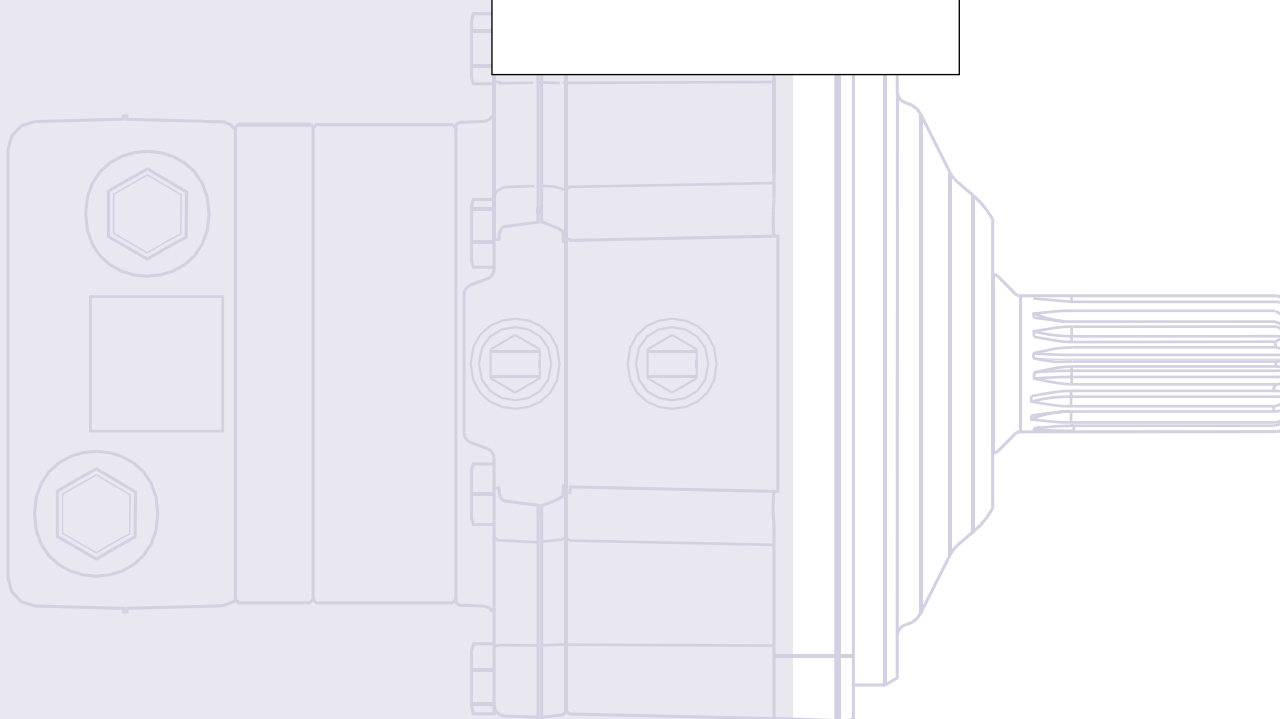
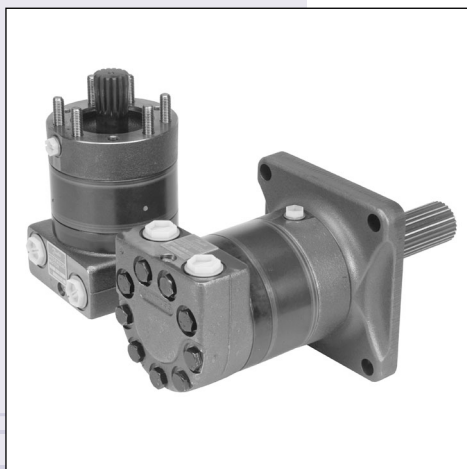




TMT
Orbital motor

Service and Parts
Manual



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SPECIAL VERSIONS

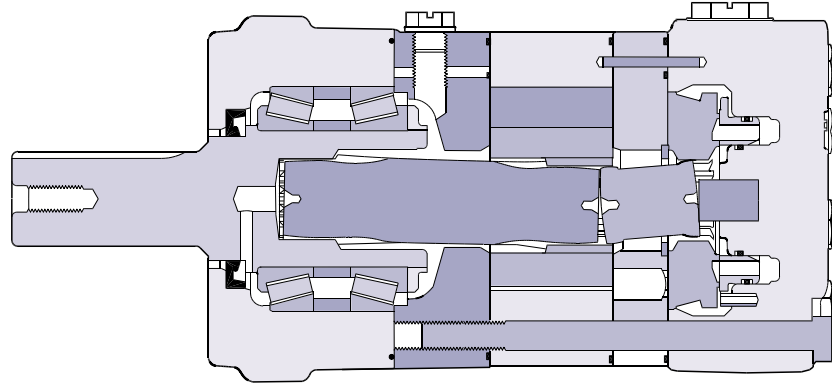
The list of spare parts cannot be used when ordering parts for special TMT versions. In this respect, please contact the sales organisation for Sauer-Danfoss Hydraulics.

COST-FREE REPAIRS

We would point out that cost-free repairs as mentioned in Sauer-Danfoss General Conditions of Sale, are carried out only at Sauer-Danfoss Nordborg or at service shops authorised by Sauer-Danfoss.

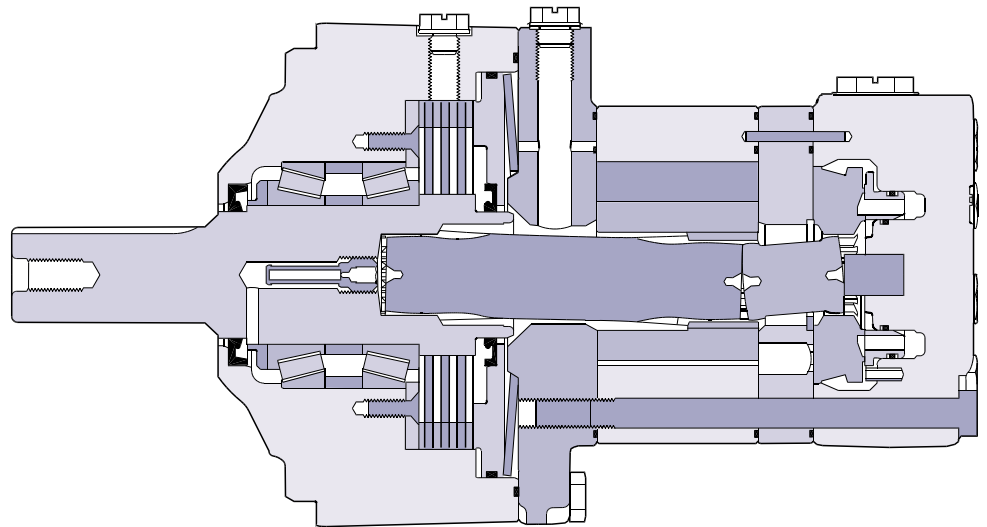
**TMT MOTOR AND
TMT FL MOTOR
WITH BRAKE**

TMT motor



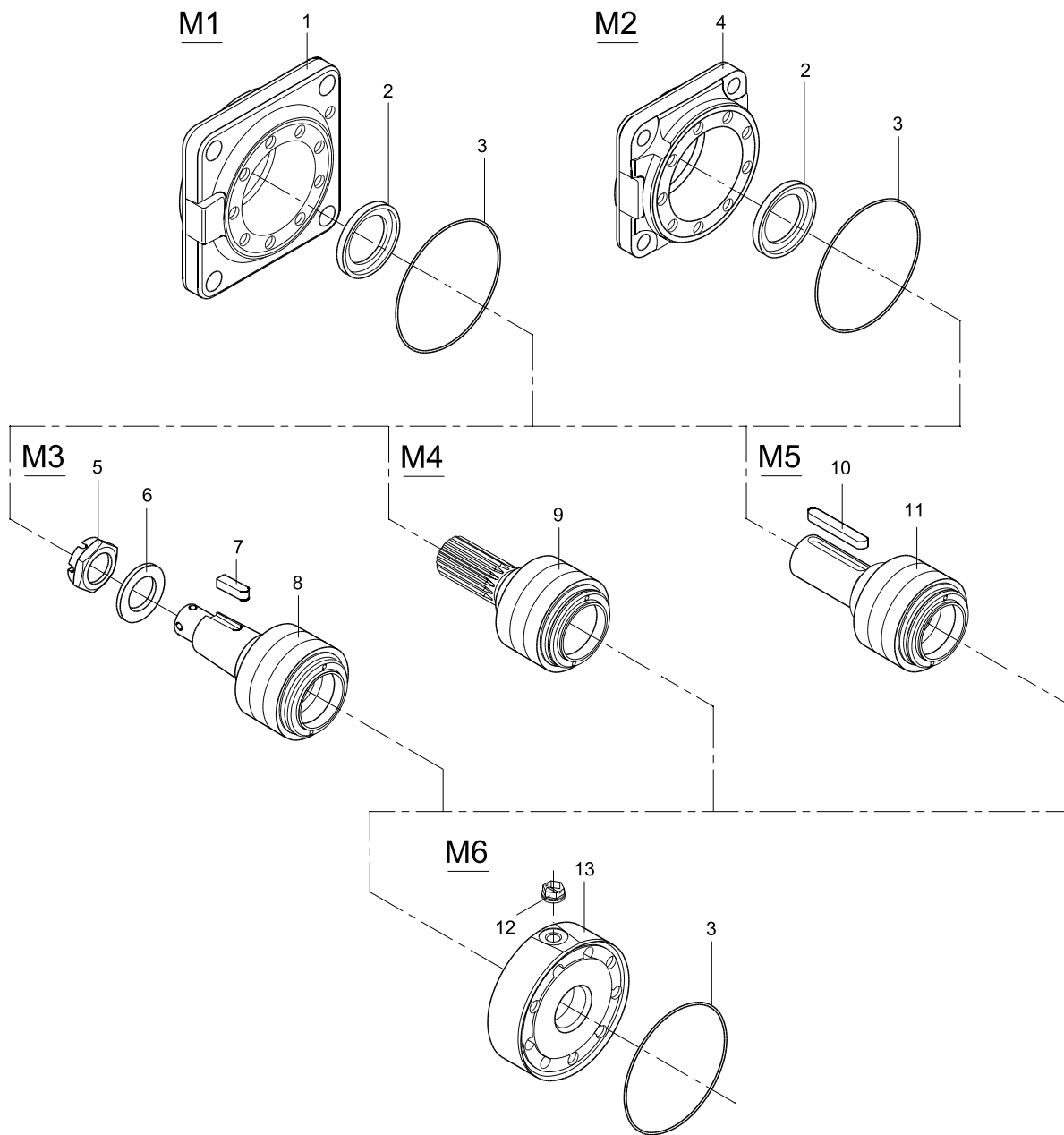
151-1943.10

TMT FL motor with brake



151-1942.10

TMT



A151Z01.10.10

Mounting flange module

	Item	Spare parts (metric version)	Code No.
M 1	1	Mounting flange with pilot Ø160 mm and BC Ø200 mm	151Z2001
	1	Shaft seal 50×72×8 mm [iu]	
	1	O-ring 125×2 mm	

	Item	Spare parts (metric version)	Code No.
M 2	4	Mounting flange with pilot Ø125 mm and BC Ø160 mm	151Z2002
	1	Shaft seal 50×72×8 mm	
	1	O-ring 125×2 mm	

Mounting flange module

	Item	Spare parts (SAE version)	Code No.
M 2	4	Mounting flange module with pilot Ø5 in and BC Ø6.374 in	151Z2015
	1	Shaft seal 1.97×2.83×9,31 in	
	1	O-ring 4.91×008 in	

Shaft module

	Item	Spare parts (metric version)	Code No.
M 3	8	Tapered shaft Ø45 mm 1 : 10 incl. bear	151Z2005
	5	Nut M 30×2 mm	
	7	Parallel key 28×12×8 mm	
	6	Washer 56×31×4 mm	

	Item	Spare parts (metric version)	Code No.
M 4	9	Splined shaft 1.5" incl. bearings	151Z2037

	Item	Spare parts (metric version)	Code No.
M 5	11	Cylindrical shaft Ø40 mm incl. bearings	151Z2017
	10	Parallel key 70×12×8 mm	

Shaft module

	Item	Spare parts (SAE version)	Code No.
M 3	8	Tapered shaft 1 3/4" 1 : 8 incl. bearings	151Z2028
	5	Nut 1 1/4 UN	
	7	Parallel key 1/16×7/16×1 1/4	
		Washer is not included in the module	

	Item	Spare parts (SAE version)	Code No.
M 4	9	Splined shaft 1.5" incl. bearings	151Z2006

	Item	Spare parts (SAE version)	Code No.
M 5	11	Cylindrical shaft Ø1.5" incl. bearings	151Z2029
	10	Parallel key 3/8×3/8×2 1/4	

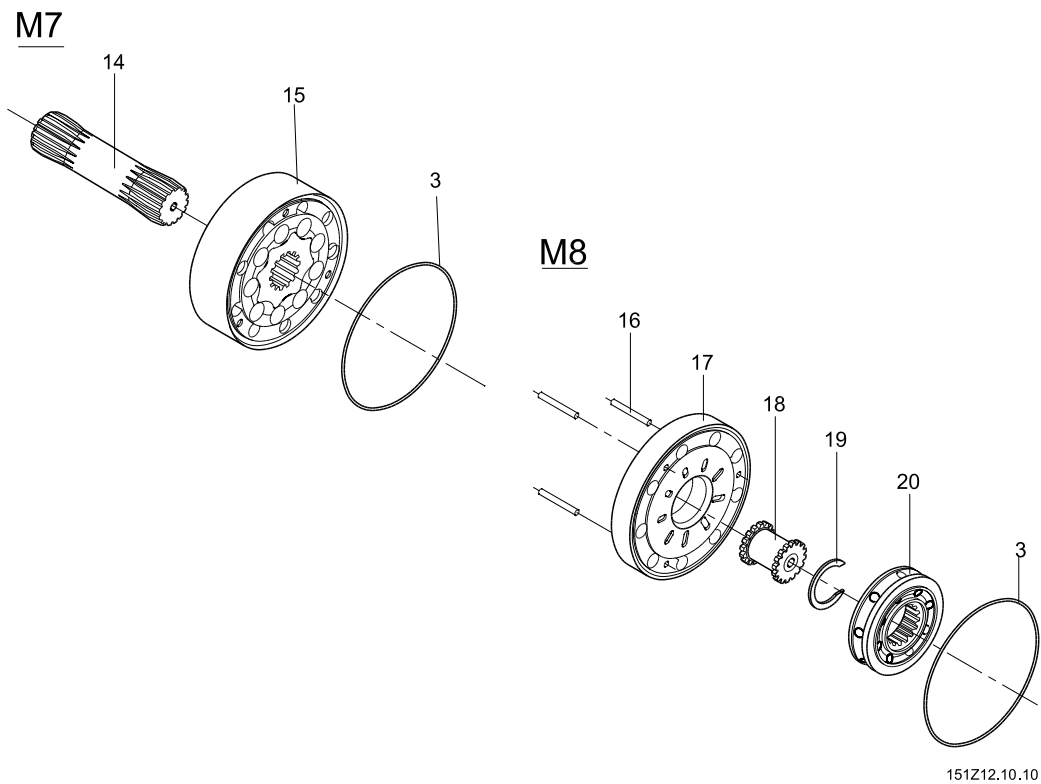
Mounting flange module

	Item	Spare parts (metric version)	Code No.
M 6	13	Motor flange with drain port G 1/4"	151Z2058
	12	Drain plug (plastic) G = 1/4"	
	1	O-ring 125×2 mm	

Mounting flange module

	Item	Spare parts (SAE version)	Code No.
M 6	13	Motor flange with drainport SAE 9/16-18 UNF	151Z2000
	12	Drain plug (plastic) SAE 9/16 - 18 UNF	
	1	O-ring 4.91×0.08 in	

TMT



Gear wheel set module

	Item	Spare parts (metric version)	Code No.
M7	14	Cardan shaft TMT 250 L = 109 mm	151Z2100
	15	Gearwheel set TMT 250 B = 31.2 mm	
	1,2	O-ring 125x2 mm	

	Item	Spare parts (metric version)	Code No.
M7	14	Cardan shaft TMT 315 L = 118.2 mm	151Z2101
	15	Gearwheel set TMT 315 B = 40.5 mm	
	1,2	O-ring 125x2 mm	

	Item	Spare parts (metric version)	Code No.
M7	14	Cardan shaft TMT 400 L = 128.7 mm	151Z2102
	15	Gearwheel set TMT 400 B = 51.0 mm	
	1,2	O-ring 125x2 mm	

	Item	Spare parts (metric version)	Code No.
M7	14	Cardan shaft TMT 470 L = 136,5 mm	151Z2103
	15	Gearwheel set TMT 470 B = 59,3 mm	
	1,2	O-ring 125x2 mm	

	Item	Spare parts (metric version)	Code No.
M7	14	Cardan shaft TMT 500 L = 142.7 mm	151Z2104
	15	Gear wheel set TMT 500 B = 65 mm	
	1,2	O-ring 125x2 mm	

	Item	Spare parts (metric version)	Code No.
M7	14	Cardan shaft TMT 630 L = 142,7 mm	151Z2105
	15	Gear wheel set TMT 630 B = 65 mm	
	1,2	O-ring 25x2 mm	

Standard valve module

	Item	Spare parts (metric version)	Code No.
M8	16	Guide pins $\varnothing 4 \times 40$ mm 3 pcs	151Z2053
	17	Channel plate	
	18	Valve drive	
	19	Stop ring	
	20	Disc valve	
	1,2	O-ring 125x2 mm	

Gear wheel set module

	Item	Spare parts (SAE version)	Code No.
M7	14	Cardan shaft TMT 250 L = 4.29 in	151Z2100
	15	Gear wheel set TMT 250 B = 1.23 in	
	1,2	O-ring 4.92x0.08 in	

	Item	Spare parts (SAE version)	Code No.
M7	14	Cardan shaft TMT 315 L = 4.65 in	151Z2101
	15	Gear wheel set TMT 315 B = 1.59 in	
	1,2	O-ring 4.92x0.08 in	

	Item	Spare parts (SAE version)	Code No.
M7	14	Cardan shaft TMT 400 L = 5.07 in	151Z2102
	15	Gear wheel set TMT 400 B = 2.01 in	
	1,2	O-ring 4.92x0.08 in	

	Item	Spare parts (SAE version)	Code No.
M7	14	Cardan shaft TMT 470 L = 5.37 in	151Z2103
	15	Gear wheel set TMT 470 B = 2.33 in	
	1,2	O-ring 4.92x0.08 in	

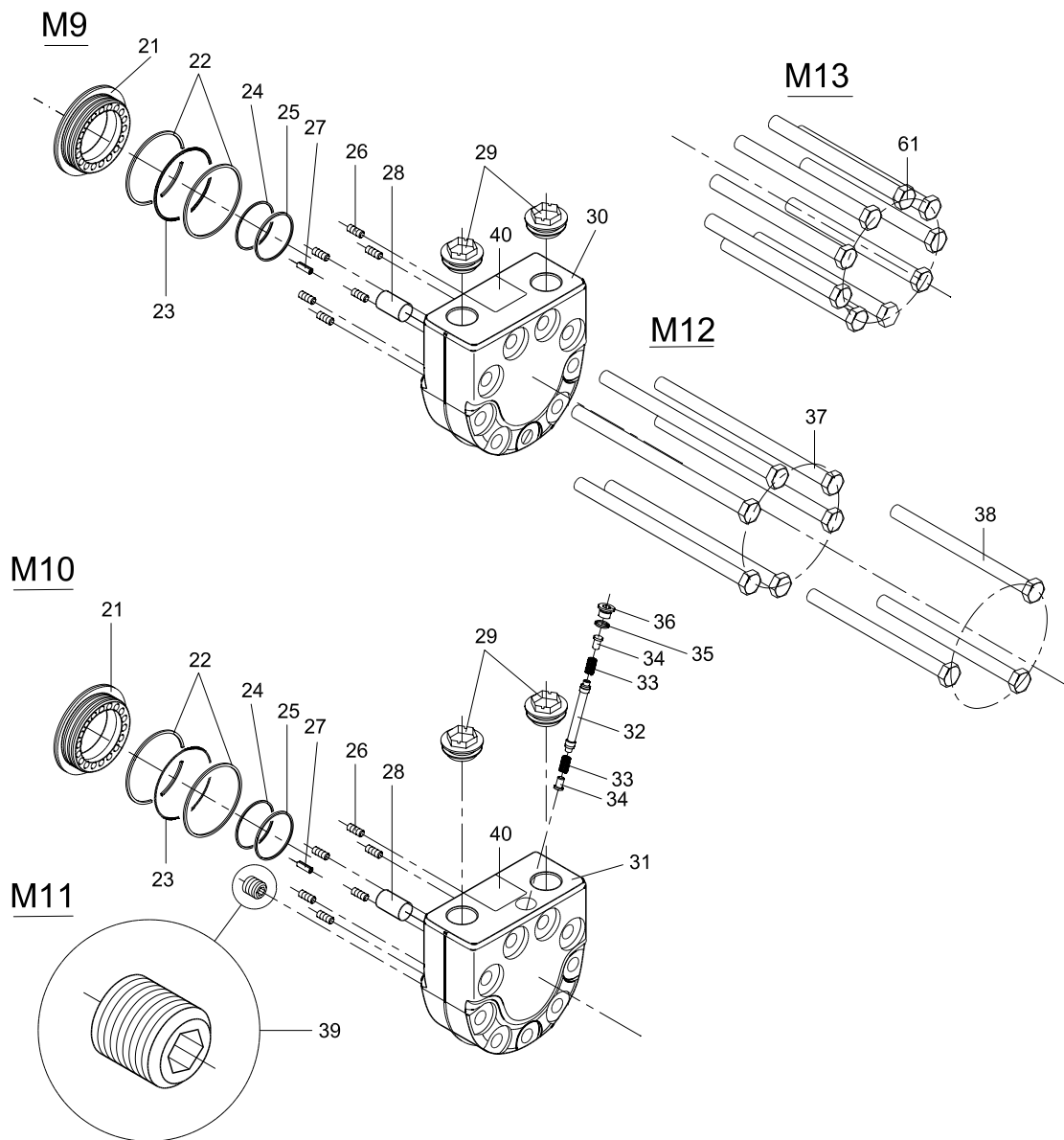
	Item	Spare parts (SAE version)	Code No.
M7	14	Cardan shaft TMT 500 L = 5.62 in	151Z2104
	15	Gear wheel set TMT 500 B = 2.56 in	
	1,2	O-ring 4.92x0.08 in	

	Item	Spare parts (SAE version)	Code No.
M7	14	Cardan shaft TMT 630 L = 5.62 in	151Z2105
	15	Gear wheel set TMT 630 B = 2.56 in	
	1,2	O-ring 4.92x0.08 in	

Standard valve module

	Item	Spare parts (SAE version)	Code No.
M8	16	Guide pins $\varnothing 0.16 \times 1.57$ in 3 pcs	151Z2053
	17	Channel plate	
	18	Valve drive	
	19	Stop ring	
	20	Disc valve	
	1,2	O-ring 4.92x0.08 in	

TMT



151Z13.10.10

End cover module

	Item	Spare parts (metric version)	Code No.
M9	30	End cover with port connection G 3/4"	151Z2041
	21	Balance plate	
	1,2	Back-up ring, 66.6×1mm 2 pcs.	
	1,2	O-ring 63×2 mm	
	1,2	Back-up ring 44.1×1mm	
	1,2	O-ring 40×2 mm	
	26	Spring 18×3.6 mm 6 pcs.	
	27	Guide pin 14×5 mm	
	28	Spacer	
	29	Main port plug (plastic) 3/4" 2 pcs.	
	40	Name plate	

End cover module

	Item	Spare parts (SAE version)	Code No.
M9	30	End cover with port connection 1 1/16-12 UN	151Z2040
	21	Balance plate	
	1,2	Back-up ring, 2.62×0.04 in 2 pcs.	
	1,2	O-ring 2.48×0.08 in	
	1,2	Back-up ring 1.74×0.04 in	
	1,2	O-ring 1.57×0.08 in	
	26	Spring 0.70×0.14 in 6 pcs.	
	27	Guide pin 0.55×0.20 in	
	28	Spacer	
	29	Main port plug (plastic) 1 1/16-12 UN 2 pcs.	
	40	Name plate	

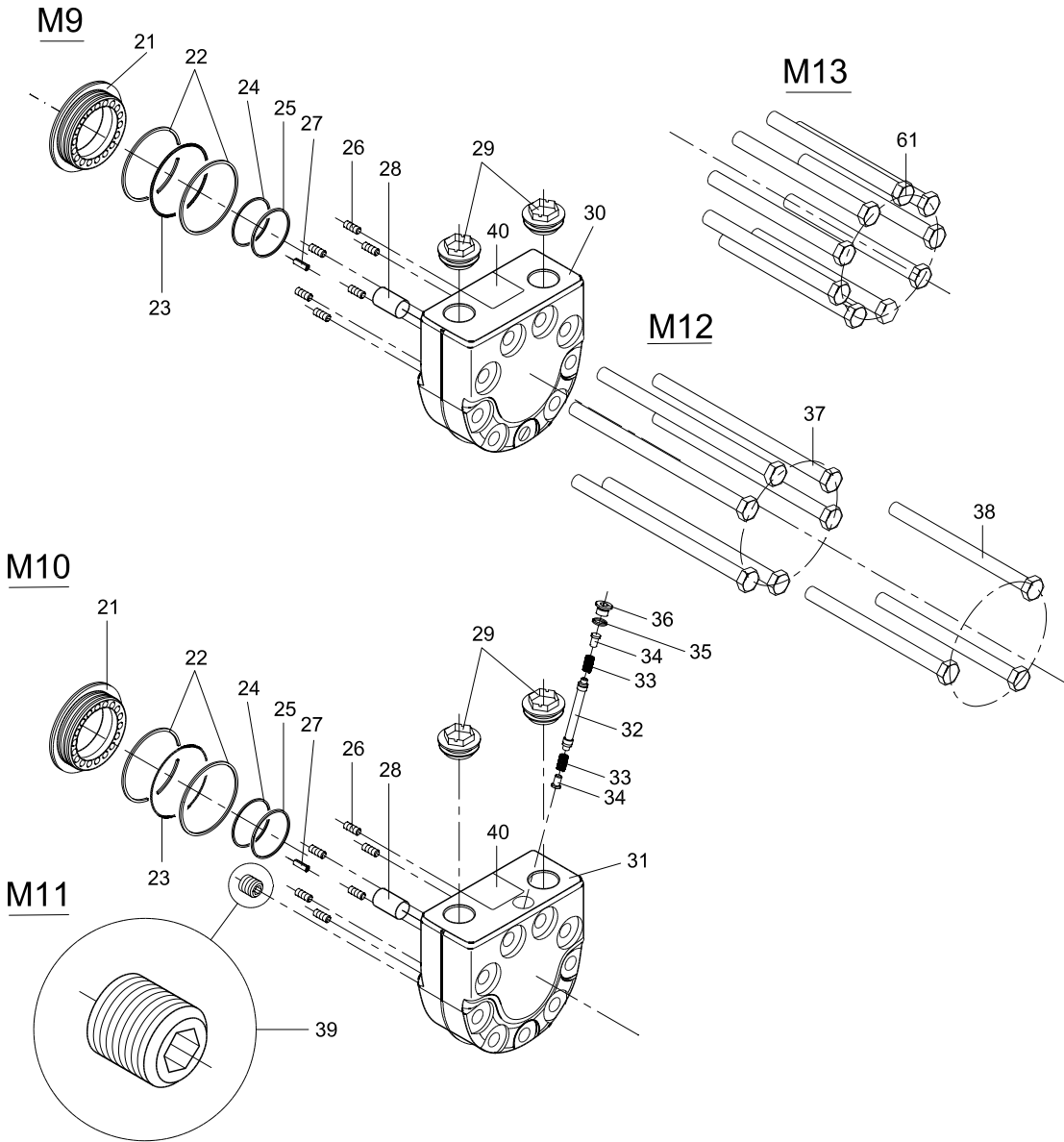
End cover module with flushing valve

	Item	Spare parts (metric version)	Code No.
M10	31	End cover with flushing valve and port connection G 3/4"	151Z2045
	21	Balance plate	
	1,2	Back-up ring, 66.6×1mm 2 pcs.	
	1,2	O-ring 63×2 mm	
	1,2	Back-up ring 44.1×1mm	
	1,2	O-ring 40×2 mm	
	26	Spring 18×3.6 mm 6 pcs.	
	27	Guide pin 14×5 mm	
	28	Spacer	
	29	Main port plug (plastic) 3/4" 2 pcs.	
	32	Flushing valve	
	33	Spring 21×5.9 mm 2 pcs.	
	34	Stop 2 pcs.	
	1,2	O-ring 9×1.5 mm	
	36	Plug 1/8"	
	40	Name plate	

End cover module with flushing valve

	Item	Spare parts (SAE version)	Code No.
M10	31	End cover with flushing valve and port connection 1 1/16-12 UN	151Z2044
	21	Balance plate	
	1,2	Back-up ring, 2.62×0.04 in 2 pcs.	
	1,2	O-ring 2.48×0.08 in	
	1,2	Back-up ring 1.74×0.04 in	
	1,2	O-ring 1.57×0.08 in	
	26	Spring 0.70×0.14 in 6 pcs.	
	27	Guide pin 0.55×0.20 in	
	28	Spacer	
	29	Main port plug (plastic) 1 1/16-12 UN 2 pcs.	
	32	Flushing valve	
	33	Spring 0.83×0.23 in 2 pcs.	
	34	Stop 2 pcs.	
	1,2	O-ring 0.35×0.06 in	
	36	Plug 1/8"	
	40	Name plate	

TMT



151Z13.10.10

Flow restriction module

	Item	Spare parts (metric version)	Code No.
M11	39	Orifice M6 0.6	151Z2106
	39	Orifice M6 0.7	151Z2107
	39	Orifice M6 0.8	151Z2108
	39	Orifice M6 0.9	151Z2109
	39	Orifice M6 1.0	151Z2110
	39	Orifice M6 1.1	151Z2111
	39	Orifice M6 1.2	151Z2112
	39	Orifice M6 1.3	151Z2113
	39	Orifice M6 1.4	151Z2114
	39	Orifice M6 1.5	151Z2115
	39	Orifice M6 1.6	151Z2116
	39	Orifice M6 1.7	151Z2117
	39	Orifice M6 1.8	151Z2118
	39	Orifice M6 1.9	151Z2119
	39	Orifice M6 2.0	151Z2120

Flow restriction module

	Item	Spare parts (SAE version)	Code No.
M11	39	Orifice M6 0.02 in	151Z2106
	39	Orifice M6 0.03 in	151Z2107
	39	Orifice M6 0.03 in	151Z2108
	39	Orifice M6 0.04 in	151Z2109
	39	Orifice M6 0.04 in	151Z2110
	39	Orifice M6 0.04 in	151Z2111
	39	Orifice M6 0.05 in	151Z2112
	39	Orifice M6 0.05 in	151Z2113
	39	Orifice M6 0.06 in	151Z2114
	39	Orifice M6 0.06 in	151Z2115
	39	Orifice M6 0.06 in	151Z2116
	39	Orifice M6 0.07 in	151Z2117
	39	Orifice M6 0.07 in	151Z2118
	39	Orifice M6 0.07 in	151Z2119
	39	Orifice M6 0.08 in	151Z2120

Bolt module, standard motors

	Item	Spare parts (metric version)	Code No.
M12	37	TMT 250 M12×180 6 pcs.	151Z2080
	38	TMT 250 M12×140 3 pcs.	

Bolt module, standard motors

	Item	Spare parts (SAE version)	Code No.
M12	37	TMT 250 M12×7.09 6 pcs.	151Z2080
	38	TMT 250 M12×5.51 3 pcs.	

	Item	Spare parts (metric version)	Code No.
M12	37	TMT 315 M12×190 6 pcs.	151Z2081
	38	TMT 315 M12×150 3 pcs.	

	Item	Spare parts (SAE version)	Code No.
M12	37	TMT 315 M12×7.48 6 pcs.	151Z2081
	38	TMT 315 M12×5.90 3 pcs.	

	Item	Spare parts (metric version)	Code No.
M12	37	TMT 400 M12×200 6 pcs.	151Z2082
	38	TMT 400 M12×160 3 pcs.	

	Item	Spare parts (SAE version)	Code No.
M12	37	TMT 400 M12×7.87 6 pcs.	151Z2082
	38	TMT 400 M12×6.30 3 pcs.	

	Item	Spare parts (metric version)	Code No.
M12	37	TMT 470 M12×200 6 pcs.	151Z2083
	38	TMT 470 M12×160 3 pcs.	

	Item	Spare parts (SAE version)	Code No.
M12	37	TMT 470 M12×7.87 6 pcs.	151Z2083
	38	TMT 470 M12×6.30 3 pcs.	

	Item	Spare parts (metric version)	Code No.
M12	37	TMT 500/630 M12×210 6 pcs.	151Z2084
	38	TMT 500/630 M12×170 3 pcs.	

	Item	Spare parts (SAE version)	Code No.
M12	37	TMT 500/630 M12×8.27 6 pcs.	151Z2084
	38	TMT 500/630 M12×6.69 3 pcs.	

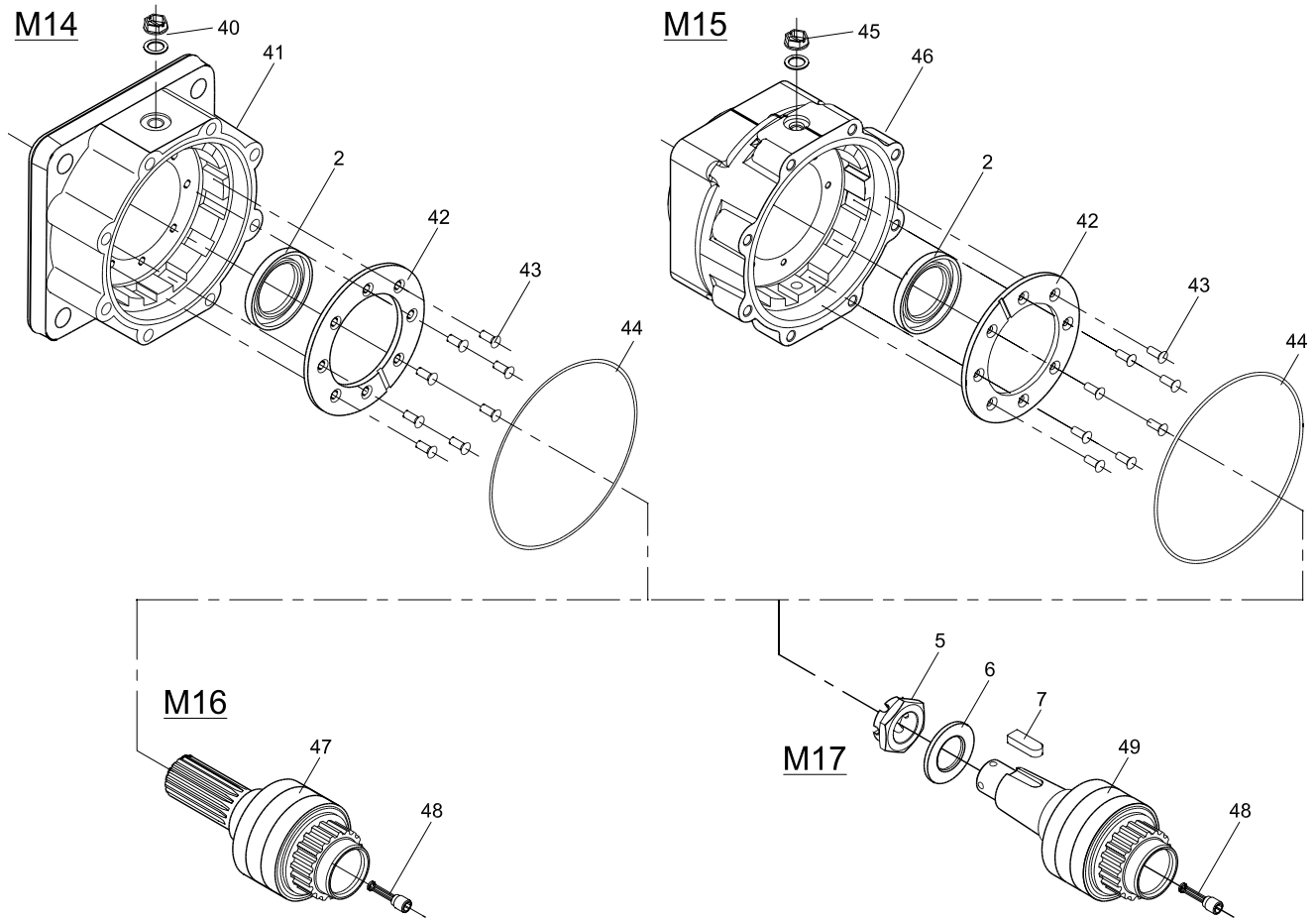
Bolt module, brake motors

	Item	Spare parts (metric version)	Code No.
M13	61	TMT 250 M12×140 9 pcs.	151Z2090
	61	TMT 315 M12×150 9 pcs.	151Z2091
	61	TMT 400 M12×160 9 pcs.	151Z2092
	61	TMT 470 M12×160 9 pcs.	151Z2093
	61	TMT 500 M12×170 9 pcs.	151Z2094
	61	TMT 630 M12×80 9 pcs.	151Z2095

Bolt module, brake motors

	Item	Spare parts (SAE version)	Code No.
M13	61	TMT 250 M12×5.51 9 pcs.	151Z2090
	61	TMT 315 M12×5.90 9 pcs.	151Z2091
	61	TMT 400 M12×6.30 9 pcs.	151Z2092
	61	TMT 470 M12×6.30 9 pcs.	151Z2093
	61	TMT 500 M12×6.70 9 pcs.	151Z2094
	61	TMT 630 M12×3.15 9 pcs.	151Z2095

TMT FL



151Z14.10.10

Mounting flange module

		Item	Spare parts (metric version)	Code No.
M14		41	Mounting flange with spigot diam Ø180 mm and BC Ø224 mm	151Z2026
	²	2	Shaft seal 50×72×8 mm	
		42	Stopping Bearing Brake	
		43	Screw M6×16 8 pcs.	
	²	44	O-ring 171.1×2.6 mm	
		40	Plug G 1/4"	

Mounting flange module

		Item	Spare parts (SAE version)	Code No.
M14		41	Mounting flange with spigot diam Ø7.09 in and BC Ø8.82 in	151Z2021
	²	2	Shaft seal 1.97×2.83×0.31 in	
		42	Stopping Bearing Brake	
		43	Screw M6×0.63 8 pcs.	
	²	44	O-ring 6.74×0.10 in	
		40	Plug 7/16-20 UNF	

		Item	Spare parts (metric version)	Code No.
M15		46	Mounting flange with spigot diam Ø125 mm and BC Ø160 mm	151Z2170
	²	2	Shaft seal 50×72×8 mm	
		42	Stopping Bearing Brake	
		43	Screw M6×16 8 pcs.	
	²	44	O-ring 171.1×2.6 mm	
		45	Plug G 1/4"	

		Item	Spare parts (SAE version)	Code No.
M15		46	Mounting flange with spigot diam Ø5 in and BC Ø6.374 in	151Z2074
	²	2	Shaft seal 1.97×2.83×0.31 in	
		42	Stopping Bearing Brake	
		43	Screw M6×0.63 8 pcs.	
	²	44	O-ring 6.74×0.10 in	
		45	Plug 7/16-20 UNF	

Shaft module

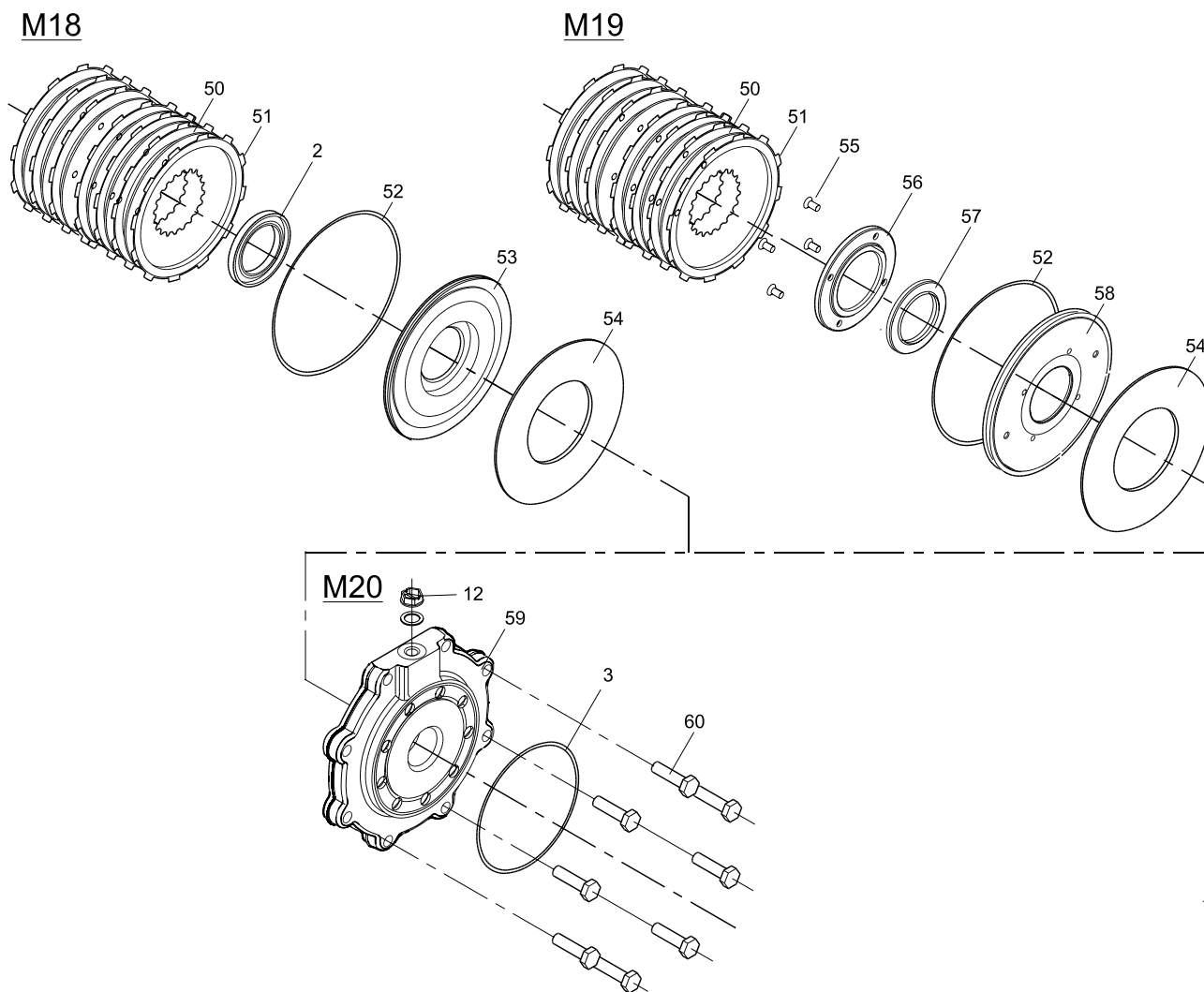
		Item	Spare parts (metric version)	Code No.
M16		47	Splined shaft 1.5" incl. bearing	151Z2020
		48	Brake Orifice-filter	

Shaft module

		Item	Spare parts (SAE version)	Code No.
M16		47	Splined shaft 1.5" incl. bearing	151Z2052
		48	Brake Orifice-filter	

		Item	Spare parts (metric version)	Code No.
M17		49	Tapered shaft Ø 45 mm 1 : 10 incl. bearing	151Z2061
		5	Nut M 30×2 mm	
		7	Parallel key 28×12×8 mm	
		6	Washer 56×31×4 mm	
		48	Brake Orifice-filter	

TMT FL



151Z15.10.10

Brake module standard

		Item	Spare parts (metric version)	Code No.
M18	3	51	Outer disc 7 pcs.	151Z2023
	3	50	Inner disc 6 pcs.	
	2	2	Shaft seal 50×72×8	
	2	52	O-ring 55×3 mm	
		53	Piston	
		54	Disc spring	

Brake module standard

		Item	Spare parts (metric version)	Code No.
M18	3	51	Outer disc 7 pcs.	151Z2023
	3	50	Inner disc 6 pcs.	
	2	2	Shaft seal 1.97×2.83×0.31 in	
	2	52	O-ring 2.17×0.12 in	
		53	Piston	
		54	Disc spring	

Brake module with back pressure

		Item	Spare parts (metric version)	Code No.
M19	3	51	Outer disc 7 pcs.	151Z2068
	3	50	Inner disc 6 pcs.	
	2	52	O-ring 155×3 mm	
		55	Screw M6×12 4 pcs.	
		56	Stopping	
	2	57	Shaft seal 50×72×4.5 mm	
		58	Piston	
		54	Disc spring	

Brake module with back pressure

		Item	Spare parts (SAE version)	Code No.
M19	3	51	Outer disc 7 pcs.	151Z2068
	3	50	Inner disc 6 pcs.	
	2	52	O-ring 6.10×0.12 in	
		55	Screw M6×12 4 pcs.	
		56	Stopping	
	2	57	Shaft seal 1.97×2.83×0.18 in	
		58	Piston	
		54	Disc spring	

Motor flange module

		Item	Spare parts (metric version)	Code No.
M20		59	Motor flange with drain port G 1/4	151Z2050
		12	Drain plug (plastic) G 1/4"	
	2	3	O-ring 125×2 mm	
		60	Screw M10×40 8 pcs.	

Motor flange module

		Item	Spare parts (SAE version)	Code No.
M20		59	Motor flange with drain port SAE 9/16-18 UNF	151Z2022
		12	Drain plug (plastic) SAE 9/16-18 UNF	
	2	3	O-ring 4.92×0.08 in	
		60	Screw M10×40 8 pcs.	

Set of seals and set of brake disc

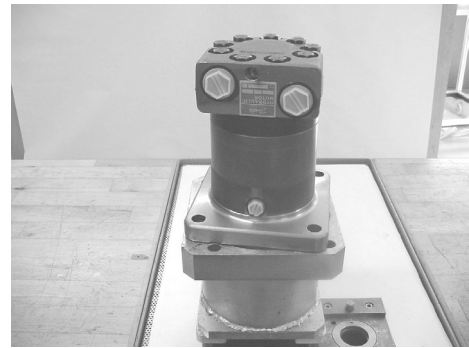
		Code No.
1	Seal set TMT incl. items 2, 3, 22, 23, 24, 25, 35	151B0176
2	Seal set TMT FL incl. items 2, 3, 22, 23, 24, 25, 35, 44, 52, 57	151Z2059
3	Set of brake disc incl. items 50, 51	151Z2069

Set of seals and set of brake disc

		Code No.
1	Seal set TMT incl. items 2, 3, 22, 23, 24, 25, 35	151B0176
2	Seal set TMT FL incl. items 2, 3, 22, 23, 24, 25, 35, 44, 52, 57	151Z2059
3	Set of brake disc incl. items 50, 51	151Z2069

TMT DISASSEMBLY

1. Fix motor in holding tool
SJ 150B9000-2.



2. To ensure correct assembly/location of motor parts, provide identification marks.



3. With an 18 mm key, loosen the nine bolts in end cover.



4. In standard TMT, the bolts have different lengths: three short ones and six long ones.
The three short bolts keep the motor part assembled, whereas the six long bolts keep the motor part fixed to the bearing housing.



TMT DISASSEMBLY

5. Lift end cover.



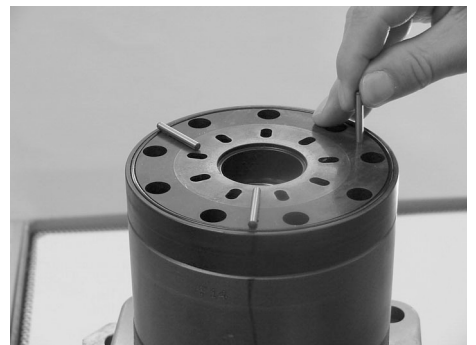
6. Separate disc valve from valve drive.



7. Remove valve drive and stop ring from channel plate.

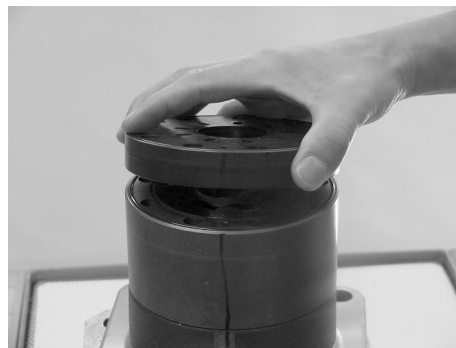


8. Remove the three guide pins from channel plate.



TMT DISASSEMBLY

9. Separate channel plate from gear wheel set.




Note that the
rollers in the
gear wheel set
can fall out!

10. Take out gear wheel set. 



11. Separate cardan shaft from output shaft.



12. Take out motor flange from bearing housing.



TMT DISASSEMBLY

13. Fix bearing housing in a hydraulic press, and push output shaft with bearings out of housing.



14. With tool SJ 150B5000-1, push shaft seal out of bearing housing.

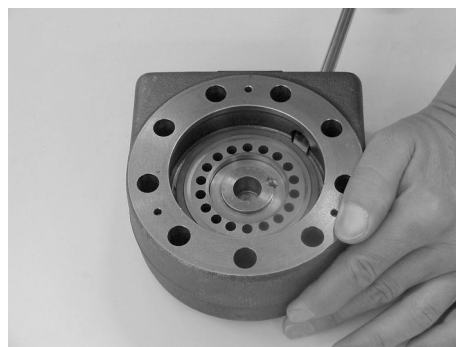


**DISASSEMBLY OF THE
END COVER**

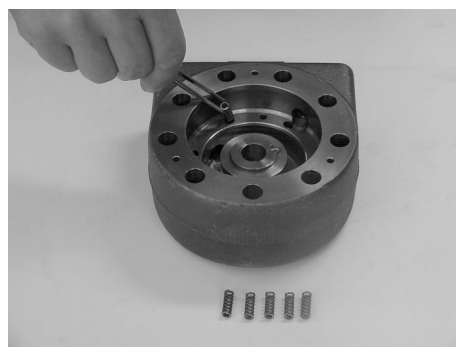
15. Remove spacer from end cover.



16. With a screwdriver through the connection port, separate balance plate from end cover.



17. Remove springs.

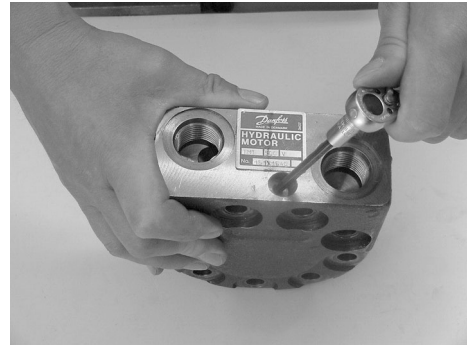


18. With an Allen key (4 mm), remove orifice

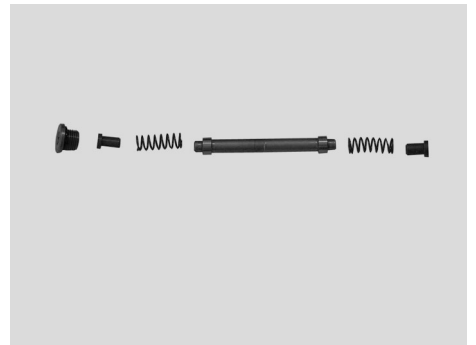


**DISASSEMBLY OF THE
END COVER**

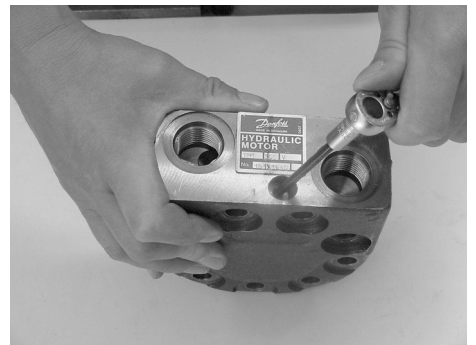
19. With an Allen key (5 mm), remove plug and flushing valve parts from flushing valve.



20. Flushing valve parts:



- 20a Install flushing valve and tighten plug with a torque of 12.5 ± 1.5 Nm [110.63 ± 13.28 lbf-in].




**DISASSEMBLY OF SEALS
ON BALANCE PLATE**

21. Remove O-ring and



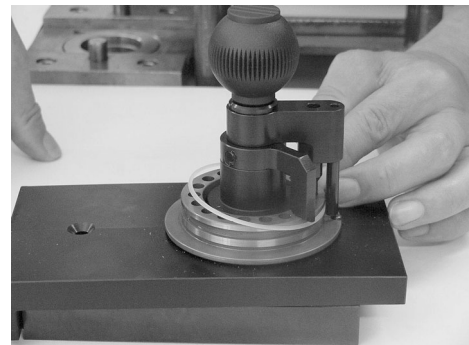

Note! Cannot be done
without damaging it.

backup rings from balance plate. 

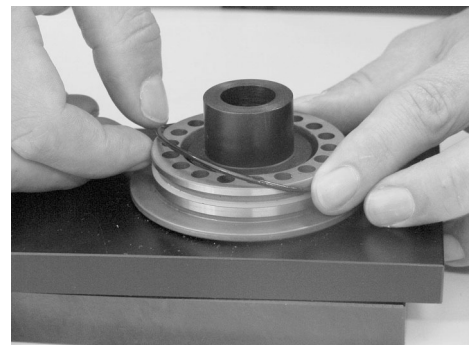


**INSTALLATION OF SEALS
ON BALANCE PLATE**

22. With tool SJ 151B5000-3, mount the two backup rings. Note that the backup rings are moulded and must therefore be correctly positioned. Be sure to make the radius of both backup rings face the O-ring.



23. After installing the backup rings, mount the O-ring in between these.




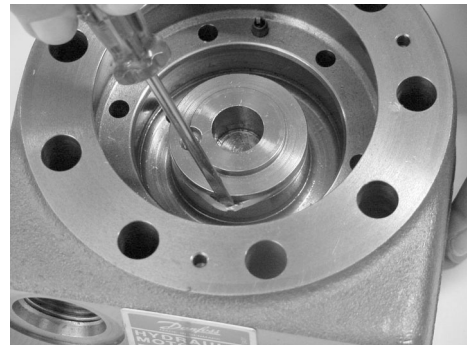
**DISASSEMBLY OF SEALS
IN END COVER**

24. Remove O-ring from end cover.



Note! Cannot be done
without damaging it.

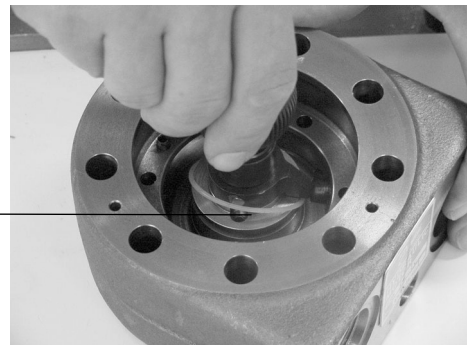
25. Remove backup ring. 



**INSTALLATION OF SEALS
IN END COVER**

26. Use tool SJ 151B5000-3 to position backup ring. Make sure that the excavation for the O-ring faces the housing.

As shown on the photo, the backup ring is located on the top.

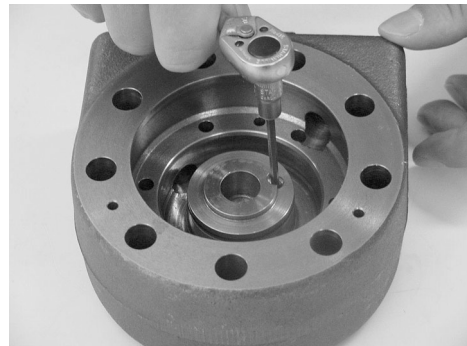


27. Mount O-ring beneath the backup ring.

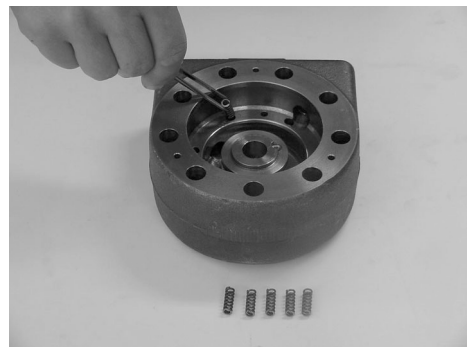


**ASSEMBLY OF END
COVER**

28. Mount orifice in end cover and tighten with a torque of 6 ± 1.5 Nm [53.10 \pm 13.28 lbf-in]



29. Install the six springs in end cover.



30. Fit balance plate into end cover and press in (if so required, use the hydraulic press). Make sure that the balance plate is still springy.

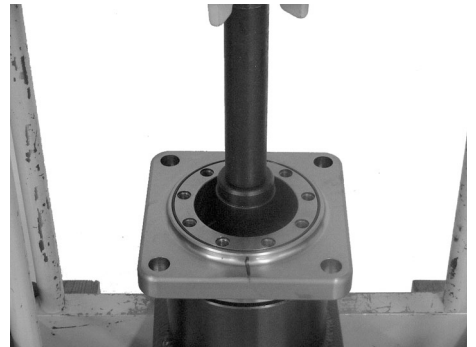


ASSEMBLY OF TMT

31. Place shaft seal on tool SJ 151B5000-1.



32. Fix bearing housing in a hydraulic press and push shaft seal into bearing housing.



33. With tool SJ 151B9000-11/13, press output shaft with bearings into bearing housing.



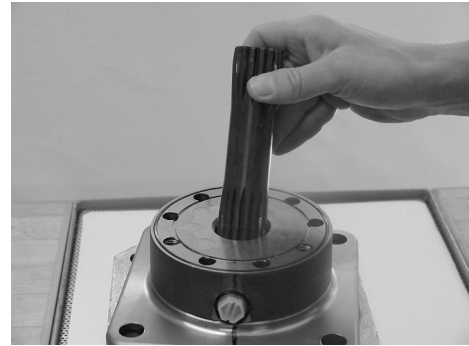
34. Fix bearing housing with output shaft and bearings in holding tool SJ 150-9000-2.
Install motor flange and use marks to ensure that bearing housing and motor flange are in line.

Remember new O-rings!



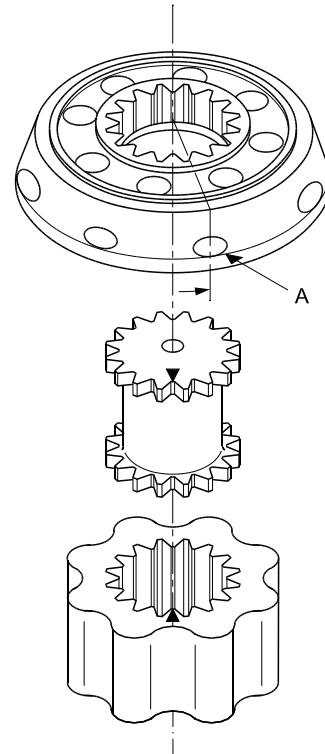
ASSEMBLY OF TMT

35. Install cardan shaft into splines of output shaft



36. The sketch shows the correct timing of the motor. Mark the gear wheel set rotor at the point where the tip of a spline tooth is opposite to the bottom of a tooth in the external rotor teeth (see drawing). Mark the bottom of a spline on the valve drive.

Line up mark on rotor and valve drive. Align mark on valve with a hole in the outer rim. (See "A" on drawing). Turn disc valve counter clockwise until splines in the two parts engage.



151-467.10

- 36a Install gear wheel set (use marks to ensure alignment)

Remember a new O-ring!



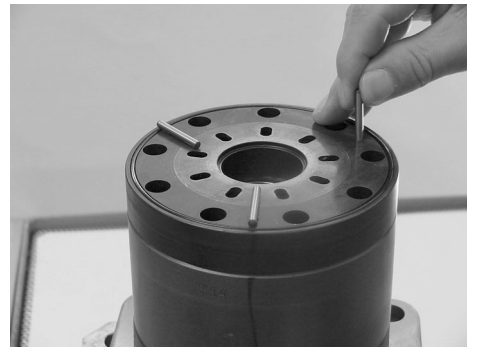
ASSEMBLY OF TMT

37. Fit channel plate onto gear wheel set (use marks to ensure alignment).

Remember a new O-ring!



38. Install the three guide pins



39. Install drive shaft in gear wheel splines. Fix valve drive with stop ring.



40. Put distributor valve onto drive shaft. Make sure that the motor is correctly timed (see the sketch, page 26).



ASSEMBLY OF TMT

41. Mount end cover (including balance plate, spacer, O-ring and backup ring).

If so required, fix spacer with Vaseline.

Use marks to ensure alignment.



42. Mount the 3 short bolts in the right holes and mount 6 long bolts.



43. Tighten all bolts with a torque of 110 ± 10 Nm [973.58 ± 88.51 lbf·in].



**DISASSEMBLY OF TMT FL
(BRAKE MOTOR)**

To disassemble TMT FL follow the same instructions as for TMT until you get to the brake part.

Note that in the brake motor, all bolts are equally long.



44. With a 17 mm key, untighten the eight bolts.

Note that the disc spring is compressed against the motor flange.



45. Remove motor flange

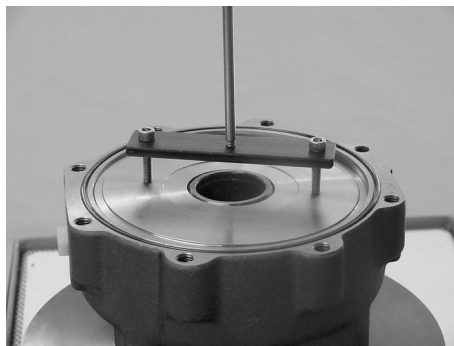


46. Remove disc spring



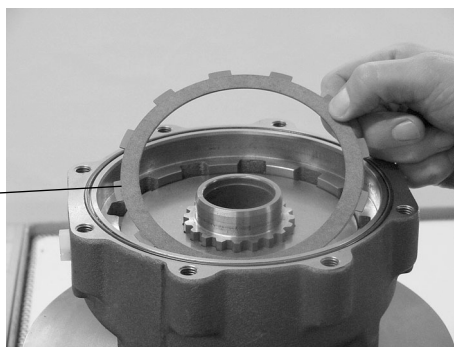
**DISASSEMBLY OF TMT FL
(BRAKE MOTOR)**

47. With tool SJ 151B5000-2, lift brake piston out of housing.

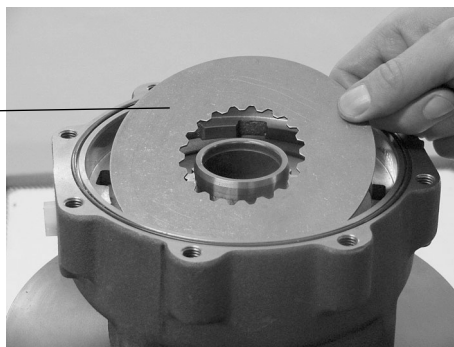


48. Remove the multiple brake discs.

Outer disc (7 pcs.)



Inner disc (6 pcs.)

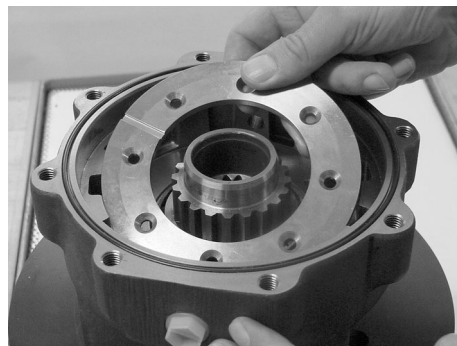


49. Unfasten the 6 bolts.

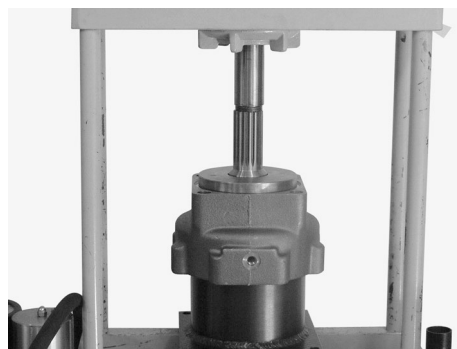


**DISASSEMBLY OF TMT FL
(BRAKE MOTOR)**

50. Lift out retainer ring.



51. Fix bearing housing in the hydraulic press and push shaft with bearings out of housing.

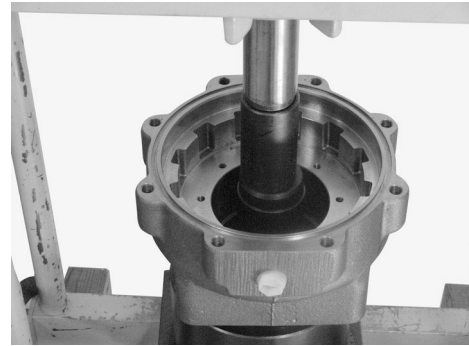


52. With tool SJ 151B5000-1, push shaft seal out of housing.



ASSEMBLY OF TMT FL

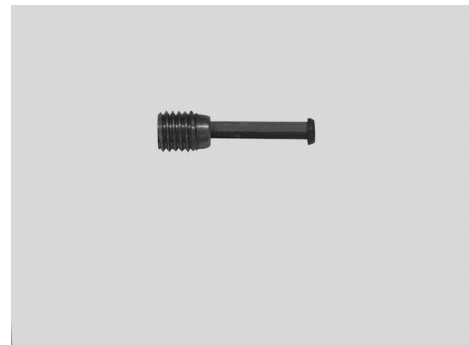
53. With tool SJ 151B5000-1, press a new shaft seal into bearing housing. Grease shaft seal with fat before installation.



54. Remove filter from output shaft.



55. Clean filter, refit onto the shaft seal and tighten with a torque of 30 ± 5 Nm [265.52 ± 44.25 lbf-in].

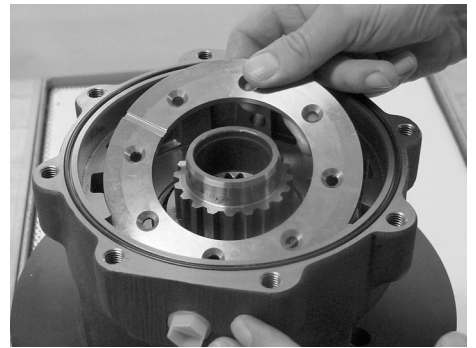


56. Fix the bearing housing in the hydraulic press and use tool SJ 151B9000-11/13 to press output shaft with bearings into the housing.

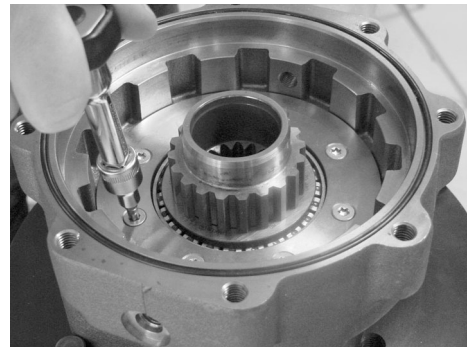


ASSEMBLY OF TMT FL

57. Install retainer ring.



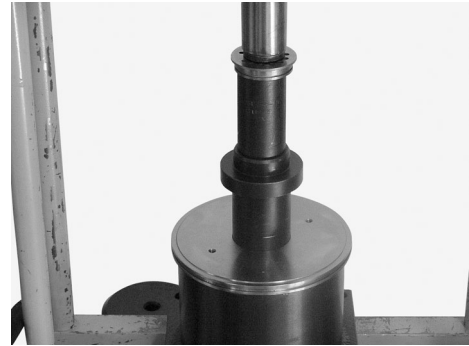
58. Fix retainer ring with six bolts and tighten with a torque of 9 ± 1.5 Nm [79.66 \pm 13.28 lbf-in].



**THE STANDARD BRAKE
PISTON**

There are two types of brake pistons:
A standard brake piston, and a
backpressure brake piston.

59. With tool SJ 151B5000-1, push shaft
seal out of brake piston.



60. With tool SJ 151B5000-1, press in
a new shaft seal with grease.



**THE BACK-PRESSURE
BRAKE PISTON**

61. Remove the six bolts.



62. Remove retainer ring and shaft seal.
For removal and reinstallation, use
tool SJ 151B5000-1.



63. After installation of the shaft seal,
fix it with a retainer ring.



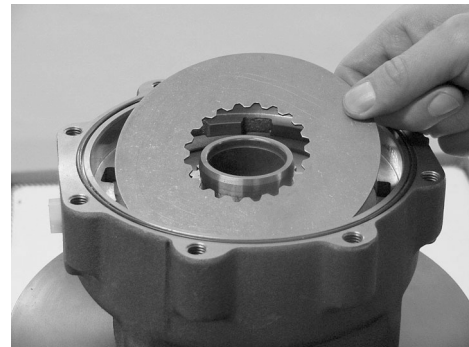
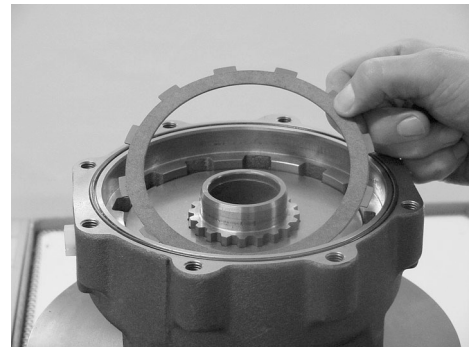
64. Mount the four bolts and tighten
with 9 ± 1.5 Nm [79.66 ± 13.28 lbf-in].



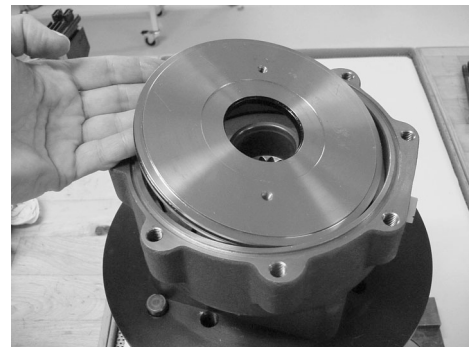
**INSTALLATION OF
BRAKING PART**

65. Install the multiple disc brake, starting with the external multiple discs.

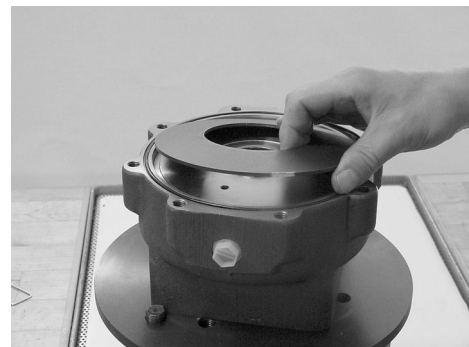
Install seven external and six internal multiple discs.



66. Install the brake piston and remember a new O-ring.



67. Install the disc spring.



**INSTALLATION OF
BRAKING PART**

68. Mount the motor flange and tighten with a torque of 75 ± 10 Nm [663.81 \pm 117.54 lbf-in].



**TOOLS FOR
DISASSEMBLY AND
REASSEMBLY OF TMT
AND TMT FL MOTORS**

1. Holding tool SJ 151B9000-2.



2. Holding plate SJ 151B5000-2
(for installation on holding tool).



3. Stripper SJ 151B5000-3 for brake piston.



4. Mandrel SJ 151B5000-1 for shaft seal.



**TOOLS FOR
DISASSEMBLY AND
REASSEMBLY OF TMT
AND TMT FL MOTORS**

5. Installation tool for backup rings.
For end cover and balance plate,
use tool SJ 151B5000-3.



6. Mandrel SJ 151B9000-11/13 for
installation of shaft with bearings.





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