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Edition 2

March 2009

SUPER PAR-A-MATIC® Self - Feed Drills

Models 8265-()-()-() and 8365-()-()-()

Operation and Maintenance Information



Save These Instructions

 **Ingersoll Rand**

Product Safety Information

Intended Use:

These Air Drills are designed for drilling, honing, reaming and hole sawing.

For Additional information refer to Air Drills Product Safety Information Manual Form 04580353.

Manuals can be downloaded from www.irttools.com.

Routine Lubrication Requirements

Lack of or an excessive amount of lubrication will affect the performance and life of this tool. Use only recommended lubricants at below time intervals:

Every 8 hours of tool operation, Fill air line lubricator reservoir of recommended F.R.L. with spindle oil (29665).

Every 160 hours of tool operation, Inject NLGI #1 "EP" grease (33153), 1 to 2 strokes, thru grease fitting in gear housing.

NOTE: Spindle must be extended from outer sleeve sufficiently to expose grease fitting in gear housing. Gearing should contain approximately 1/4 oz. (7 g) of grease per set of gears.

Air Supply Requirements

For maximum operating efficiency, the following air supply specifications should be maintained to this air tool:

- AIR PRESSURE - 90 PSIG (6 bar)
- AIR FILTRATION - 50 micron
- LUBRICATED AIR SUPPLY
- HOSE SIZE - 3/8" (10 mm) I.D.

A model C28231-810 Air Lines Filter/Regulator/Lubricator (F.R.L) is recommended to maintain the above air supply specifications.

Recommended Lubricants

After disassembly is complete, all parts, except sealed or shielded bearings, should be washed with solvent. To relubricate parts, or for routine lubrication, use the following recommended lubricants:

| Where Used | Ingersoll Rand Part # | Description |
|---------------------|-----------------------|------------------------------|
| Air Motor | 29665 | 1 qt. Spindle Oil |
| O-Rings & Lip Seals | 36460 | 4 oz. Stringy Lubricant |
| Gears and Bearings | 33153 | 5 lb. "EP" - NLGI # 1 Grease |

Mounting

The nose end of the outer sleeve (40) is provided with 2-1/2" - 16 L.H. threads (remove thread guard [45] for use) and a 2-1/2" x 1-1/4" long pilot diameter for fixture mounting. Foot and flange type mounting brackets are available for tool mounting.

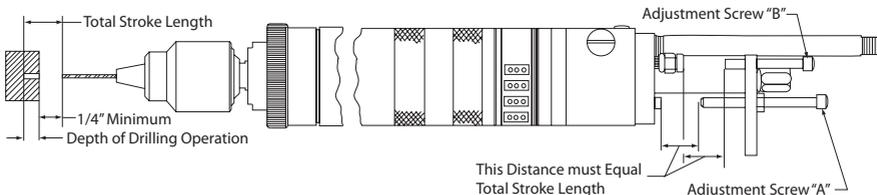
Set-up Procedure

WARNING

Keep clear of rotating end of unit with hands and/or clothing. Keep fingers/hands from being pinched between housing or valves and adjustment screws and/or trip bracket.

- Loosen two screws (11) and remove cover (1).
- Allow a minimum distance of 1/4" between the drill point of the unit and the workpiece (this is necessary for the air motor to start and reach free speed before the drill point touches the workpiece).
- Determine the TOTAL STROKE LENGTH the drill must travel to perform the drilling operation, see illustration below.

- Loosen jam nut (8) and turn adjustment screw "A" so the distance between the end of the screw and the stud (28) equals the Total Stroke Length.
- Tighten jam nut (8).
- Loosen jam nut (8) and turn adjustment screw "B" so the distance between the end of the screw and the button bleed valve (27) is slightly GREATER than the distance set for adjustment screw "A".
- Start and let unit advance until the adjustment screw "A" makes contact with the stud (28).
- Carefully, and be aware that the unit is going to retract, turn the adjustment screw "B" until it depresses the button bleed valve (27) enough to cause the unit to retract.
- Tighten jam nut (8).
- See "FEED RATE CONTROL VALVES".



Feed Rate Control Valves

- Turn valve (25), marked "R" on top of housing, approximately 1-1/2 turns counterclockwise (open).
- Turn the other valve (25), marked "F" on top of housing, clockwise until closed (do not tighten to snugly).

- Start unit and slowly turn valve (25) marked "F" counterclockwise (open) until the desired forward rate of feed is reached.
- A final adjustment of the rate of return (retract) can be made with the valve (25) marked "R" on housing.

Manual Operation

- Install button bleed valve (27) in either the "F" port located at top of valve housing or the "F" port located at the rear of valve housing. **NOTE:** Unused port must be plugged with pipe plug (26).
- Depress button bleed valve (27) marked "F" on valve housing. The unit will start in the forward (advancing) mode and continue to feed forward until the adjusting screw "B" has depressed bleed valve (27) marked "R" to retract the unit. See set-up procedure.

- A manual emergency retract button bleed valve (27) can be installed in "R" port at top of valve housing if desired. This valve can be used to immediately retract the unit in case of misaligned part or other emergency. Valve not furnished.

Remote Operation

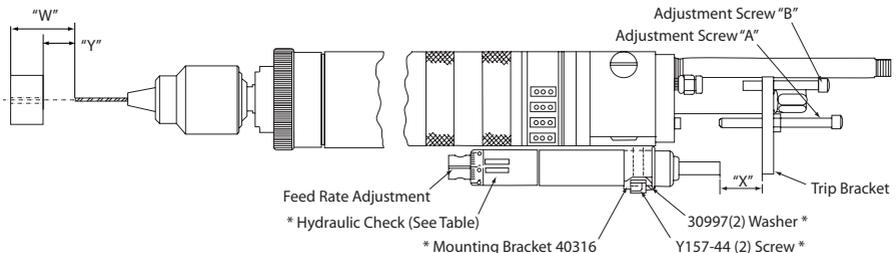
- Install a pressure bleed valve - Part Number 9600 - in valve port marked "F" at either the top or rear of valve housing.
- Connect pressure bleed valve - using 1/8" i.d. tubing - to a remote operated valve which, when actuated, feeds air pressure to the pressure bleed valve. Pressure bleed valve will bleed the air from "F" port of valve housing causing spool valve in housing to shift to the forward feed position, thus starting the forward stroke of the unit.
- Install a pressure Bleed valve - Part Number 9600 - in valve port marked "R" at the top of the valve housing and connect using 1/8" i.d. tubing - to a remote MANUALLY operated valve. This valve is used as an emergency retract in case of part misalignment or such only as the unit, when properly set-up and applied, will automatically retract and return to the start position. See set-up procedure.

- Refer to Page 7 and 8 for plumbing and schematic diagrams.
- **SPECIAL NOTE:** The air inlet and remote ports of valve housing have tapered pipe threads and should not require the use of thread sealants, such as sealant tape or pipe joint compounds. Thread sealants, when used improperly, can contaminate air passages and cause valve or unit to malfunction.

Set-up Procedure with Optional Hydraulic Check

- Assemble hydraulic check to mounting bracket and assemble mounting bracket to tool using washers (30997) and cap screws (Y157-44).
- Measure distance from drill point to work piece - distance "Y".
- Distance "X" between hydraulic check plunger and trip bracket must be less than distance "Y" to prevent damage to drill point when it approaches the work piece.
- Loosen the cap screws (Y157-44) and position hydraulic check to obtain Correct setting for distance "X".
- Tighten cap screws (Y157-44) securely before operating unit.
- Increase the air flow thru the feed control valve marked "F" by opening two (2) full turns from closed position. This will allow drill to advance rapidly until the trip bracket contacts plunger of hydraulic check.

- The hydraulic feed rate adjustment is located at the nameplate end of the hydraulic check. Rotate extended spindle until the slot on the spindle is located midway between the highest and the lowest settings.
- Start drill unit and the drill will advance at a rapid rate until the trip bracket contacts plunger of hydraulic check.
- Slowly rotate the hydraulic feed rate counterclockwise for faster feed rate or clockwise for slower feed rate.



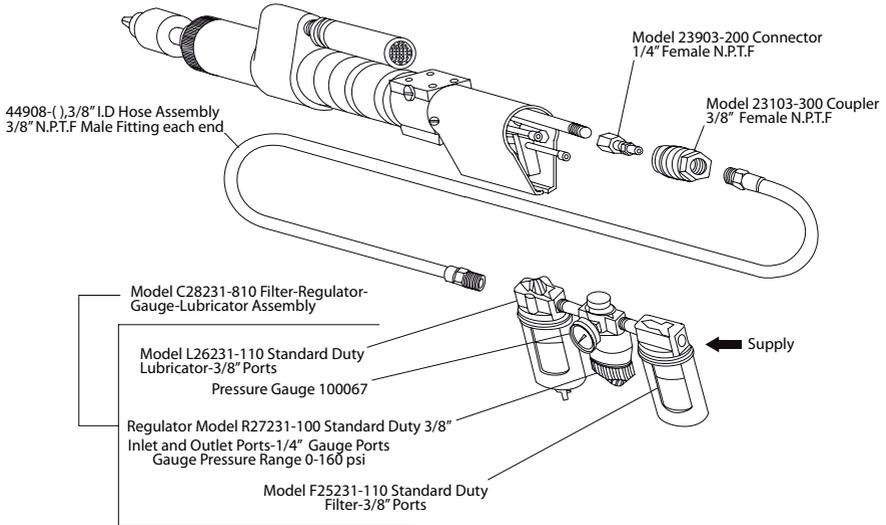
* Included in 45091-(-) Hydraulic Check Assembly
See Page 11 For Hydraulic Check Dimensional Data

| Stroke Length | Hydraulic Check Assembly | Hydraulic Check No. |
|---------------|--------------------------|---------------------|
| 1 Inch | 40591-3 | 38922 |
| 2 Inch | 40591-4 | 38922-1 |
| 3 Inch | 40591-5 | 38922-2 |

To Control Breakthrough

- Position hydraulic check so the distance between the plunger and the trip bracket (distance "X") is less than the distance from the drill point to the opposite side of the work piece (distance "W").
- Set-up of the self-feed drill unit will be the same as explained in Set-up Procedure, page 1.

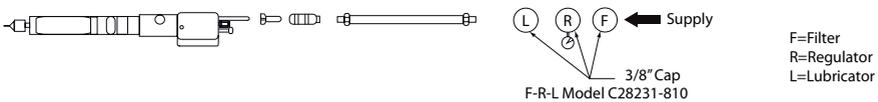
Recommended Power Air Inlet System



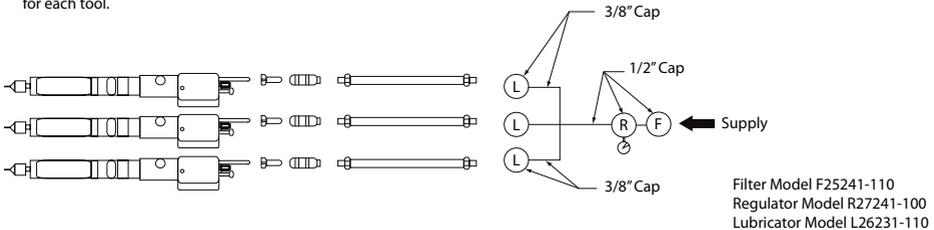
Your **Ingersoll Rand** self-feed tool is designed to deliver specific horsepower and thrust to achieve high rates of work. To assure the unit will develop this power, care must be taken that the power air inlet system is correctly sized to permit to proper rate of air flow. Shown is a system for a single tool that will supply correct delivery.

IMPORTANT - The tool is power rated when 90 p.s.i. is present **AT THE TOOL DURING OPERATION**.

Shown below is the same system in schematic form.



If two or three units are to be installed, Each unit should be supplied with a system like that shown below or use system like that above for each tool.



Disassembly /Assembly Instructions



WARNING

- Never apply excessive pressure by a holding device which may cause distortion of a part.
- Apply pressure evenly to parts which have a press fit.
- Apply even pressure to the bearing race that will be press fitted to the mating part.
- Use correct tools and fixtures when servicing this tool.
- Don't damage O-Rings when servicing tool.
- Use only genuine **Ingersoll Rand** replacement parts for this tool. When ordering, specify part number, description, tool model number and serial number.

Gearing Disassembly

- Remove chuck from gearing.
- Thread adjustment screws (6 and 7) all the way back and push the piston rod (47) all the way forward to expose wrench flats of motor housing (50) from the outer sleeve (40).
- Using wrenches on flats of housing adapter and motor housing, unthread gearing from motor housing.
- If tool has double gearing, unthread lock nut (82) from housing adapter (67).
- Remove spindle nut (85) from spindle.
- DIRECT DRIVE MODELS: Unthread and remove collet nut (116) and bearing lock nut (114).
- Grasp lock nut (82) in one hand and tap the threaded end of the spindle with a soft faced hammer; spindle and components will loosen from lock nut.
- Remove bearings (78 and 79) and turn snap ring so the open portion will allow the removal of one shaft, releasing gear. Repeat for removal of opposite shaft and gear.

48129-1 Gearing Disassembly

- Remove chuck from gearing.
- Thread adjustment screws (6 and 7) all the way back and push the piston rod (47) all the way forward to expose wrench flats of motor housing (50) from the outer sleeve (40).
- Using wrenches on flats of ring gear (90) and motor housing, unthread gearing from motor housing.
- Pull spindle (89) and components from ring gear.
- Remove bearing (87) and spacer (88).
- Turn snap rings (68 and 74) so the open portion will allow the removal of shafts and gears.
- Remove lock nut (93), releasing bearings (92) and spindle (91).

Gearing Assembly

- Lubricate gears and needle bearings (70) liberally with 33153 grease and assemble two needle bearings to each gear.
- Assemble one gear to spindle and secure with shaft (71).
- Repeat for opposite shaft and gear.
- Rotate snap ring, securing both shafts.
- Pack bearing (78) with 33153 grease and assemble bearings (78 and 79) to spindle. **NOTE:** Bearing (78) is an angular contact type bearing and should be installed with the identification markings facing away from the spindle.
- Assemble washer (81), wavy washers (80) and spindle into lock nut (82).
- Assemble seal (83), nose housing (84) and spindle nut (85) to gearing.
- DIRECT DRIVE MODELS: Assemble bearing lock nut (114) to spindle.
- Assemble gearing to tool.
- Assemble chuck to spindle.

48129-1 Gearing Assembly

- Pack bearings (92) with 33153 grease and assemble to spindle (91).
- Assemble spindle (91) to ring gear (90).
- Assemble seal (94) to lock nut (93) and assemble lock nut to ring gear, securing bearings (92).
- Assemble spindle nut (95) to spindle.
- Assemble snap rings to spindle.

- Lubricate gears and needle bearings (70) liberally with 33153 grease and assemble two needle bearings to each gear.
- Assemble one gear to spindle and secure with shaft (71). Repeat this procedure for the three remaining gears.
- After shafts have been assembled, rotate snap rings to secure shafts.
- Pack bearing (87) with 33153 grease and assemble into spacer (88).
- Assemble spacer and bearing to spindle and assemble spindle and components into ring gear.
- Assemble gearing to tool.
- Assemble chuck to spindle.

Motor Disassembly

- Remove gearing from tool as previously outlined.
- Remove spacers (63 and 62) and motor assembly from motor housing.
- Using a spanner type wrench, remove retainer nut (51) and sems fastener (52).
- Grasp cylinder in one hand and tap splined end of rotor with a soft faced hammer; motor will come apart.

Motor Assembly

- Pack bearing (53) with 33153 grease and assemble into end plate (54). **NOTE:** Assemble bearing with identification markings facing away from end plate.
- Assemble spacer (55) and end plate (54) to rotor (56), securing with sems fastener. **NOTE:** Torque to 28 in. lbs.
- Coat i.d. of cylinder (58) with 29665 spindle oil and assemble cylinder over rotor, aligning roll pin in cylinder with hole in end plate and air inlet of cylinder with air inlet of end plate.
- Coat blades (57) with 29665 spindle oil and assemble to rotor slots - straight side out.
- Pack bearing (61) with 33153 Grease and assemble into end date (60).
- Assemble end plate (60) to rotor, aligning hole in end plate with roll pin in cylinder.
- Assemble bearing retainer nut (51) to end plate (54) and torque to 9 - 12 ft lbs.
- Be sure rotor does not bind (if rotor binds, tap splined end of rotor lightly to loosen).
- Assemble motor and spacers (62 and 63) to motor housing.
- Assemble gearing to tool.

Air Piston Disassembly

- Remove gearing and motor assembly as outlined.
- Remove cover (1), adapter (3), lock washer (4) and trip bracket (5 or 106).
- Place valve housing (12 or 105) in a suitable holding device with the outer sleeve (40) in an upright position.
- Using a strap type wrench on outer sleeve (40), unthread (L.H. threads) and CAUTIOUSLY remove outer sleeve straight up and off from valve housing to prevent bending of air cylinder (35) and damaging the inside diameter. **NOTE:** Motor housing (50), piston rod (47), piston (32) and components will remain inside outer sleeve when outer sleeve is removed from valve housing.
- Handle the air cylinder (35) with care so its fine cylindrical shape is not distorted in any manner.
- If the air cylinder remains inside the outer sleeve when the sleeve is removed, push the piston rod (47) forward then pull it backward. The air cylinder will then extend from the sleeve and can now be removed.
- Remove retaining ring (48).
- Push piston rod and motor housing out thru gear end of outer sleeve. Piston (32) will drop out when motor housing and piston rod are removed from outer sleeve.
- Insert a suitable rod thru gear end of outer sleeve and push cap (38) out thru valve end of outer sleeve.
- Piston rod (47) and motor housing (50) are secured with a hard drying thread adhesive. If it should become necessary to separate these two parts, heat the threaded area lightly to soften the adhesive and unthread the rod from the housing.

Air Piston Assembly

- **NOTE:** When a part containing O-Rings has been removed from tool, it is recommended that the O-Rings be replaced with new ones when reassembling part to the tool. Lubricate all O-Ring with 36460 O-Ring lubricant.
- Assemble retaining ring (39) Into outer sleeve (40).
- Assemble O-Rings (36 and 37) to cap (38) and assemble cap into outer sleeve thru valve end.
- Coat torque pin (42) with grease to retain pin in place and assemble inside outer sleeve in hole provided.
- Assemble O-Ring (49) to groove in piston rod and assemble O-Ring (37) to groove in motor housing (50).
- Assemble piston rod and motor housing to outer sleeve thru end of sleeve with external threads and push piston rod thru cap (38) using care not to damage O-Ring (36) contained in cap. Align slot in motor housing with torque pin (42).
- Assemble O-Ring (34) and backup rings (33) to piston (32).
- Assemble piston to piston rod and push piston on rod until it seats against shoulder on rod.
- Secure piston with retaining ring (48).
- Clamp valve housing (12 or 105) in a suitable holding device with the threaded end of housing upright.
- Coat i.d. of air cylinder (35) with O-Ring lubricant 36460 and place air cylinder on valve housing, over O-Ring (30).
- Using care not to damage O-Rings (13) contained in valve housing, insert piston rod (47) thru housing and carefully locate outer sleeve over air cylinder and thread outer sleeve to valve housing. Tighten securely using a strap type wrench.
- Assemble motor, gearing, trip bracket and components and cover (1) to housing.

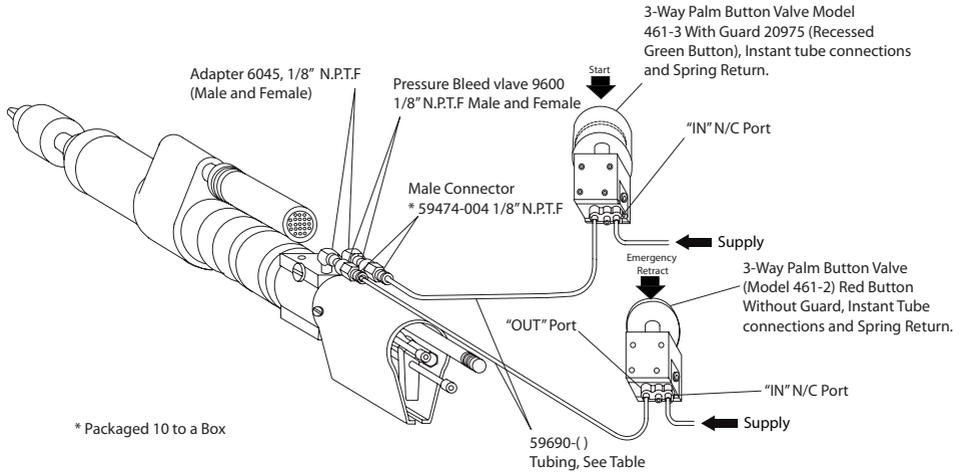
Valve Housing Disassembly

- The valve body (16), needle valves (25) and button bleed valves (27) can be serviced without removing outer sleeve from valve housing. To gain access to check valves (20) and components or O-Rings (13), follow disassembly procedure for removing the air piston.
- Remove both caps (15) and O-Rings (14) from housing (12).
- Push valve body (16) out thru housing. Handle valve body with reasonable care so the O.D. of valve is not damaged.
- Button bleed valves (27) need not be removed except for replacement.

Valve Housing Assembly

- **NOTE:** When a part containing O-Rings has been removed from tool, it is recommended that the O-Rings be replaced with new ones when reassembling part to the tool. Lubricate all O-Rings with 36460 O-Ring lubricant.
- Assemble O-Rings (24) to needle valves (25) and assemble needle valves to housing.
- Assemble plate (103) to housing, securing with screws (104).
- Assemble O-Rings (17) to valve body (16).
- Assemble valve body (16) to valve housing (12) and assemble caps (15) with O-Rings (14) to housing.
- If check valves (20) have been removed, assemble O-Rings (19) to valves (20) and assemble valves to valve housing.
- Assemble springs (21) to housing.
- Assemble O-Ring (22) to screw (23) and assemble screw to housing.
- Assemble retaining screw (18) to housing.
- Assemble outer sleeve and components to valve housing as described in air piston assembly section.

Basic Remote Control for Start and Emergency Retract Functions - Model 8265 - ()



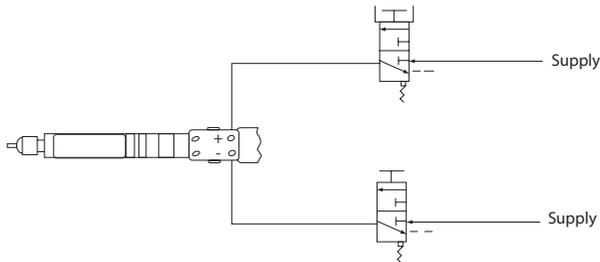
Remote operation of the unit may be achieved by connecting a 3-way valve to the remote start and / or remote retract parts, as shown above.

TO START - Depress the remote button momentarily. The unit will advance the drill to a pre-set depth and automatically retract to the initial position whereupon the unit will stop.

EMERGENCY RETRACT - Depress the emergency button momentarily. The signal to the Unit will shift the built-in pressure operated valve, commanding the unit to retract immediately to the initial position whereupon the unit will stop.

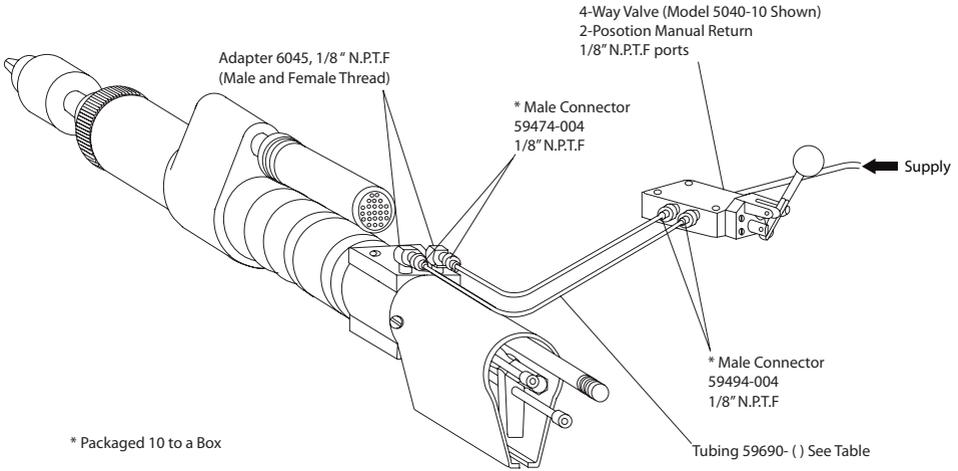
NOTE: MANUAL START and EMERGENCY RETRACT buttons on the tool are fully operational even when remote control is used. The manually operated buttons can be used when set-up is required.

Shown below is the same system in schematic form.



| Ingersoll Rand Instant Tubing - 100 Ft. Rolls | | | | | |
|---|-------|------|-----------|--------|------|
| Model No | Color | Size | Model No | Color | Size |
| 59690-004 | White | 5/32 | 59690-404 | Blue | 5/32 |
| 59690-104 | Black | 5/32 | 59690-504 | Yellow | 5/32 |
| 59690-204 | Green | 5/32 | 59690-604 | Gray | 5/32 |
| 59690-304 | Red | 5/32 | 59690-704 | Orange | 5/32 |

Basic Remote Control for Start and Emergency Retract Functions - Model 8365 - ()



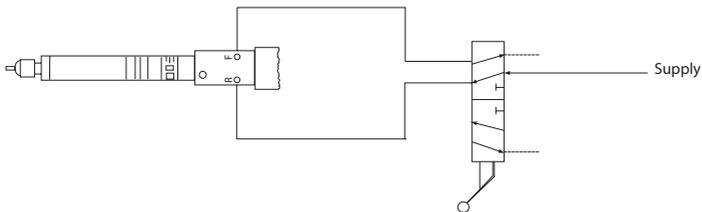
Remote operation is achieved by connecting a 4-way valve to the remote start and retract ports. as shown above. This valve supplies power directly to the feed piston in the tool.

TO START - Move lever forward. The unit will advance to a pre-set depth (adjustment screw contacts stud on valve housing).

TO RETRACT - Move lever rearward (back). The unit will retract to the Initial position.

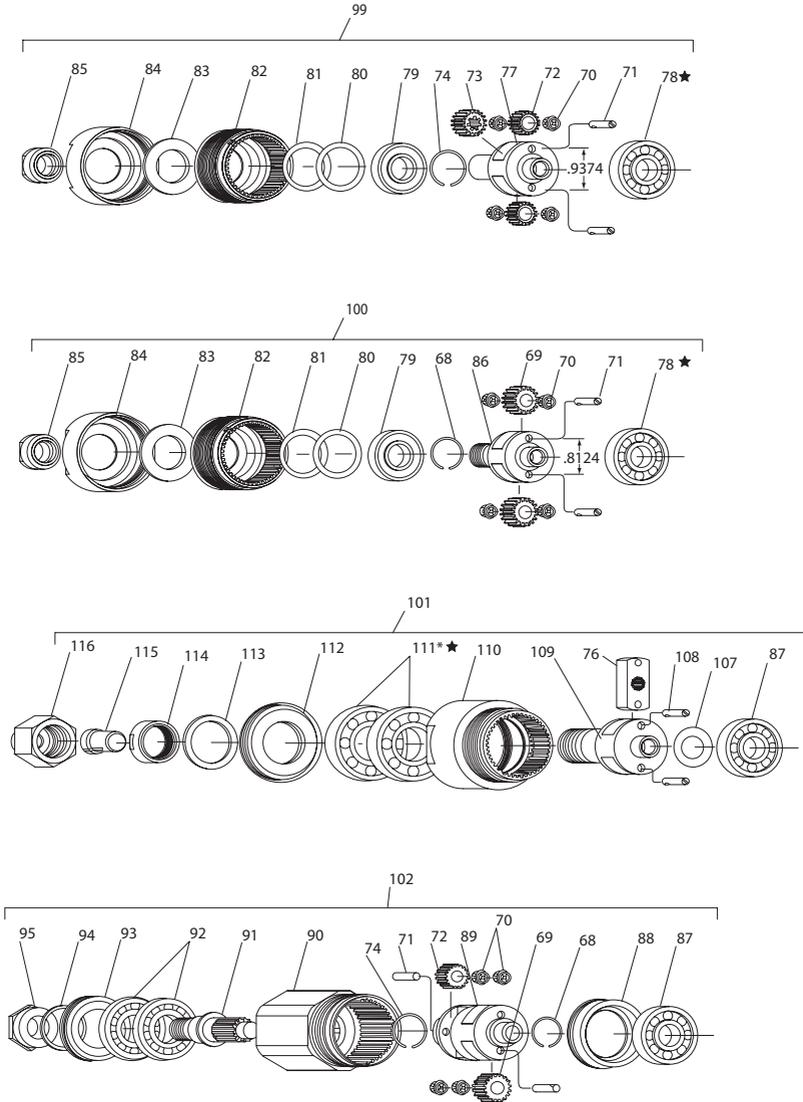
EMERGENCY RETRACT -The unit will retract at any time the lever is moved to the rearward (back) position. The motor runs continuously as long as air pressure is present at the air inlet to the tool. A shut-off valve should be installed in the air inlet line to completely shut the tool off in case of an emergency.

Shown below is the same system in schematic form.



| Ingersoll Rand Instant Tubing - 100 Ft. Rolls | | | | | |
|---|-------|------|-----------|--------|------|
| Model No. | Color | Size | Model No. | Color | Size |
| 59690-004 | White | 5/32 | 59690-404 | Blue | 5/32 |
| 59690-104 | Black | 5/32 | 59690-504 | Yellow | 5/32 |
| 59690-204 | Green | 5/32 | 59690-604 | Gray | 5/32 |
| 59690-304 | Red | 5/32 | 59690-704 | Orange | 5/32 |

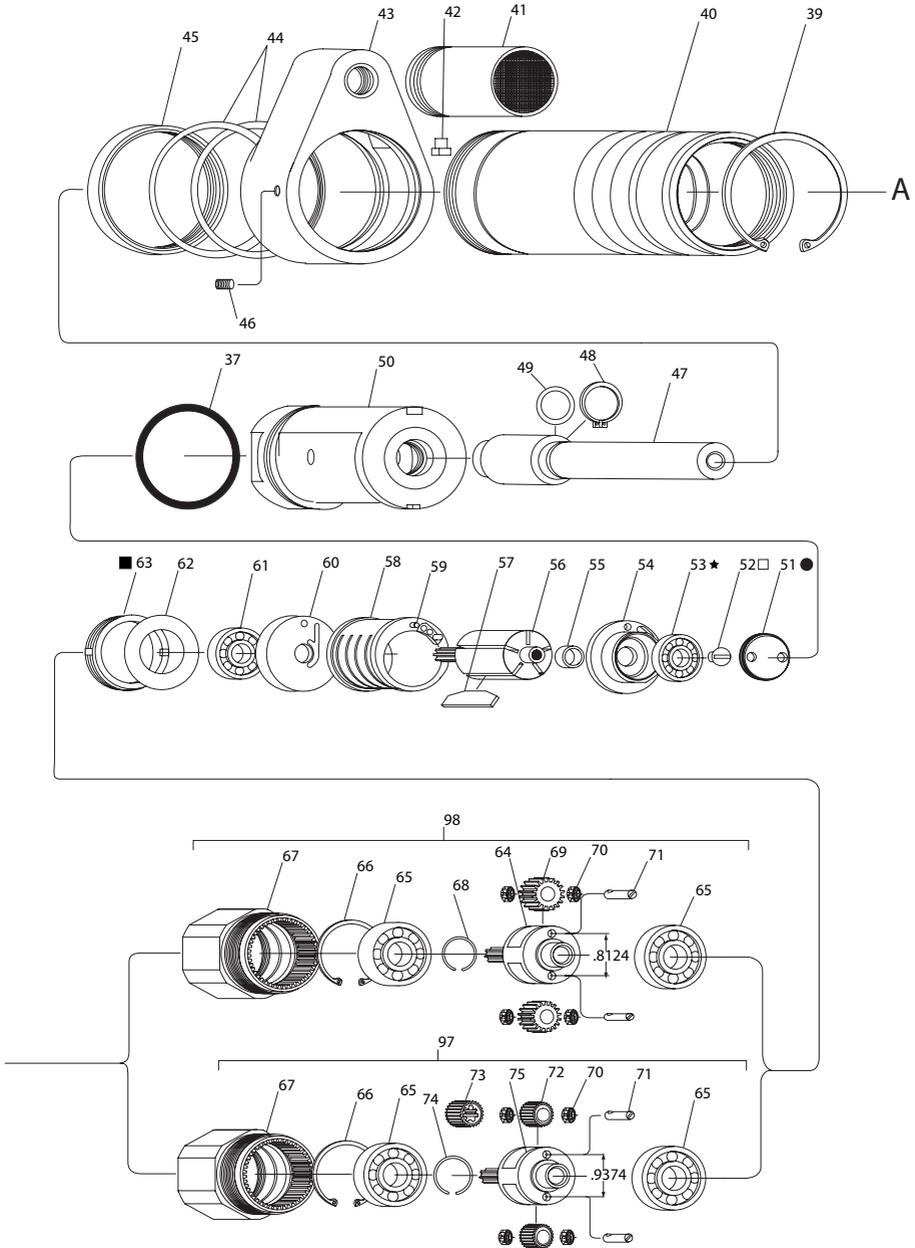
Self Feed Drill Models 8265-(-)-() and 8365-(-)-() - Exploded View



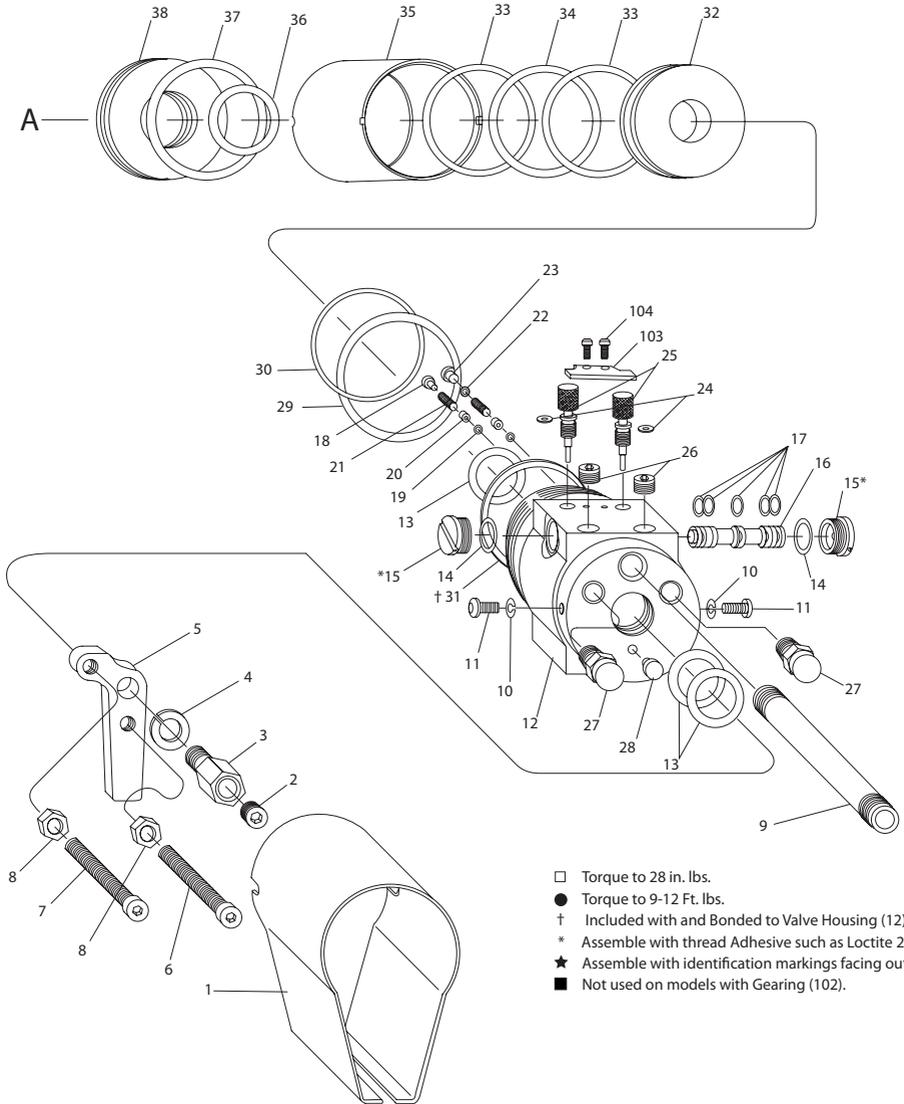
★ Assemble with identification markings facing out.

* Assemble with scribed lines on o.d. aligned.

Self Feed Drill Models 8265-(-)(-) and 8365-(-)(-) - Exploded View



Self Feed Drill Models 8265-(-)(-) and 8365-(-)(-) - Exploded View



- Torque to 28 in. lbs.
- Torque to 9-12 Ft. lbs.
- † Included with and Bonded to Valve Housing (12).
- * Assemble with thread Adhesive such as Loctite 242.
- ★ Assemble with identification markings facing out.
- Not used on models with Gearing (102).

| Model Number | | RPM | Auxiliary Gearing | Drive Gearing | Chuck | Capacity | Total |
|--------------|------------|--------|-------------------|---------------|-------|----------|--------|
| | Cancelled | | | | | | |
| 8265-3(-) | 8365-3(-) | 350 | 40826 | 40820 | 30018 | 1/2" | 55.2:1 |
| 8265-6(-) | 8365-6(-) | 650 | 40825 | 40820 | 30018 | 1/2" | 29.7:1 |
| 8265-12(-) | 8365-12(-) | 1200 | 40825 | 40819 | 30018 | 1/2" | 16:1 |
| 8265-25(-) | 8365-25(-) | 2500 | | 40820 | 30018 | 1/2" | 7.43:1 |
| 8265-46(-) | 8365-46(-) | 4600 | | 40819 | 30018 | 1/2" | 4:1 |
| 8265-101(-) | | 10,000 | | 48129-1 | 33907 | 3/8" | 1.86:1 |
| 8265-171(-) | | 17,000 | | 38246 | | | 1:1 |

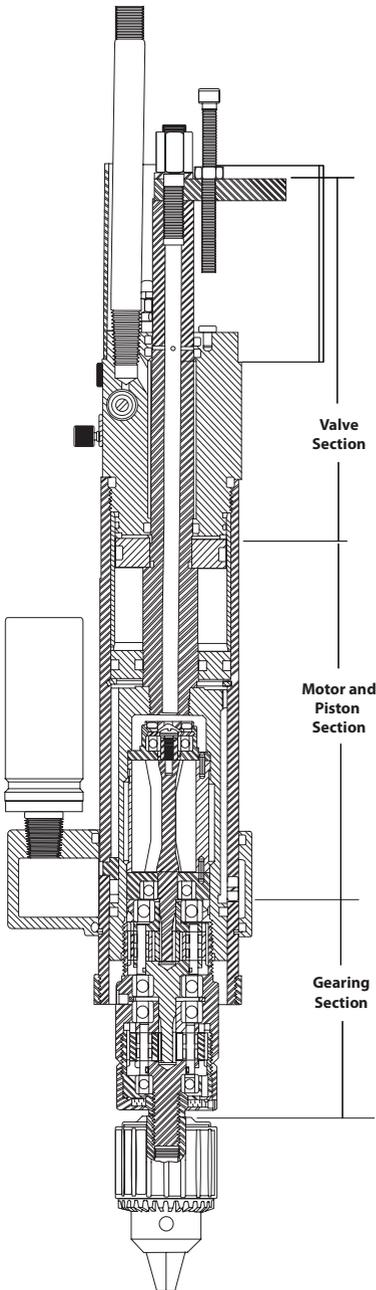
Parts List for Self Feed Drill Models 8265-()-1 and 8365-()-1

| Item | Part Description | Part Number | Item | Part Description | Part Number |
|------|--|-------------|------|--|-------------|
| 1 | Cover | | 35 | Air Cylinder | |
| | for models 8265-()-1 and 8365-()-1 | 40582-1 | | for models 8265-()-1 and 8365-()-1 | 40579-1 |
| | for models 8265-()-3 and 8365-()-3 | 40582 | | for models 8265-()-3 and 8365-()-3 | 40579 |
| 2 | Pipe Plug | Y227-2-L | 36 | O-Ring | Y325-214 |
| 3 | Adapter | 44883 | 37 | O-Ring (2) | Y325-225 |
| 4 | Lock Washer | Y14-616 | 38 | Cap | 40577 |
| 5 | Trip Bracket | 41713-3 | 39 | Retaining Ring | Y147-212 |
| 6 | Adjustment Screw "A" | | 40 | Outer Sleeve | |
| | for models 8265-()-1 and 8365-()-1 | 40292-2 | | for models 8265-()-1 and 8365-()-1 | 40595 |
| | for models 8265-()-3 and 8365-()-3 | 40292-3 | | for models 8265-()-3 and 8365-()-3 | 40573 |
| 7 | Adjustment Screw "B" | | 41 | Muffler | 43874-1 |
| | for models 8265-()-1 | 40292-1 | 42 | Torque Pin | 40578 |
| | for models 8265-()-3 | 40292-2 | 43 | Manifold (Includes items 44 thru 46) | 43589 |
| 8 | Nut (1 or 2 as required) | Y11-4-C | | | |
| 9 | Pipe Nipple | | 44 | O-Ring (2) | Y325-230 |
| | for models 8265-()-1 and 8365-()-1 | 40857-6-2 | 45 | Thread Guard | 40581 |
| | for models 8265-()-3 and 8365-()-3 | 40857-7-2 | 46 | Set Screw | Y23-103 |
| 10 | Washer (2) | Y14-10 | 47 | Piston Rod | |
| 11 | Screw (2) | Y211-102 | | for models 8265-()-1 and 8365-()-1 | 40596 |
| 12 | Valve Housing (Includes item 31) | 40572 | | for models 8265-()-3 and 8365-()-3 | 40575 |
| | | | 48 | Retaining Ring | Y145-23 |
| 13 | O-Ring (3) | Y325-210 | 49 | O-Ring | Y325-16 |
| 14 | O-Ring (2) | Y325-14 | 50 | Motor Housing | 40574 |
| 15 | Cap (2) | 46697 | 51 | Bearing Retainer Nut | 33694 |
| 16 | Valve Body | 40307 | 52 | Sems Fastener | 33700 |
| 17 | O-Ring (5) | 41083 | 53 | Bearing | 33709 |
| 18 | Retaining Screw | 39652 | 54 | End Plate | 33710 |
| 19 | O-Ring (1 or 2 as required) | Y325-2 | 55 | Spacer | 33701 |
| 20 | Check Valve (1 or 2 as required) | 39587 | 56 | Rotor | 41521 |
| 21 | Spring (1 or 2 as required) | 35733 | 57 | Blade (5) | 41520 |
| 22 | O-Ring | Y325-3 | 58 | Cylinder (Includes items 59) | 35679 |
| 23 | Screw | 38863 | | | |
| 24 | O-Ring (1 or 2 as required) | Y325-7 | 59 | Roll Pin (2) | Y178-20 |
| 25 | Needle Valve (1 or 2 as required) | 48441-1 | 60 | End Plate | 33712 |
| 26 | Pipe Plug (2) | Y227-2-L | 61 | Bearing | 33705 |
| 27 | Button Bleed Valve (2) | 24130 | 62 | Motor Assembly (Includes items 51 thru 61) | 41522 |
| 28 | Stud | 46558 | | | |
| 29 | O-Ring | Y325-226 | | | |
| 30 | O-Ring | Y325-32 | 63 | Spacer | 33711 |
| 31 | Ring Seal (Included with items 12 and 105) | 40593 | 64 | Spindle | 40840 |
| | | | 65 | Bearing (2) | 33704 |
| | | | 66 | Retaining Ring | 33708 |
| | Housing and Valve Assembly (Includes items 12 thru 31, 103 and 104) | 40815 | 67 | Housing Adapter (Includes grease fitting 35323) | 35270-ARO |
| 32 | Piston | 40576 | 68 | Snap Ring | 40843 |
| 33 | Backup Ring (2) | 41981 | 69 | Gear, 18 teeth (2) | 46416 |
| 34 | O-Ring | Y325-224 | | | |

Parts List For Self Feed Drill Models 8265-(-)(-) and 8365-(-)(-)

| Item | Part Description | Part Number | Item | Part Description | Part Number |
|------|--|-------------|------|---|------------------|
| 70 | Needle Bearing (2 Per Gear) | 42271 | 94 | Seal | 48120-1 |
| 71 | Shaft (2 or 4 as Required) | 40841 | 95 | Spindle Nut | 48119-1 |
| 72 | Gear, 14 teeth (2) | 46417 | 96 | Chuck (Not Shown) | |
| 73 | Gear, (7 interior, 15 exterior teeth) | 34574 | | 1/2" capacity | 30018 |
| 74 | Snap Ring | 40842 | | 3/8" capacity | 33907 |
| 75 | Spindle | 40839 | 97 | Gearing Assembly (4:1) | 40825 |
| 76 | Splined Driver | 34488 | 98 | Gearing Assembly (7.43:1) | 40826 |
| 77 | Spindle | 40835 | 99 | Gearing Assembly (4:1) | 40819 |
| 78 | Bearing | 33703 | 100 | Gearing Assembly (7.43:1) | 40820 |
| 79 | Bearing | 33706 | 101 | Gearing Assembly (1:1) | 38246 |
| 80 | Wave Washer (2) | 47589 | 102 | Gearing Assembly (1.86:1) | 48129-1 |
| 81 | Washer | 47590 | 103 | Plate | 48440-1 |
| 82 | Lock Nut | 34490 | 104 | Screw (2) | Y211-1 |
| 83 | Grease Seal | 37774 | 105 | Valve Housing (Includes item 31) | 40594-1 |
| 84 | Nose Housing (Includes grease fitting 35967) | 38379 | | 106 | Trip Bracket |
| 85 | Spindle Nut | 33697-1 | 107 | Spacer | 37128 |
| 86 | Spindle | 40836 | 108 | Shaft (2) | 38242 |
| 87 | Bearing | 33704 | 109 | Spindle | 38238 |
| 88 | Spacer | 48126-1 | 110 | Ring Gear (Includes grease fitting 35967) | 38239-1 |
| 89 | Spindle (Includes needle bearing 42261) | 48127-1 | | 111 | Bearing (Paired) |
| 90 | Ring Gear (Includes needle bearing 48123-1 and grease fitting 35323) | 48128-1 | 112 | Bearing Lock Ring | 38241 |
| | | | 113 | Seal | 38243 |
| | | | 114 | Bearing Lock Nut | 38240 |
| 91 | Spindle | 48118-1 | 115 | Collet | 32968-9 |
| 92 | Bearing (2) | 39164 | 116 | Collet Chuck Nut | 32970 |
| 93 | Lock Nut | 48121-1 | | Housing and Valve Assembly (includes items 13, 19 thru 26, 28 thru 31 and 103 thru 105) | 41303 |

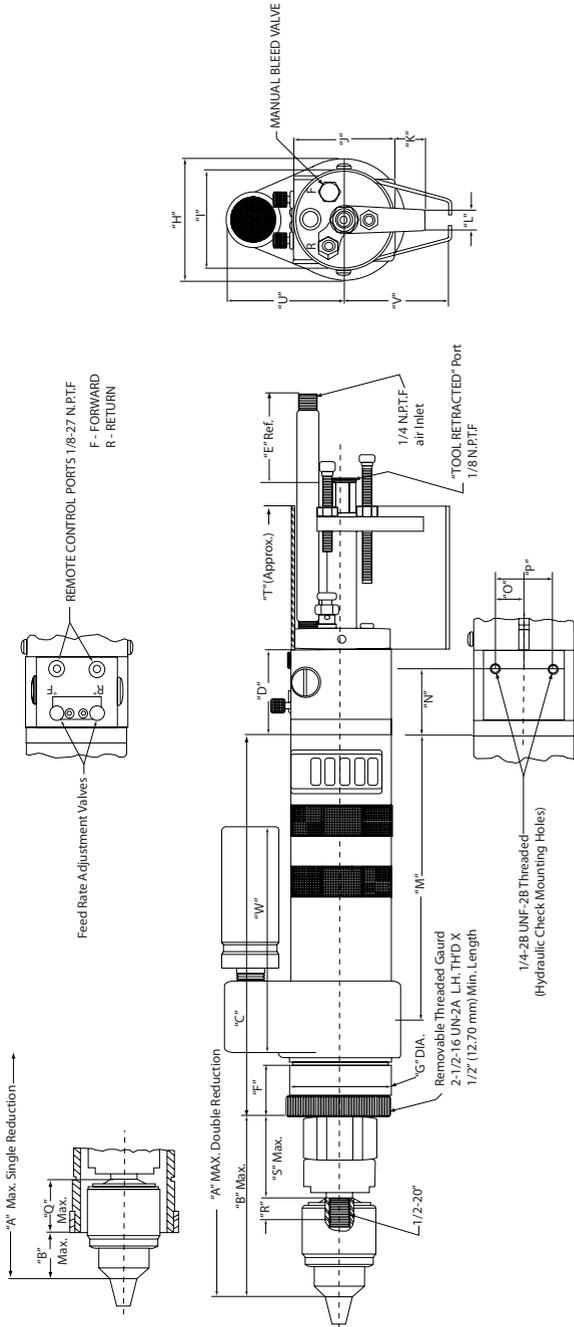
Self Feed Drill Models 8265-(-)-() and 8365-(-)-() - Sectional View



Service Kit No. 41327

| Part Description | Part Number |
|------------------|-------------|
| Bearing | 33705 |
| Bearing | 33709 |
| Spring (2) | 35733 |
| Grease Seal | 37774 |
| Gasket (2) | 40309 |
| Ring Seal | 40593 |
| O-Ring (5) | 41083 |
| Blade (5) | 41520 |
| Motor Oil | 41795 |
| Gear Lube | 41799 |
| O-Ring Lube | 41954 |
| Back Up Ring (2) | 41981 |
| O-Ring (2) | Y325-2 |
| O-Ring | Y325-3 |
| O-Ring (2) | Y325-7 |
| O-Ring (2) | Y325-14 |
| O-Ring | Y325-16 |
| O-Ring | Y325-32 |
| O-Ring (3) | Y325-210 |
| O-Ring | Y325-214 |
| O-Ring | Y325-224 |
| O-Ring (2) | Y325-225 |
| O-Ring | Y325-226 |

Dimensional Data



| Models 8265(-)-1 and 8365(-)-1 | | 1-1/2" Stroke (38 mm) | | | | | | | | | | | | | | | | 3" Stroke (76 mm) | | | | | | | | |
|--------------------------------|-----|-----------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--|
| | | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | | |
| Inches | mm | Double Reduc-tion | Single Reduc-tion | Double Reduc-tion | Single Reduc-tion | Double Reduc-tion | Single Reduc-tion | Double Reduc-tion | Single Reduc-tion | Double Reduc-tion | Single Reduc-tion | Double Reduc-tion | Single Reduc-tion | Double Reduc-tion | Single Reduc-tion | Double Reduc-tion | Single Reduc-tion | Double Reduc-tion | Single Reduc-tion | Double Reduc-tion | Single Reduc-tion | Double Reduc-tion | Single Reduc-tion | Double Reduc-tion | Single Reduc-tion | |
| 20-1/64 | 508 | 18-7/32 | 4-35/64 | 2-3/4 | 9-3/8 | 2-9/32 | 1-1/4 | 2-1/2 | 2-23/32 | 2-1/2 | 2-1/2 | 3/4 | 1/2 | 7-7/32 | 1.620 | .7135 | 1.432 | 2-3/32 | 35/64 | 19/64 | 17/32 | 2-15/32 | 2-19/32 | 2-19/32 | 5-9/16 | |
| | | | | | | | | | | | | | | | 1.630 | .7235 | 1.442 | | | | | | | | | |
| | | | | | | | | | | | | | | | 41.15 | 18.12 | 36.37 | 53 | 14 | 8 | 13 | 75 | 66 | 141 | | |
| | | | | | | | | | | | | | | | 41.40 | 18.37 | 36.63 | | | | | | | | | |
| Models 8265(-)-3 and 8365(-)-3 | | 1-1/2" Stroke (38 mm) | | | | | | | | | | | | | | | | 3" Stroke (76 mm) | | | | | | | | |
| | | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | | |
| Inches | mm | Double Reduc-tion | Single Reduc-tion | Double Reduc-tion | Single Reduc-tion | Double Reduc-tion | Single Reduc-tion | Double Reduc-tion | Single Reduc-tion | Double Reduc-tion | Single Reduc-tion | Double Reduc-tion | Single Reduc-tion | Double Reduc-tion | Single Reduc-tion | Double Reduc-tion | Single Reduc-tion | Double Reduc-tion | Single Reduc-tion | Double Reduc-tion | Single Reduc-tion | Double Reduc-tion | Single Reduc-tion | Double Reduc-tion | Single Reduc-tion | |
| 23-1/64 | 584 | 21-7/32 | 3-3/64 | 1-1/4 | 12-3/8 | 2-3/32 | 1-1/4 | 2-1/2 | 2-23/32 | 2-1/2 | 2-1/2 | 3/4 | 1/2 | 8-23/32 | 1.620 | .7135 | 1.432 | 2-3/32 | 35/64 | 19/64 | 17/32 | 2-15/32 | 2-19/32 | 2-19/32 | 5-9/16 | |
| | | | | | | | | | | | | | | | 1.630 | .7235 | 1.442 | | | | | | | | | |
| | | | | | | | | | | | | | | | 41.15 | 18.12 | 36.37 | 34 | 14 | 15 | 13 | 75 | 66 | 141 | | |
| | | | | | | | | | | | | | | | 41.40 | 18.37 | 36.36 | | | | | | | | | |

Trouble Shooting

Listed below are some of the most common causes for the self-feed drill to malfunction. Malfunctions beyond the scope of this manual should be brought to the attention of your **Ingersoll Rand** representative or return the tool to factory for repair.

| Conditions | Possible Cause | Corrective Action |
|---|---|--|
| Failure to feed or irregular or erratic feed. | Inadequate air supply. | Check air supply for correct regulator adjustment (90 p.s.i.g. max. when tool is operating). |
| | Feed control valves improperly adjusted. | Refer to set-up procedure, page 1. |
| | Air leak around cap (15). | Check for damage to O-Ring. |
| | Dirt or damaged O-Rings on spool valve 06). | Check and insure caps are properly tightened. |
| | Clogged air passage in valve housing. | Refer to valve section, page 4, and remove spool valve. Inspect, clean and replace O-Rings. Remove valve housing from tool. Disassemble and blow all air passages clear of debris. |
| Low speed or motor fails to operate. | Inadequate air supply. | Check air supply for correct regulator adjustment. |
| | Clogged air passage in valve housing. | Remove valve housing from tool. Disassemble and blow all air passages clear of debris. |
| Motor continues to run after retraction. | Piston not fully retracted. | Insure piston is not obstructed and is returned all the way back. |
| | Damaged O-Ring (13) inside valve housing. | Remove valve housing from tool. Replace O-Rings. |
| Foilure to retract. | Improper adjustment or alignment between adjustment screw and button bleed valve. | Refer to set-up procedure, page 1. |
| | Feed control valves (25) improperly adjusted or dirty. | Check adjustment, refer to page 2. Remove, inspect and clean. |
| | Air leak around cap (15). | Check for damage to O-Ring. Check and insure caps are properly tightened. |
| | Damaged O-Rings in muffler cap, valve housing or spool valve or seals on piston. | Disassemble, inspect and replace O-Ring ond/or seals. |
| | Clogged air passages in valve housing. | Remove volve housing from tool. Disassemble and blow air passages clear of debris. |

Notes:

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