

# **Repair Instructions**

## **DT 740 Series**



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# Chapter

# 1

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## DT 740 Series Diagram

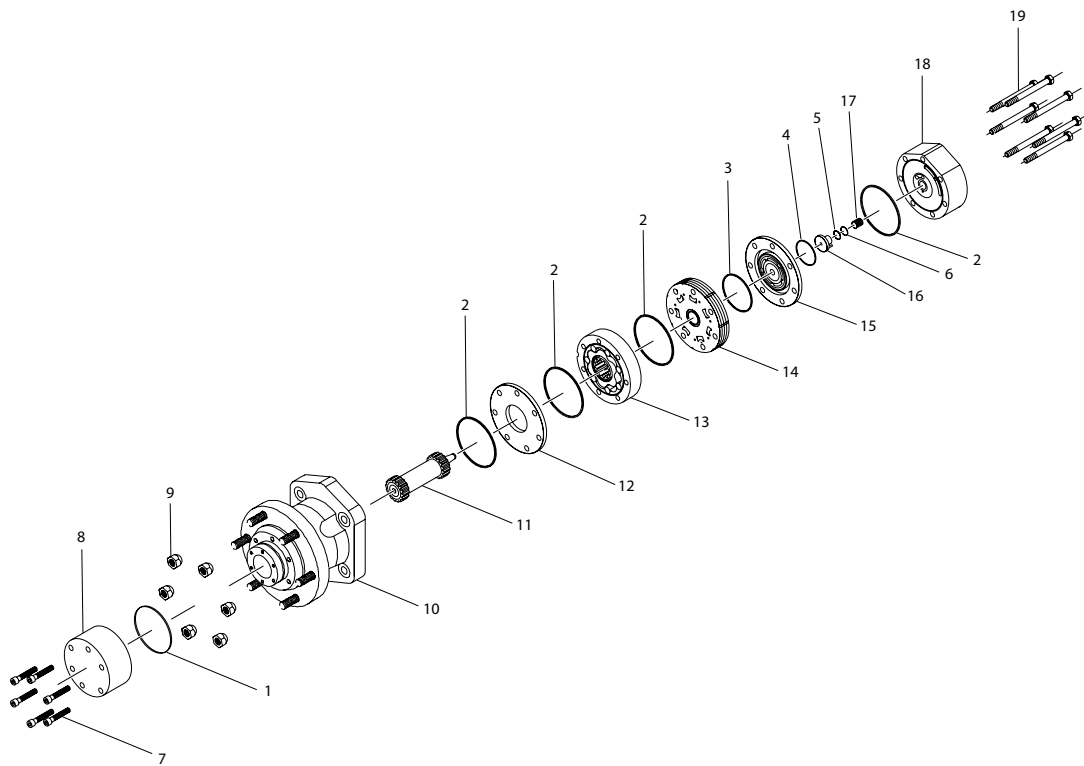
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### Topics:

- [DT 740 Exploded View](#)

## DT 740 Exploded View

### Exploded View



### Components List

Description	Item Number
Cap seal	1
Body seal	2
Manifold seal	3
Commutator seal	4
O-ring seal	5
Backup seal	6
Capscrew	7
Flange cap	8
Lug nut	9
Housing/Hub assembly	10
Drive link	11
Divider plate	12
Rotor assembly	13
Manifold	14

<b>Description</b>	<b>Item Number</b>
Commutator assembly	15
Endcover piston	16
Piston spring	17
Endcover	18
Assembly bolt	19





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# Chapter

# 2

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## DT 740 Series Service Instructions

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### Topics:

- [DT 740 Motor Section Disassembly & Assembly](#)

dimensions: mm [in]

**Note:** Housing and body seals on products manufactured after July 1, 2016 are o-ring seals. Prior to this date the these seals were square cut seals. It is recommended that if the product being serviced has square seals to replace with the square seals in this kit, likewise if the product has o-ring seals, replace with the o-ring seals in this kit.

The special tools and fixtures required, the housing/hub assembly is not field serviceable. For repair work, the housing/hub assembly must be returned to the factory. For breakdown situations requiring immediate repairs, new housing/hub assemblies are available for immediate shipment.

## DT 740 Motor Section Disassembly & Assembly

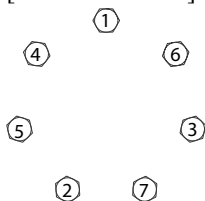
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1. To aid in reassembly of the motor, make a “V” shaped set of lines from the endcover (18) to the housing/hub (10) using either paint or a marker. With housing/hub (10) facing down, secure motor in vise.
2. Loosen and remove seven bolts (19) holding motor assembly together.
  - a) Remove endcover (18) carefully as piston (16) and spring (17) may fall out.
  - b) If piston does not come out, carefully pry piston (16) out of endcover (18) and lay aside.
  - c) Remove O-ring seal (5) and backup seal (6) from endcover and discard seals.
  - d) Remove spring (17) and lay aside.
3. Lift commutator container and commutator (15) from motor and lay aside.
  - a) Place commutator on a flat, clean surface with the seal (4) facing up.
  - b) Place the tip of a small screwdriver on the seal (4) and gently tap until opposite side of seal lifts from groove.
  - c) Remove seal (4) and discard.
4. Remove manifold (14), rotor assembly (13) and divider plate (12).
  - a) Remove all seals (2 & 3) from components and discard.



**Caution:** Do not allow rolls to drop from rotor assembly (13) when removing rotor assembly from motor

- b) Remove drive link (11) from motor and lay aside.
- Note:** At this point, all parts should be cleaned in an oil-based solvent and dried using compressed air (For safety, observe all OSHA safety guidelines). All new seals should be lightly coated in clean oil prior to installation.
5. Install drive link (11) into end of shaft with tapered end facing up.
    - a) Place rear housing seal (2) in groove in housing/hub (10).
    - b) Place body seals (2) in grooves in both sides of rotor assembly (13).
    - c) Place rotor assembly (13) onto housing/hub (10) with side of rotor assembly with chamfer in splines facing housing (10).
    - d) Place manifold (14) over rotor assembly (13) with seal groove side up.
    - e) Install manifold seal (3).
  6. Install the commutator seal (4) into the commutator (15) with the metal side facing up.
    - a) Use finger pressure to press the seal down flush with the surface of the commutator.
    - b) Place the commutator container onto the manifold (14) and then place the commutator onto the protruding end of the drive link (11) making sure that the seal side faces up.
  7. Install the remaining body seal (2) in the groove in the face of the endcover (18).
    - a) Install piston spring (17) into endcover (18), then the white backup seal (6) followed by the O-ring seal (5).
    - b) Lining up the alignment pin on the piston (16) with the hole in the endcover (18), press piston (16) into the endcover (18).
    - c) While holding the piston (16) in the endcover, lower the endcover assembly onto the commutator assembly (15).
    - d) Check to make sure that the endcover ports are in their original position.
  8. Install the seven assembly bolts (19) and pre-torque to 13.6 Nm [10 ft. lb.]. Final torque all bolts to 69.8 ± 7.5 Nm [51.5 ± 5.5 ft. lb.] using the bolt torque sequence shown in *Figure 1: Figure 1* on page 10.



**Figure 1: Figure 1**

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# Chapter

# 3

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## DT 740 Series Parts Listing

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### Topics:

- [DT 740 Replacement Kits](#)

## DT 740 Replacement Kits

### Available Kits

Note: Refer to the [Exploded View](#) on page 6 for item numbers.

**Table 1: Seal kits**

Description	Exploded View Item Number	Qty. In Kit	Order Number
Cap seal	1	1	700666300(Includes item numbers 1-6)
Body seal	2	4	
Manifold seal	3	1	
Commutator seal	4	1	
O-ring seal	5	1	
Backup seal	6	1	

**Table 2: Miscellaneous kits**

Description	Exploded View Item Number	Order Number
Capscrew	7	700018123
Flange cap	8	700018122
Lug nut	9	500018151
Divider plate	12	700012000
Manifold	14	700668002
Commutator Assembly	15	700668003
Endcover piston	16	700668004
Piston spring	17	700018046
1000 psi relief valve	Not shown	500018228
2000 psi relief valve	Not shown	500018231
3000 psi relief valve	Not shown	500018221

### Rotors, drive links, and bolts

When changing motor displacements, a matching rotor, drive link, and bolt set kit must be ordered.

Exploded View Item Number	13	13	11	20
Displacement	Standard Rotor Kit	Freeturn Rotor Kit	Drive link Kit	Bolt Set Kit
300	700662019	700662019F	700140019	700665019
375	700662025	700662025F	700140025	700665025
470	700662028	700662028F	700140028	700665028

Exploded View Item Number	13	13	11	20
Displacement	Standard Rotor Kit	Freeturn Rotor Kit	Drive link Kit	Bolt Set Kit
540	700662033	700662033F	700140033	700665033
750	700662046	700662046F	700140046	700665046
930	700662056	-	700140056	700665056
1K1	700662066	700662066F	700140066	700665066
1K5	700662091	-	700140091	700665091
2K1	700662099	-	700140099	700665099

### Housing/Hub assembly kits

Exploded view item #10

**Note:** Because of the special tools and fixtures required, the housing/hub assembly is not field serviceable. For repair work, the housing/hub assembly must be returned to the factory. For breakdown situations requiring immediate repairs, new housing/hub assemblies are available for immediate shipment.

Description	Order Number
#W2 & W8- Housing / Hub assembly - 6.00 Dia. B.C.	700134140

### Endcover kits

Exploded view item #18

Endcover kits come assembled with exploded view item numbers 5, 6, 16, & 17. To order a relief valve for the valve cavity endcovers, see the [Table 2: Miscellaneous kits](#) on page 12 listing for relief valve kit numbers.

Description	Standard Endcover Kit	Valve Cavity Endcover	Internal Drain Endcover Kit	Valve Cavity & Internal Drain Endcover Kit
#1- 7/8" O-ring rear ports	700160000	700160000R	700160000D	700160000DR
#5- 1-1/16" O-ring radial ports	700160005	700160005R	700160005D	700160005DR
#2- 3/4" BSP.F Radial ports	700160007	700160007R	700160007D	700160007DR
#6- 1-1/16" O-ring parallel ports	700160008	700160008R	-	-
#7- 3/4" BSP.F Parallel ports	700160009	-	-	-

