

INTERNATIONAL TOOL CO.

A6C Kelly Spinner

** The Industry Standard for over 30 years **

Installation ❖ Operation ❖ Maintenance



TABLE OF CONTENTS

Specifications	3
Care and maintenance	4
Installation	5
Air motor parts	7

SPECIFICATIONS

OPERATING PRESSURE	120 PSI
AIR CONSUMPTION	300-330 SCFM
SPEED	170 RPM
STALL TORQUE	1,100 FT-LBS
WEIGHT	1,200 LBS
SUB DIMENSIONS	7-15/16" OD, 3-1/4" ID, 31" L
CONNECTIONS	BOX UP, PIN DOWN 6-5/8" API Reg L.H.

CARE AND MAINTENANCE

The bearings, located at the top and bottom of the spinner housing, should be lubricated daily with a lithium base water repellent grease. There are two alemite grease fittings, located at 180° in both the upper and the lower bearing seal retainers.

After use, the upper and lower bearings will wear. There is a set of plastic shims installed between the upper and lower bearing retainer plates and bearing housings. Each set has several thickness of shims. One or more of these shims can be removed to adjust for bearing wear. Free play can be determined by raising and lowering the spinner body casting.

The 1" turnbuckles attached between the kelly spinner and swivel should never be more than hand tight. The turnbuckles are used as torque arresters. They do not support any weight. Tightening the turnbuckles can cause misalignment, resulting in excessive bearing wear.

The lower cover plate can be removed or lowered for access to the kelly spinner internals.

The air motors should be checked periodically for wear. If the motors appear to be operating sluggishly, make sure the air mufflers are clean before removing or disassembling the air motors. Also, make sure that they are receiving the proper amount of air.

INSTALLATION

The installation process involves locating and routing air supply lines, modifying the swivel and installing the spinner and hand control valve. Survey the rig to determine the best way to route the air lines before installation is begun. Once this has been done, perform the following steps.

1. Run a 1-½” to 2” air supply line to a convenient place to install a filter-lubricator assembly, as shown in Fig 1. The lines should be installed to approximately 1 to 1-½ feet below the mud line goose neck. Provide a tee in the air supply line for a connection to the hand control valve.
2. Install the hand control valve in convenient location, and run ½” -¾” air line to the control valve inlet. Connect the ¼” twin line to the control valve and run up the derrick to the air supply line end.

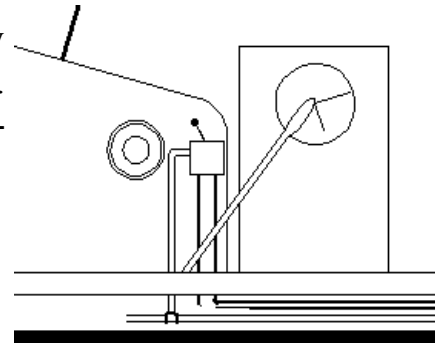


Fig. 1

3. The kelly spinner installs between the swivel and the kelly. Break out the swivel-kelly connection and install the kelly spinner. The swivel pin threads into the box of the kelly spinner and in turn, the pin of the kelly spinner threads into the kelly. Make up the kelly spinner connections.
4. Weld pad-eyes to the bottom of the bail bumper and attach the turnbuckles to the kelly spinner and the pad-eyes, as shown. Tighten the turnbuckle by hand until snug, then back off one-half turn. The turnbuckles are torque arresters, **NOT** to support the kelly spinner.

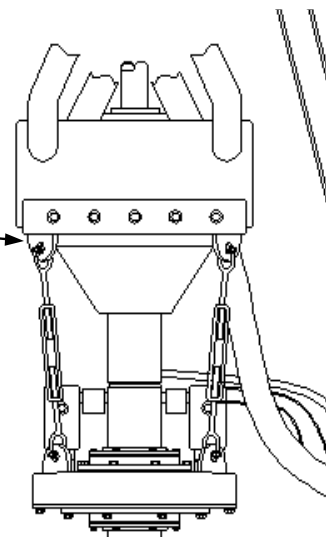
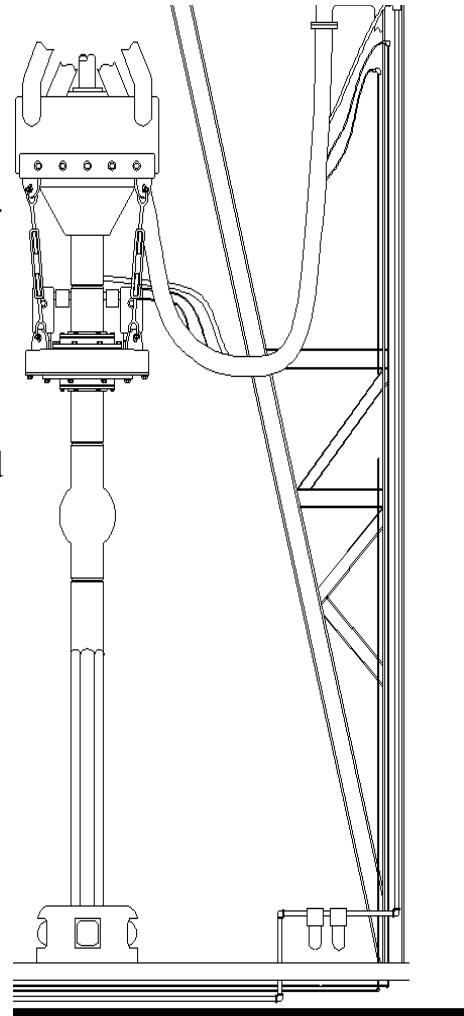


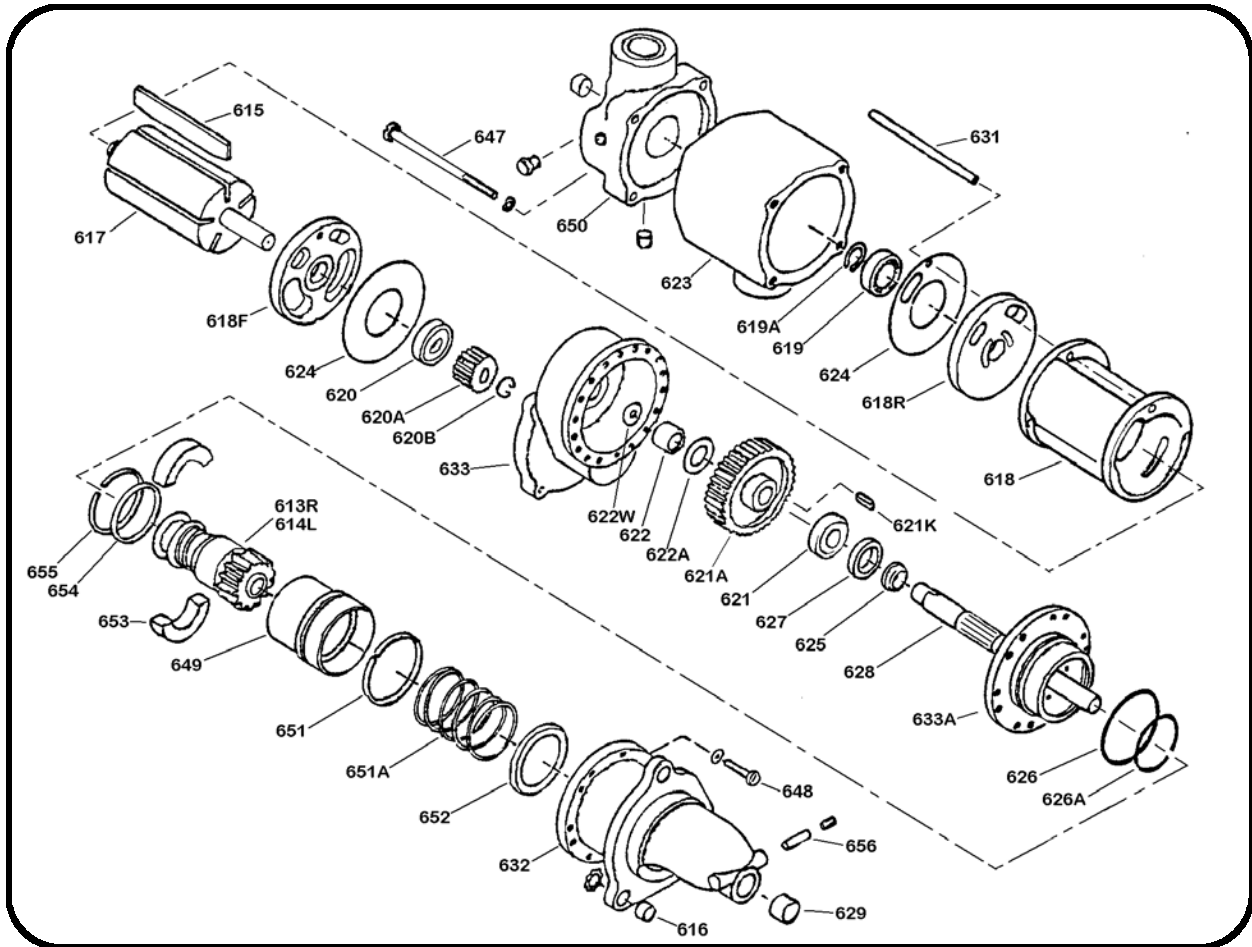
Fig. 2

5. Install the air motors, placing the motor assembly on the rotary hose side of the swivel. Mount the motors with supplied $\frac{5}{8}$ " x $1\frac{1}{4}$ " bolts.
6. Connect the 1" air supply hose to the standpipe, run along the mud hose to the 1" tee on the kelly spinner motor assembly. Attach the air hose to the mud line with supplied rubber straps. Before making final connection to the spinner, blow sufficient air through the lines to clean out all dirt and debris.
7. The control lines connect the hand control valve to the relays on the kelly spinner motor assembly. Run the twin line beneath the rig floor, up the derrick with the 1" air supply line to the kelly spinner. Decide which color, red or green, is desired for left and right rotation. Connect each hose to the upper air fitting of each motor (after blowing out the lines to ensure they are clean). If, after installation, it is discovered that the kelly spinner does not rotate in the direction desired, swap the lines at the control valve.



8. The operation of the kelly spinner is as follows:
 - The control valve is operated
 - Air is delivered to the top port of the bendix housing
 - Air pressure forces a piston down which simultaneously engages the bendix and opens the lower bendix housing air port
 - Air is then passed to a relay valve which opens the 1" air line
 - The motor is operated until the hand control valve is released

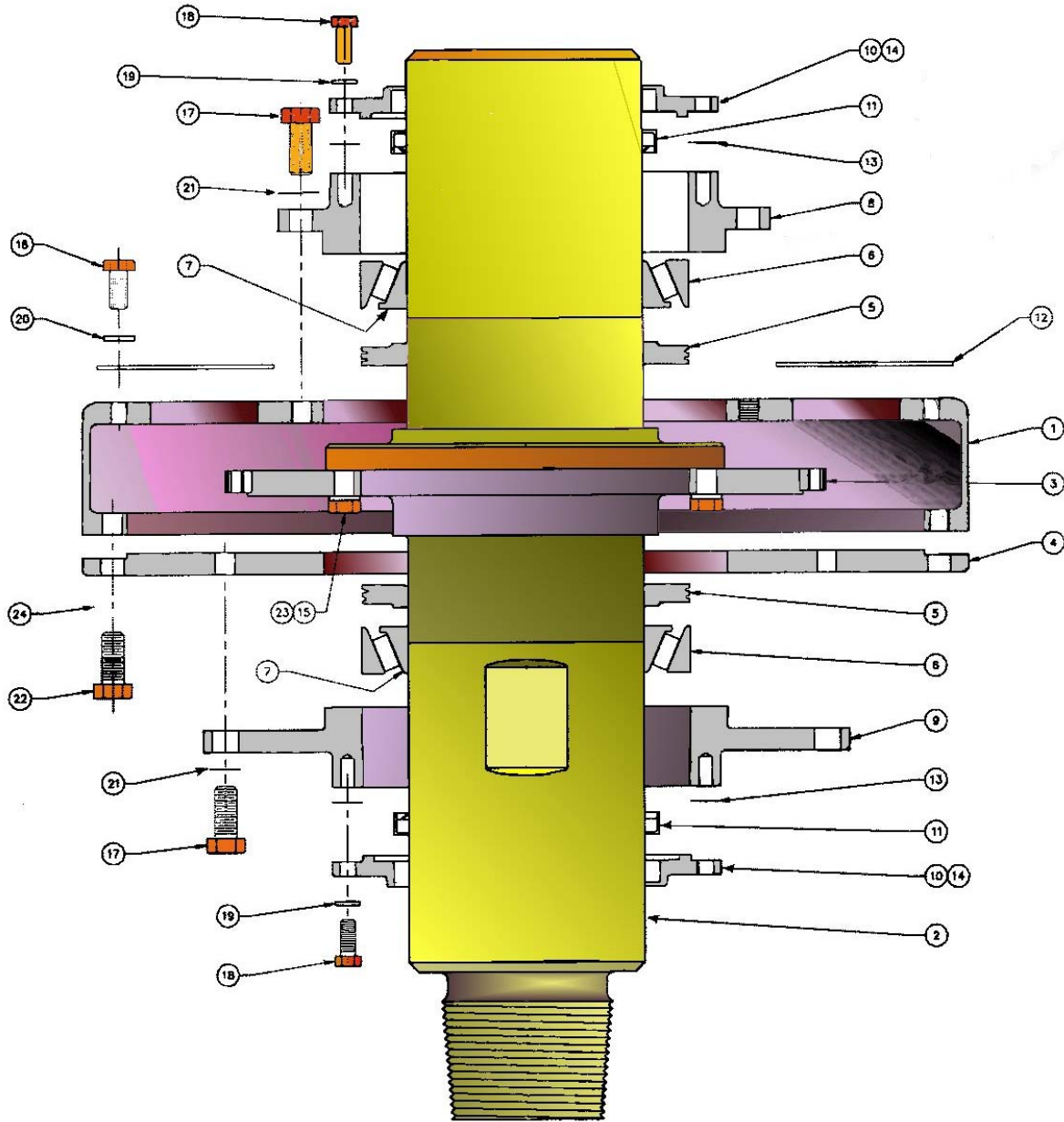
AIR MOTOR PARTS



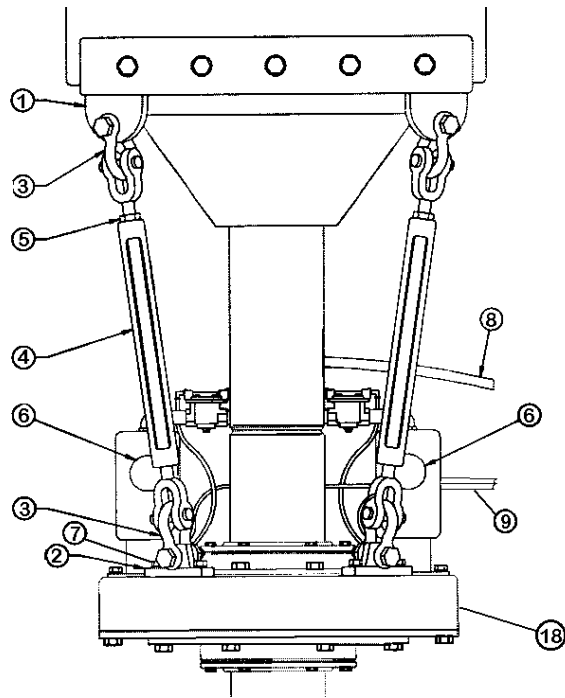
613R	Bendix drive RH	621A	Gear, drive	632	Housing, bendix
614L	Bendix drive LH	621K	Key	633	Case, gear
615	Vanes	622	Bearing, needle	633A	Cover, gear case
616	Motor mount bolts/LW	622W	Washer, ejection	647	Cap screw, cover
617	Rotor	622A	Washer, thrust	648	Cap screw, cover
618	Cylinder	623	Housing, motor	649	Piston assembly
618F	Front end plate	624	Gasket set, motor	650	Cover, housing
618R	Back end plate	625	Collar	651	Ring, piston
619	Rear rotor bearing	626	Seal, gear case	651A	Spring, piston return
619A	Retainer, rotor bearing	626A	Seal, piston	652	Seat, spring
620	Rotor bearing, front	627	Seal, drive shaft	653	Shift ring
620A	Gear, pinion	628	Drive shaft	654	Spacer
620B	Retainer, pinion gear	629	Bushing, bendix housing	655	Retainer, bendix
621	Bearing, drive shaft	631	Dowel	656	Wick, oil

629A Needle bearing can replace 629 bushing

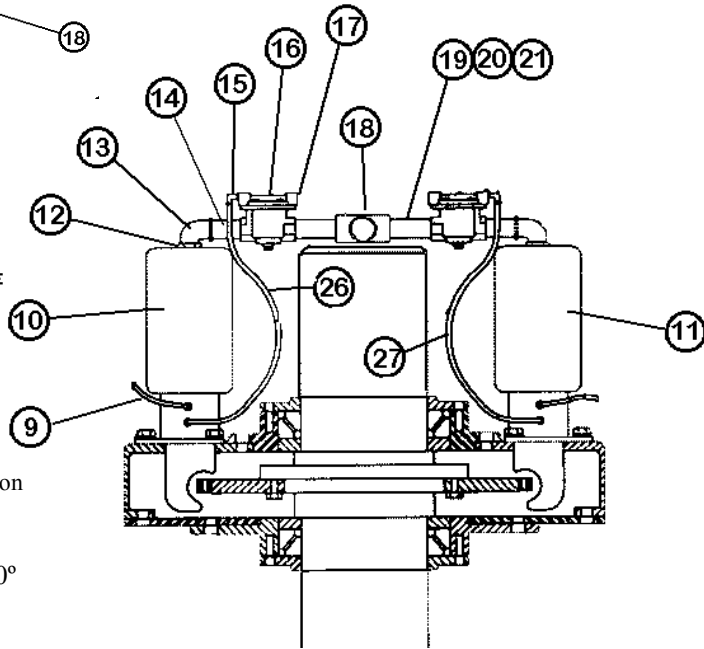
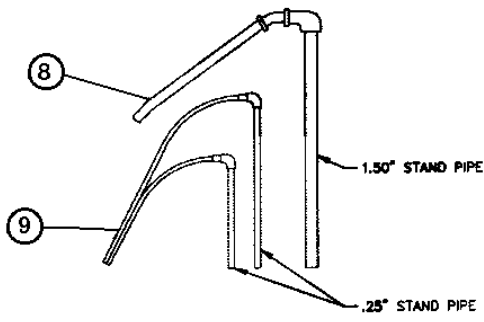
A6C KELLY SPINNER PARTS



Item	Qty	Part No.	Description	Item	Qty	Part No.	Description
1	1	600B-8C	Housing	13	2	603C-8C	Bearing shim pack
2	1	602C-8C	Sub, model A6C	14	4	600-6	Grease fitting
3	1	607C-8C	Ring gear	15	6	600-3	Capscrew, ring gear
4	1	601B-8C	Lower cover plate	16	6	607-1	Capscrew, motor mount
5	2	604F-8C	Bearing spacer & seal	17	14	600-4	Capscrew, bearing housing
6	2	603B-1	Bearing cup	18	16	600-5	Capscrew, bearing and seal retainer
7	2	603B-2	Bearing cone	19	16	600-12	Lock washer, bearing and seal
8	1	604T-8C	Upper bearing housing	20	6	600-58	Lockwasher, motor mount
9	1	604B-8C	Lower bearing housing	21	14	600-34	Lockwasher, bearing housing
10	2	604E-8C	Bearing & seal retainer	22	8	600-2	Capscrew, housing
11	2	604-A	Seal, grease	23	6	600-7	Lockwasher, ring gear
12	2	657-8C	Cover plate, motor hole	24	8	600-8	Lockwasher, housing



Item	Qty	Part No	Description
1	2	605P	Pad eye
2	2	605P-8C	Pad eye
3	2	606	Shackle
4	2	605	Turnbuckle
5	2	605N	Jam nut
6	2	612	Muffler
7	4	607-1	Hex head cap screw /LW
8	1	638	Air supply hose, 1"
9	1	640	Pilot line, twin-line, 1/4"
10	1	611R	Air motor, right hand rot.
11	1	610L	Air motor, left hand rot.



Item	Qty	Part No	Description
12	2	675	Bushing , pipe
13	4	690	Elbow, street, 90°
14	3	676	Nipple, pipe
15	6	682	Elbow, 1/4 NPTx1/4 JIC
16	2	635S	Air valve, relay
17	2	681	Plug, pipe, sq head
18	1	677	Tee, NPT
19	2	678	Pipe fitting, /hose
20	1	679	Hose, 1"
21	2	680	Hose clamp
22	3	683	Adapter, 1/4 NPT x JIC
23	1	636H	Air valve, hand control

Item	Qty	Part No	Description
24	1	634	Lubricator
25	1	630A	Air filter
26	1	643A	Relay hose LH
27	1	643B	Relay hose RH

