Desoutter
D Series
Reversible Torque Control
One Shot Screwdriver

Operating Instructions
Servicing Instructions
Parts List

<table>
<thead>
<tr>
<th>Type</th>
<th>Code 5/16 Drive</th>
<th>Code 1/4 Drive</th>
</tr>
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<tbody>
<tr>
<td>2D89-AX-2200</td>
<td>1338294</td>
<td>1338114</td>
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</table>
The following instructions for the motor complete (43) must be followed.

Take the rotor (38) and place the rear bearing plate (36) with grooves to rotor, into position. Press bearing (33) onto the rotor so that there is a 0.038mm (0.0015in) gap between the rotor and the rear bearing plate. Holding the rotor and rear bearing plate assembly with the gear end of the rotor uppermost, slide the cylinder (37) over the rotor.

Locate the rotor blades (39) into their slots in the rotor and lubricate. Place the front bearing plate (36) into position, with grooves to rotor. Press the front bearing (33) onto the rotor until all the free axial movement between the front and rear bearings is removed. Place the front bearing housing (34) over its bearing making sure that the location pin and hole are aligned.

Locate the rear bearing housing (40) with cap (42) and check that the rotor is free to rotate.

Final Assembly

Place control top in vice using flats as in dismantling, then place gasket (44) in position so that the pin location hole is clear. Remove the rear bearing housing (40) from the motor complete (43) and locate in the control top, load the rest of the motor into position then slide the motor case (31) over the motor and screw fully into the control top. Slide the planet cage assemblies into the motor case checking that as each assembly is located the unit is free to rotate, check that push-rods (32 & 45) are fitted and operate without binding.

Now tighten the nose to 40Nm (29.5 lbf.ft) and replace spacer and circlip.

NOTE:

Now check setting dimension of push rod (32). This is done by measuring the distance from circlip (20) to tip of Push Rod (32) with ball held on its seat. The dimension should be 31.5-32mm.

To adjust remove air inlet (63) and adjust position of ball on the rod bearing in mind the pitch is 0.35mm. Then rebuild front end of tool.

The tool should be connected to the air supply and tested for correct operation.

If the tool is to be used on a dry airline installation it should be run for a few minutes to clear any oil, used in assembly, from the motor.

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<table>
<thead>
<tr>
<th>Item No.</th>
<th>Part No.</th>
<th>Description</th>
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Optional Accessory

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Supplied Accessories

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* Indicates normal replacement items. It is recommended that adequate stocks are held for servicing requirements.

# Indicates updated parts. Always quote tool model number, serial number and spare part number when ordering spares.
REQUIREMENTS

Air Supply

A water free and filtered air supply is required at a pressure of 6 bar (87 lbf/in²), with a flow of 8.4 l/s (18 scfm); controlled by a pressure regulator selected from the Desoutter Air Line Service Equipment Catalogue.

Lubrication

This is a DRYLINE tool designed to operate on a totally dry air line; i.e., one without any oil or water moisture. The speed of the tool when operated dry will be found to be 10% lower than that stated on the tool nameplate; this will not alter the overall performance.

DREAM LINE tools can also operate on a lubricated or partly lubricated air line thus allowing easy tool interchangeability with existing installations. If lubrication is required an airline lubricator should be fitted down stream of the filter.

Desoutter recommend the use of an ISO Viscosity Classified Oil, grade number ISO VG 15, in the lubricator.

Accessories

A wide range of screwdriving bits and nutrunning sockets are available and a suitable item should be selected from the Desoutter Accessories Catalogue.

The retention of these items is by spring loaded ball, which requires a sharp pull to release for the 5/16 in bit holder, or by pulling the sleeve forward to release for the 1/4 in bit holder.

OPERATING

With the correct accessory fitted connect the tool to the air supply. Grip the tool around the motor case and press the tool onto the fixing that is to be tightened; the motor will start and tighten the fixing to the required torque, set by adjusting the tension on the clutch spring, at this point the internal drive is disengaged and the air to the motor cut off.

To engage reverse rotation press the reverse button and rotate it to lock in position.

NOTE: With the same clutch setting a higher torque is always transmitted in reverse, ensuring a speedy fastener removal.

WARNING

1) Always disconnect tool from the power supply before attempting any replacement, adjustment, servicing or dismantling.

2) Ensure that no loose articles of clothing or cleaning material can be caught by the rotating parts of the tool.

3) Always allow the tool to stop before removing work or resting tool.

4) Ensure that work piece is securely clamped before commencement of operation — clear all loose items from vicinity.

INITIAL SETTING

When received the torque output of the tool will require setting to match the job requirement.

It is recommended that a trial tightening operation is carried out to determine the amount of adjustment required. The ideal instrument for checking the torque is an electronic torque meter, request information from Desoutter; failing this a dial indicating torque wrench is adequate.

Clutch Adjustment

Rotate the spring ring (4) to uncover access hole in clutch case (3); insert clutch key, supplied with tool, and rotate to obtain the required torque.

SERVICING REQUIREMENTS

General Notes

Replace as necessary all ‘O’ rings, gaskets, bearings and rotor blades.

Use the following lubricants:

- Oil — ISO Viscosity Classified — ISO VG 15, for motor.
- Grease — BP FG30-EP, for motor bearings.
- Grease — Duckhams Type G5618, for gears and other bearings.
- Silicone Grease — Molykote 33, for ‘O’ rings.

ATTENTION:

The rotor blades in this tool have a PTFE content. The normal Health and Safety recommendations concerning PTFE must be observed when handling these rotor blades.

1. Do not smoke.

2. Motor components must be washed with cleaning fluid and not blown clear with an air line.

3. Sintered silencers must be replaced when dirty, do not clean and re-use.

4. Wash hands before recommencing any other activity.

Bearings that have a retainer holding the balls in place must be assembled into the tool with the blank face of the retainer to the air flow; in the case of the motor the blank faces must face each other across the rotor.

The threads in this tool are left hand with the exception of the air inlet adaptor.

Customers wishing to service the clutch (19) should request a separate service sheet from Desoutter.

TO DISEMBLE

Clamp tool in Vice using Flats on Control top. Unscrew Clutch Housing (5) and remove clutch (19) and output Drive (11).

Remove Circlip (20) and spacer (22) from final Planet Cage (20) and insert tool into Gear and Nose (21). Then loosen.

Remove tool from Vice then holding the tool unscrew the Control Top (64) and remove Motor (43) and planet cage complete (29).

Passing through the motor and gearbox are push-rods, these should now be inspected for straightness and stored for future assembly.

The remainder of the dismantling follows normal engineering practice with reference to the illustration.

TO ASSEMBLE

Assembly Notes:

1) When locating the motor complete (43) in the control top complete (64), the pin projecting out of rear bearing housing complete (40) must enter the location hole in the control top.

2) It is important that spacer (59) is located the correct way round: concave side to the rear of the tool.

3) The push-rod and ball assembly (55) is the point of adjustment for the push-rods (32 & 45). To check for correct assembly of the push-rods, see final Assembly Notes.

Sub Assemblies

Using the illustration as a guide, assemble control and planet cages. The push-rods (32 & 45) must be positioned while there is free access for them.
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D Series
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One Shot Screwdriver

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<th>Type</th>
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Take the rotor (38) and place the rear bearing plate (36) with grooves to rotor, into position. Press bearing (33) onto the rotor so that there is a 0.038mm (0.0015in) gap between the rotor and the rear bearing plate. Holding the rotor and rear bearing plate assembly with the gear end of the rotor uppermost, slide the cylinder (37) over the rotor.

Locate the rotor blades (39) into their slots in the rotor and lubricate. Place the front bearing plate (36) into position, with grooves to rotor. Press the front bearing (33) onto the rotor until all the free axial movement between the front and rear bearings is removed. Place the front bearing housing (34) over its bearing making sure that the location pin and hole are aligned.

Locate the rear bearing housing (40) with cap (42) and check that the rotor is free to rotate.

Final Assembly

Place control top in vice using flats as in dismantling, then place gasket (44) in position so that the pin location hole is clear. Remove the rear bearing housing (40) from the motor complete (43) and locate in the control top, load the rest of the motor into position then slide the motor case (31) over the motor and screw fully into the control top. Slide the planet cage assemblies into the motor case checking that as each assembly is located the unit is free to rotate, check that push-rods (32 & 45) are fitted and operate without binding.

Now tighten the nose to 40Nm (29.5 lbf.ft.) and replace spacer and circlip.

NOTE:

Now check setting dimension of push rod (32). This is done by measuring the distance from circlip (20) to tip of Push Rod (32) with ball held on its seat. The dimension should be 31.5-32mm. To adjust remove air inlet (63) and adjust position of ball on the rod bearing in mind the pitch is 0.35mm. Then rebuild front end of tool.

The tool should be connected to the air supply and tested for correct operation.

If the tool is to be used on a dry airline installation it should be run for a few minutes to clear any oil, used in assembly, from the motor.
REQUIREMENTS

Air Supply
A water free and filtered air supply is required at a pressure of 6 bar (87 lb/in²), with a flow of 8.4 l/s (18 scfm); controlled by a pressure regulator selected from the Desoutter Air Line Service Equipment Catalogue.

Lubrication
This is a DRYLINE tool designed to operate on a totally dry airline, i.e., one without any oil or water moisture. The speed of the tool when operated dry will be found to be 10% lower than that stated on the tool nameplate; this will not alter the overall performance.

DRYLINE tools can also operate on a lubricated or partly lubricated airline thus allowing easy tool interchangeability with existing installations. If lubrication is required an airline lubricator should be fitted down stream of the filter.

Desoutter recommend the use of an ISO Viscosity Classified Oil, grade number ISO VG 15, in the lubricator.

Accessories
A wide range of screwdriving bits and nutrunning sockets are available and a suitable item should be selected from the Desoutter Accessories Catalogue.

The retention of these items is by spring loaded ball, which requires a sharp pull to release for the 5/16 in bit holder, or by pulling the sleeve forward to release for the 1/4 in bit holder.

OPERATING
With the correct accessory fitted connect the tool to the air supply, Grip the tool around the motor case and press the tool onto the fixing that is to be tightened; the motor will start and tighten the fixing to the required torque, set by adjusting the tension on the clutch spring, at this point the internal drive is disengaged and the air to the motor cut off.

To engage reverse rotation press the reverse button and rotate it to lock in position.

NOTE: With the same clutch setting a higher torque is always transmitted in reverse, ensuring a speedy fastener removal.

WARNING
1) Always disconnect tool from the power supply before attempting any replacement, adjustment, servicing or dismantling.

2) Ensure that no loose articles of clothing or cleaning material can be caught by the rotating parts of the tool.

3) Always allow the tool to stop before removing work or resting tool.

4) Ensure that work piece is securely clamped before commencement of operation — clear all loose items from vicinity.

INITIAL SETTING
When received the torque output of the tool will require setting to match the job requirement.

It is recommended that a trial tightening operation is carried out to determine the amount of adjustment required. The ideal instrument for checking the torque is an electronic torque meter, request information from Desoutter; failing this a dial indicating torque wrench is adequate.

Clutch Adjustment

Rotate the spring ring (4) to uncover access hole in clutch case (3); insert clutch key, supplied with tool, and rotate to obtain the required torque.

SERVICING REQUIREMENTS

General Notes
Replace as necessary all ‘O’ rings, gaskets, bearings and rotor blades.

Use the following lubricants:

- Oil — ISO Viscosity Classified — ISO VG 15, for motor.
- Grease — BP FG00-EP, for motor bearings.
- Grease — Duvankaus Type Q5618, for gears and other bearings.
- Silicone Grease — Molykote 33, for ‘O’ rings.

ATTENTION:
The rotor blades in this tool have a PTFE content. The normal Health and Safety recommendations concerning PTFE must be observed when handling these rotor blades.

1) Do not smoke.
2) Motor components must be washed with cleaning fluid and not blown clear with an air line.
3) Sintered silencers must be replaced when dirty, do not clean and re-use.

4) Wash hands before commencing any other activity.

Bearings that have a retainer holding the balls in place must be assembled into the tool with the blank face of the retainer to the air flow; in the case of the motor the blank faces must face each other across the rotor.

The threads in this tool are left hand with the exception of the air inlet adaptor.

Customers wishing to service the clutch (19) should request a separate service sheet from Desoutters.

TO DISMANTLE
Clamp tool in Vice using Flats on Control top. Unscrew Clutch Housing (5) and remove clutch (19) and output Drive (11).

Remove Circlip (20) and spacer (22) from final Planet Cage (29) and insert tool into Gear and Nose (21). Then loosen.

Remove tool from Vice then holding the tool unscrew the Control Top (64) and remove Motor (43) and planet cage complete (29).

Passing through the motor and gearbox are push-rod, these should now be inspected for straightness and stored for future assembly.

The remainder of the dismantling follows normal engineering practice with reference to the illustration.

TO ASSEMBLE

Assembly Notes:

1) When locating the motor complete (43) in the control top complete (64), the pin projecting out of rear bearing housing complete (40) must enter the location hole in the control top.
2) It is important that spacer (59) is located the correct way round: concave side to the rear of the tool.
3) The push-rod and ball assembly (65) is the point of adjustment for the push-rods (32 & 45). To check for correct assembly of the push-rods, see final Assembly Notes.

Sub Assemblies
Using the illustration as a guide, assemble control and planet cages. The push-rods (32 & 45) must be positioned while there is free access for them.

The following instructions for the motor complete (43) must be followed.
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One Shot Screwdriver

Operating Instructions
Servicing Instructions
Parts List

<table>
<thead>
<tr>
<th>Type</th>
<th>Code</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/16 Drive</td>
<td>1338614</td>
<td>1338534</td>
</tr>
<tr>
<td>2D89-AX-1000</td>
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# 2D89-AX-1000

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>Thread Protection Cap</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Bearing Bush</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Clutch Case</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>Spring Ring</td>
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</tr>
<tr>
<td>5</td>
<td>Clutch Case Complete</td>
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</tr>
<tr>
<td>6</td>
<td>Spacer 2.0mm</td>
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<tr>
<td>7</td>
<td>Spacer 2.8mm</td>
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</tr>
<tr>
<td>8</td>
<td>Spacer 2.3mm</td>
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<tr>
<td>9</td>
<td>Shim 0.13mm</td>
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<tr>
<td>10</td>
<td>Shim 0.25mm</td>
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<tr>
<td>11</td>
<td>Bit Holder 5/16&quot; Hex</td>
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<tr>
<td>12</td>
<td>Ball</td>
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<tr>
<td>13</td>
<td>Rollers</td>
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<tr>
<td>14</td>
<td>Spring</td>
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<tr>
<td>15</td>
<td>Sleeve</td>
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<tr>
<td>16</td>
<td>Bit Holder 1/4&quot; Hex</td>
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<tr>
<td>17</td>
<td>Ball</td>
<td>1</td>
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<tr>
<td>18</td>
<td>Rollers</td>
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<tr>
<td>19</td>
<td>Bit Holder 1/4&quot; Hex (complete)</td>
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<tr>
<td>20</td>
<td>Clutch complete</td>
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<tr>
<td>21</td>
<td>Gear and Nose</td>
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<tr>
<td>22</td>
<td>Distance Collar</td>
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<tr>
<td>23</td>
<td>Bearing</td>
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<td>Curb</td>
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<tr>
<td>25</td>
<td>Number not used</td>
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## Final Assembly

- Place control top in vice using flats as in dismantling, then place gasket (54) in position so that the pin location hole is clear. Remove the rear bearing housing (50) from the motor complete (53) and locate in the control top, load the rest of the motor into position then slide the motor case (40) over the motor and screw fully into the control top. Slide the planet cage assemblies into the motor case checking that each assembly is located the unit is free to rotate, check that push-rods (41 & 55) are fitted and operate without binding.

- Now tighten the nose to 40Nm (29.5 lbf.ft.) and replace spacer and circlip.

## NOTE:

Now check setting dimension of push rod (41). This is done by measuring the distance from circlip (20) to tip of Push Rod (41) with ball held on its seat. The dimension should be 31.5-32mm. To adjust remove air inlet (73) and adjust position of ball on the rod bearing in mind the pitch is 0.35mm. Then rebuild front end of tool.

The tool should be connected to the air supply and tested for correct operation.

If the tool is to be used on a dry airline installation it should be run for a few minutes to clear any oil, used in assembly, from the motor.
REQUIREMENTS

Air Supply
A water free and filtered air supply is required at a pressure of 6 bar (87 lbf/in²), with a flow of 8.4 l/s (18 scfm); controlled by a pressure regulator selected from the Desoutter Air Line Service Equipment Catalogue.

Lubrication
This is a DRYLINE tool designed to operate on a totally dry airline, i.e., one without any oil or water moisture. The speed of the tool when operated dry will be found to be 10% lower than that stated on the tool nameplate; this will not alter the overall performance.

DRYLINE tools can also operate on a lubricated or partly lubricated airline thus allowing easy tool interchangeability with existing installations. If lubrication is required an airline lubricator should be fitted down stream of the filter.

Desoutter recommend the use of an ISO Viscosity Classified Oil, grade number ISO VG 15, in the lubricator.

Accessories
A wide range of screwdriving bits and nutrunning sockets are available and a suitable item should be selected from the Desoutter Accessories Catalogue.

The retention of these items is by spring loaded ball, which requires a sharp pull to release for the 5/16 in bit holder, or by pulling the sleeve forward to release for the 1/4 in bit holder.

OPERATING
With the correct accessory fitted connect the tool to the air supply. Grip the tool around the motor case and press the tool onto the fixing that is to be tightened, the motor will start and tighten the fixing to the required torque, set by adjusting the tension on the clutch spring, at this point the internal drive is disengaged and the air to the motor cut off.

To engage reverse rotation press the reverse button and rotate it to lock in position.

NOTE: With the same clutch setting a higher torque is always transmitted in reverse, ensuring a speedy fastener removal.

WARNING
1) Always disconnect tool from the power supply before attempting any replacement, adjustment, servicing or dismantling.

2) Ensure that no loose articles of clothing or cleaning material can be caught by the rotating parts of the tool.

3) Always allow the tool to stop before removing work or resting tool.

4) Ensure that work piece is securely clamped before commencement of operation — clear all loose items from vicinity.

INITIAL SETTING
When received the torque output of the tool will require setting to match the job requirement.

It is recommended that a trial tightening operation is carried out to determine the amount of adjustment required. The ideal instrument for checking the torque is an electronic torque meter, request information from Desoutter; failing this a dial indicating torque wrench is adequate.

Clutch Adjustment
Rotate the spring ring (4) to uncover access hole in clutch case (3); insert clutch key, supplied with tool, and rotate to obtain the required torque.

SERVICING REQUIREMENTS

General Notes
Replace as necessary all ‘O’ rings, gaskets, bearings and rotor blades.

Use the following lubricants:
- Oil — ISO Viscosity Classified — ISO VG 15, for motor.
- Grease — BP FG09-EP, for motor bearings.
- Grease — Duckhams Type O5618, for gears and other bearings.
- Silicone Grease — Molykote 33, for ‘O’ rings.

ATTENTION:
The rotor blades in this tool have a PTFE content. The normal Health and Safety recommendations concerning PTFE must be observed when handling these rotor blades.

1. Do not smoke.
2. Motor components must be washed with cleaning fluid and not blown clear with an air line.
3. Sintered silencers must be replaced when dirty, do not clean and re-use.

4. Wash hands before commencing any other activity.

Bearings that have a retainer holding the balls in place must be assembled into the tool with the blank face of the retainer to the air flow; in the case of the motor the blank faces must face each other across the rotor.

The threads in this tool are left hand with the exception of the air inlet adaptor.

Customers wishing to service the clutch (19) should request a separate service sheet from Desoutter.

TO DISMANTLE
Clamp tool in Vice using Flats on Control top. Unscrew Clutch Housing (5) and remove clutch (19) and output Drive (11).

Remove Circlip (20) and spacer (22) from final Planet Cage (29) and insert tool into Gear and Nose (21). Then loosen.

Remove tool from Vice then holding the tool unscrew the Control Top (74) and remove Motor (53) and planet cage complete (39).

Passing through the motor and gearbox are push-rods, these should now be inspected for straightness and stored for future assembly.

The remainder of the dismantling follows normal engineering practice with reference to the illustration.

TO ASSEMBLE

Assembly Notes:
1) When locating the motor complete (53) in the control top complete (74), the pin projecting out of rear bearing housing complete (50) must enter the location hole in the control top.

2) It is important that spacer (69) is located the correct way round: concave side to the rear of the tool.

3) The push-rod and ball assembly (65) is the point of adjustment for the push-rods (41 & 55). To check for correct assembly of the push-rods, see final Assembly Notes.

Sub Assemblies

Using the illustration as a guide, assemble control and planet cages. The push-rods (41 & 55) must be positioned while there is free access for them.

The following instructions for the motor complete (53) must be followed.
Desoutter
D Series
Reversible Torque Control
One Shot Screwdriver

Operating Instructions
Servicing Instructions
Parts List

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<tr>
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</tr>
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<tbody>
<tr>
<td>5/16 Drive</td>
<td>2D89-AX-600</td>
<td>1338874</td>
</tr>
<tr>
<td>1/4 Drive</td>
<td>1338794</td>
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Item 74 comprises items 57 to 73.
Take the rotor (48) and place the rear bearing plate (46) with grooves to rotor, into position. Press bearing (43) onto the rotor so that there is a 0.038mm (0.0015in) gap between the rotor and the rear bearing plate. Holding the rotor and rear bearing plate assembly with the gear end of the rotor uppermost, slide the cylinder (47) over the rotor.

Locate the rotor blades (49) into their slots in the rotor and lubricate. Place the front bearing plate (46) into position, with grooves to rotor. Press the front bearing (43) onto the rotor until all the free axial movement between the front and rear bearings is removed. Place the front bearing housing (44) over its bearing making sure that the location pin and hole are aligned.

Locate the rear bearing housing (50) with cap (52) and check that the rotor is free to rotate.

**Final Assembly**

Place control top in vice using flats as in dismantling, then place gasket (54) in position so that the pin location hole is clear. Remove the rear bearing housing (50) from the motor complete (53) and locate in the control top, load the rest of the motor into position then slide the motor case (40) over the motor and screw fully into the control top. Slide the planet cage assemblies into the motor case checking that each assembly is located the unit is free to rotate, check that push-rods (41 & 55) are fitted and operate without binding.

Now tighten the nose to 40Nm (29.5 lb.f.t.) and replace spacer and circlip.

**NOTE:**

Now check setting dimension of push rod (41). This is done by measuring the distance from circlip (20) to tip of Push Rod (41) with ball held on its seat. The dimension should be 31.5-32mm.

To adjust remove air inlet (73) and adjust position of ball on the rod bearing in mind the pitch is 0.35mm. Then rebuild front end of tool.

The tool should be connected to the air supply and tested for correct operation.

If the tool is to be used on a dry airline installation it should be run for a few minutes to clear any oil, used in assembly, from the motor.
2D89-AX-600

REQUIREMENTS

Air Supply

A water and filtered air supply is required at a pressure of 6 bar (87 lb/in²), with a flow of 8.4 l/s (16 scfm); controlled by a pressure regulator selected from the Desoutter Air Lino Service Equipment Catalogue.

Lubrication

This is a DRYLINE tool designed to operate on a totally dry airline i.e., one without any oil or water moisture. The speed of the tool when operated dry will be found to be 10% lower than that stated on the tool nameplate, this will not alter the overall performance.

DRYLINE tools can also operate on a lubricated or partly lubricated airline thus allowing easy tool interchangeability with existing installations. If lubrication is required an airline lubricator should be fitted downstream of the filter.

Desoutter recommend the use of an ISO Viscosity Classified Oil, grade number ISO VG 15, in the lubricator.

Accessories

A wide range of screwdriving bits and nutrunning sockets are available and a suitable item should be selected from the Desoutter Accessories Catalogue.

The retention of these items is by spring loaded ball, which requires a sharp pull to release for the 5/16 in bit holder, or by pulling the sleeve forward to release for the 1/4 in bit holder.

OPERATING

With the correct accessory fitted connect the tool to the air supply. Grip the tool around the motor case and press the tool onto the fixing that is to be tightened; the motor will start and tighten the fixing to the required torque, set by adjusting the tension on the clutch spring, at this point the internal drive is disengaged and the air to the motor cut off.

To engage reverse rotation press the reverse button and rotate it to lock in position.

NOTE: With the same clutch setting a higher torque is always transmitted in reverse, ensuring a speedy fastener removal.

WARNING

1) Always disconnect tool from the power supply before attempting any replacement, adjustment, servicing or dismantling.

2D89-AX-600

2) Ensure that no loose articles of clothing or cleaning material can be caught by the rotating parts of the tool.

3) Always allow the tool to stop before removing work or resting tool.

4) Ensure that work piece is securely clamped before commencement of operation — clear all loose items from vicinity.

INITIAL SETTING

When received the torque output of the tool will require setting to match the job requirement.

It is recommended that a trialing tightening operation is carried out to determine the amount of adjustment required. The ideal instrument for checking the torque is an electronic torque meter, request information from Desoutter; failing this a dial indicating torque wrench is adequate.

Clutch Adjustment

Rotate the spring ring (4) to uncover access hole in clutch case (3); insert clutch key, supplied with tool, and rotate to obtain the required torque.

SERVICING REQUIREMENTS

General Notes

Replace as necessary all ‘O’ rings, gaskets, bearings and rotor blades.

Use the following lubricants:

- Oil — ISO Viscosity Classified — ISO VG 15, for motor.
- Grease — BP FG08 EP, for motor bearings.
- Grease — Duckhams Type G5618, for gears and other bearings.
- Silicone Grease — Molykote 33, for ‘O’ rings.

ATTENTION:

The rotor blades in this tool have a PTFE content. The normal Health and Safety recommendations concerning PTFE must be observed when handling these rotor blades.

1) Do not smoke.

2) Motor components must be washed with cleaning fluid and not blown clear with an air line.

3) Sintered silencers must be replaced when dirty, do not clean and re-use.

4) Wash hands before commencing any other activity.

Bearings that have a retainer holding the balls in place must be assembled into the tool with the blank face of the retainer to the air flow; in the case of the motor the blank faces must face each other across the rotor.

The threads in this tool are left hand with the exception of the air inlet adaptor.

Customers wishing to service the clutch (19) should request a separate service sheet from Desoutter.

TO DISMANTLE

Clamp tool in Vice using Flats on Control top. Unscrew Clutch Housing (5) and remove clutch (19) and output Drive (11).

Remove Circlip (20) and spacer (22) from final Planet Cage (29) and insert tool into Gear and Nose (21). Then loosen.

Remove tool from Vice then holding the tool unscrew the Control Top (74) and remove Motor (53) and planet cage complete (39).

Passing through the motor and gearbox are push-rods, these should now be inspected for straightness and stored for future assembly.

The remainder of the dismantling follows normal engineering practice with reference to the illustration.

TO ASSEMBLE

Assembly Notes:

1) When locating the motor complete (53) in the control top complete (74), the pin projecting out of rear bearing housing complete (50) must enter the location hole in the control top.

2) It is important that spacer (69) is located the correct way round: concave side to the rear of the tool.

3) The push-rod and ball assembly (65) is the point of adjustment for the push-rods (41 & 55). To check for correct assembly of the push-rods, see final Assembly Notes.

Sub Assemblies

Using the illustration as a guide, assemble control and planet cages. The push-rods (41 & 55) must be positioned while there is free access for them.

The following instructions for the motor complete (53) must be followed.
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D Series
Reversible Torque Control
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<tbody>
<tr>
<td>2D89-AX-450</td>
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<td>1339764</td>
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Item 74 comprises items 57 to 73
Take the rotor (48) and place the rear bearing plate (46) with grooves to rotor, into position. Press bearing (49) onto the rotor so that there is a 0.038mm (0.0015in) gap between the rotor and the rear bearing plate. Holding the rotor and rear bearing plate assembly with the gear end of the rotor uppermost, slide the cylinder (47) over the rotor.

Locate the rotor blades (49) into their slots in the rotor and lubricate. Place the front bearing plate (46) into position, with grooves to rotor. Press the front bearing (43) onto the rotor until all the free axial movement between the front and rear bearings is removed.

Place the front bearing housing (44) over its bearing making sure that the location pin and hole are aligned.

Locate the rear bearing housing (50) with cap (52) and check that the rotor is free to rotate.

Final Assembly

Place control top in vice using flats as in dismantling, then place gasket (54) in position so that the pin location hole is clear. Remove the rear bearing housing (50) from the motor complete (63) and locate in the control top, load the rest of the motor into position then slide the motor case (40) over the motor and screw fully into the control top. Slide the planet cage assemblies into the motor case checking that each assembly is located the unit is free to rotate, check that push-rods (41 & 55) are fitted and operate without binding.

Now tighten the nose to 40N/m (29.5 lbs.ft) and replace spacer and circlip.

NOTE:

Now check setting dimension of push rod (41). This is done by measuring the distance from circlip (20) to tip of Push Rod (41) with ball held on its seat. The dimension should be 31.5-32mm — (860, 1,000, 1,500, 2,200, rpm) 43.5-44mm — (450 rpm). To adjust remove air inlet (73) and adjust position of ball on the rod bearing in mind the pitch is 0.35mm. Then rebuild front end of tool.

The tool should be connected to the air supply and tested for correct operation.

If the tool is to be used on a dry airline installation it should be run for a few minutes to clear any oil, used in assembly, from the motor.

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**Desoutter Limited, 319 Edgeware Road, Colindale, London NW9 6ND. Telephone: 01-205 7050 Telex: 21392 Fax: 01-205 5167**

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REQUIREMENTS

Air Supply
A water free and filtered air supply is required at a pressure of 6 bar (87 lbf/in²), with a flow of 8.4 l/s (18 scfm); controlled by a pressure regulator selected from the Desoutter Air Line Service Equipment Catalogue.

Lubrication
This is a DRYLINE tool designed to operate on a totally dry airline i.e., one without any oil or water moisture. The speed of the tool when operated dry will be found to be 10% lower than that stated on the tool nameplate; this will not alter the overall performance.

DRYLINE tools can also operate on a lubricated or partly lubricated airline thus allowing easy tool interchangeability with existing installations. If lubrication is required an airline lubricator should be fitted down stream of the filter.

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Accessories
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The retention of these items is by spring loaded ball, which requires a sharp pull to release for the 5/16 in bit holder, or by pulling the sleeve forward to release for the 1/4 in bit holder.

OPERATING
With the correct accessory fitted connect the tool to the air supply. Grip the tool around the motor case and press the tool onto the fixing that is to be tightened; the motor will start and tighten the fixing to the required torque, set by adjusting the tension on the clutch spring, at this point the internal drive is disengaged and the air to the motor cut off.

To engage reverse rotation press the reverse button and rotate it to lock in position.

NOTE: With the same clutch setting a higher torque is always transmitted in reverse, ensuring a speedy fastener removal.

WARNING
1) Always disconnect tool from the power supply before attempting any replacement, adjustment, servicing or dismantling.

2) Ensure that no loose articles of clothing or cleaning material can be caught by the rotating parts of the tool.

3) Always allow the tool to stop before removing work or resting tool.

4) Ensure that work piece is securely clamped before commencement of operation — clear all loose items from vicinity.

INITIAL SETTING
When received the torque output of the tool will require setting to match the job requirement.

It is recommended that a trial tightening operation is carried out to determine the amount of adjustment required. The ideal instrument for checking the torque is an electronic torque meter, request information from Desoutter; failing this a dial indicating torque wrench is adequate.

Clutch Adjustment
Rotate the spring ring (4) to uncover access hole in clutch case (3); insert clutch key, supplied with tool, and rotate to obtain the required torque.

SERVICING REQUIREMENTS

General Notes
Replace as necessary all ‘O’ rings, gaskets, bearings and rotor blades.

Use the following lubricants:
Oil — ISO Viscosity Classified — ISO VG 15, for motor.
Grease — BP FG00-EP, for motor bearings.
Grease — Duckham’s Type Q5618, for gears and other bearings.
Silicone Grease — Molykote 33, for ‘O’ rings.

ATTENTION:
The rotor blades in this tool have a PTFE content. The normal Health and Safety recommendations concerning PTFE must be observed when handling these rotor blades.

1. Do not smoke.
2. Motor components must be washed with cleaning fluid and not blown clear with an air line.
3. Sintered silencers must be replaced when dirty, do not clean and re-use.

4. Wash hands before commencing any other activity.

Bearings that have a retainer holding the balls in place must be assembled into the tool with the blank face of the retainer to the air flow; in the case of the motor the blank faces must face each other across the rotor.

The threads in this tool are left hand with the exception of the air inlet adaptor.

Customers wishing to service the clutch (19) should request a separate service sheet from Desoutters.

TO DISMANTLE
Clamp tool in Vice using Flats on Control top. Unscrew Clutch Housing (5) and remove clutch (19) and output Drive (11).
Remove Circlip (20) and spacer (22) from final Planet Cage (29) and insert tool into Gear and Nose (21). Then loosen.
Remove tool from Vice then holding the tool unscrew the Control Top (74) and remove Motor (53) and planet cage complete (39).
Passing through the motor and gearbox are push-rods, these should now be inspected for straightness and stored for future assembly.

The remainder of the dismantling follows normal engineering practice with reference to the illustration.

TO ASSEMBLE

Assembly Notes:

1) When locating the motor complete (53) in the control top complete (74), the pin projecting out of rear bearing housing complete (50) must enter the location hole in the control top.

2) It is important that spacer (69) is located the correct way round: concave side to the rear of the tool.

3) The push-rod and ball assembly (66) is the point of adjustment for the push-rod (41 & 55). To check for correct assembly of the push-rods, see final Assembly Notes.

Sub Assemblies
Using the illustration as a guide, assemble control and planet cages. The push-rods (41 & 55) must be positioned while there is free access for them.

The following instructions for the motor complete (53) must be followed.