUMPS

1. Secure base of pump to table or workbench.
2. Remove twelve (12) 3/8" x 1 1/4" back plate bolts that attaches back plate to center case.



Insert two (2) 3/8" x 2" pull bolts into threaded holes. Remove end plate by sequentially turning the pull bolt so that the plate move evenly on top and bottom to avoid binding on the bushings and shafts.

1. Remove tie wire securing the packing nut. Remove packing nut and packing on drive shaft.
2. Carefully remove drive and idler gears.
3. To remove front plate, remove twelve (12) 3/8" x 1 1/4" front plate bolt that attached the front plate to the center case. Follow steps of line 3 to remove front plate.
4. Remove the two end plugs from the back plate and the one end plug from the front plate.
5. There is access now for removal of the bushings (part #309B), three in the front plate and two in the back plate.



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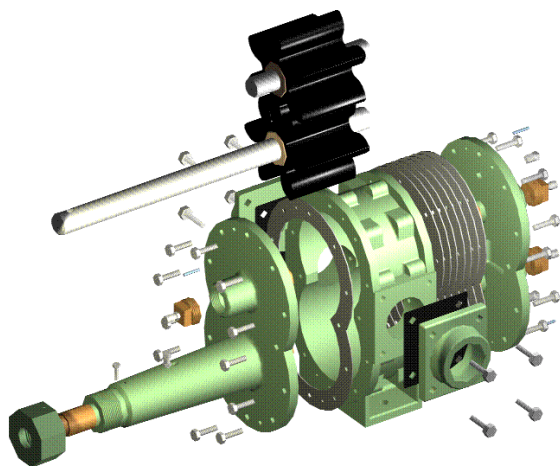
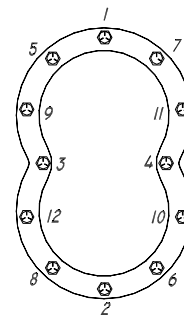


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## ASSEMBLY OF 300 SERIES BOWIE PUMPS

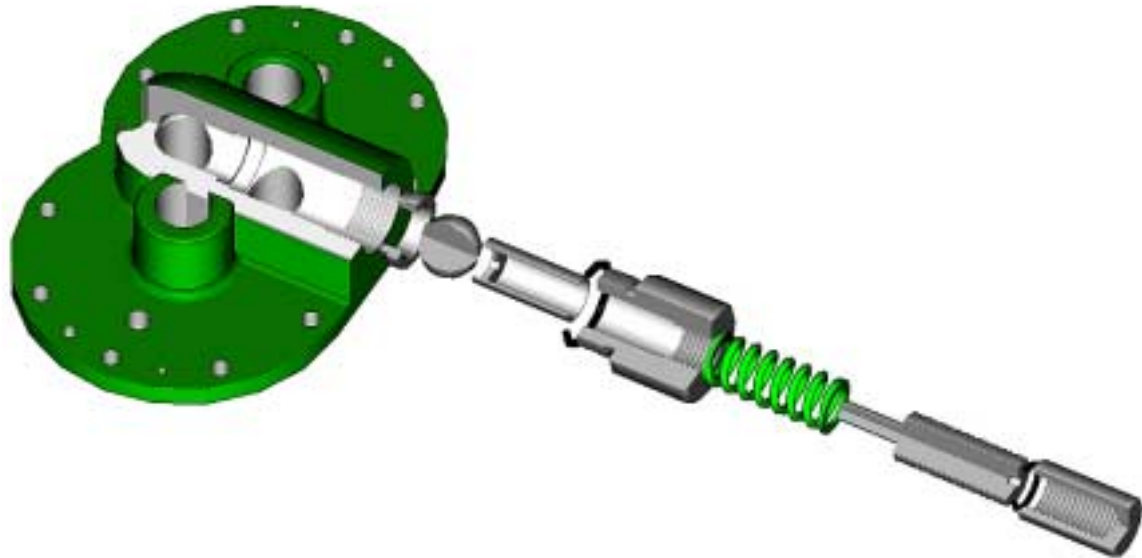
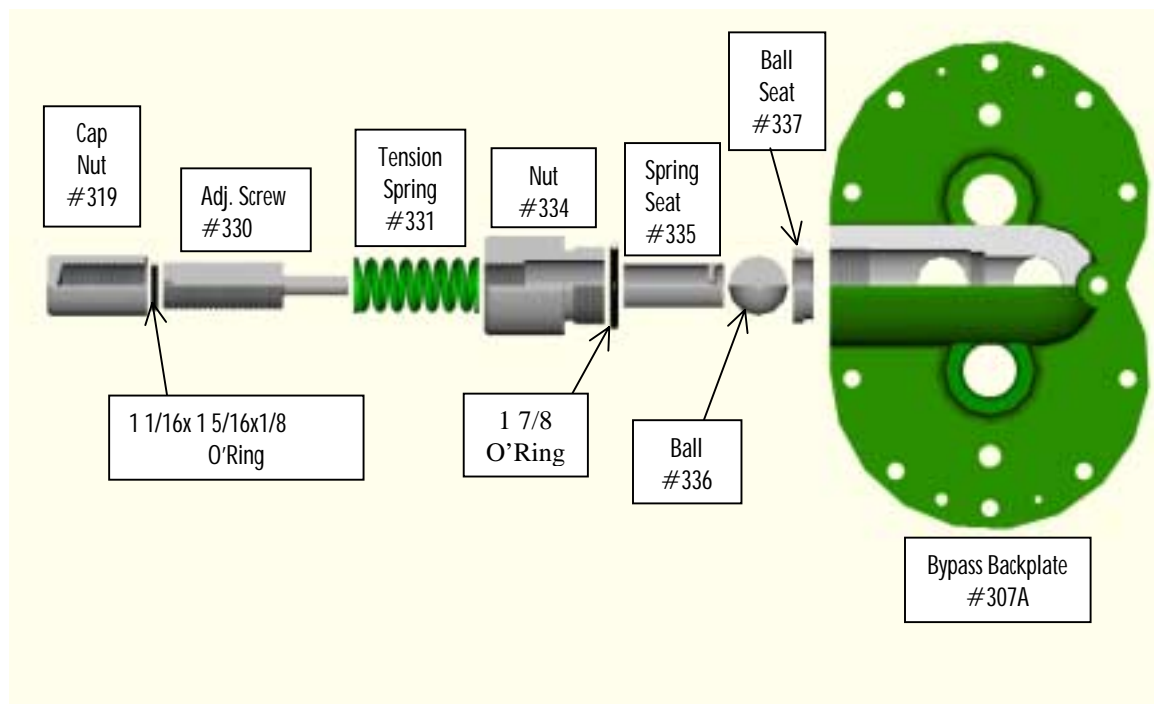
Prior to assembly of pump make sure all parts are clean and free from foreign objects.

1. Install end plugs and drain plugs into both the front [part no. 302] and back plates [part no. 307].
2. Attach front plate [part no. 302] to center case using one [part no. 306] gasket between plate and center case. Affix bolts finger tight.
1. Solidly secure center case. Lightly oil both the idler and drive gears prior to installation into the center case.
2. Insert idler and drive gears into center case and front plate.
3. Use seven [part no. 306] gaskets between back plate [part no. 307] and center case. Attach back plate to center case with bolts finger tight.
4. Tighten bolt numbers 1 & 2 on both the front and back plates.
5. Oil gears through the input/discharge port
6. Turn the gears several turns with the drive shaft to seat the gears in place. When the gears are turning smoothly tighten bolt numbers 3 & 4 on both the front and back plates. Turn the gears several turns with the drive shaft to assure smooth operation. If the gears turn smoothly then continue to tighten the bolts in the sequence as shown in diagram to 22-25 ft. lbs. Otherwise loosen the bolts and repeat steps 5 & 7.
7. Install taper pins on both plates, top and bottom.
8. Install graphite packing [part no. 313G] into packing nut [part no. 301].
9. Install packing nut over drive shaft and turn until firm, not tight. Note: over tightening can cause damage
10. Use tie wire to secure packing nut in place.
11. Lubricate at all grease fittings. Three are located on end plugs, and one on over front plate drive shaft gland. Grease front plate drive shaft gland until grease starts to come out the packing.



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## Bypass Assembly



The bypass is easily adjusted and is set for approximately 30 lbs. pressure when leaving the factory. The pressure is easily adjusted with the adjusting screw (#330). Seven turns equals approximately 30 lbs. pressure. The stainless steel ball and seat assures longer life of the bypass. Make sure that the adjusting valve points to the outlet port.

Note: this is a pump option. Not on all Bowie 300 Series pumps.