



Technote: technote_090424_IRB7600

Title: Lubrication for IRB 7600 - Summary

Product Type: IRB 7600
Year Model: M2000, M2000A, M2004
Keywords: lubricant, lubrication, oil, maintenance, schedule
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Revision:- -

Reference: SI 10177, new lubrication and lubrication schedule for IRB 7600

In September 2008 Serop published Service Information 10177, which details an upgrade to a new lubricating oil type for the robot family IRB 7600.

This technote is published due to the complexity of the present situation on the field, with different oil families that must not be mixed and different maintenance schedules for different oils etc. The overview presented here should help service engineers and customers perform the necessary maintenance and upgrade to new lubricants for IRB 7600 robots delivered from ABB before 2008-08-11.

Note!

Please note that the information given by this technote is not new, but can be found in Product Manual - IRB 7600 (3HAC022033-001 Revision: F) and in Service Information 10177.



Background

To further increase reliability of the IRB 66X0 and 7600 robot families, ABB has introduced new lubricating oils for compact gears (RV-Gears). At the next oil change, an upgrade to the new oils should be done. For gear boxes that now contain Shell Tivela S150, a modified maintenance schedule should also be applied.

These three different oil families can be ordered from ABB today:

1. Optimol Optigear RO 150, which replaces Optimol Optigear RMO 150
2. Kyodo Yushi TMO 150, which replaces Shell Tivela S 150
3. Type XP 320 (Mobilgear 600 XP 320)

How to use the information of this technote

On the next page identify your robots by the columns Robot Model and Serial-No. Range to find out which oil, what amount and which service interval to apply. Part numbers for oils and labels are provided on page 4.

Note!

Mixing oil families will damage the gears. It is therefore necessary to use compatible oil at gear box maintenance. Check labels at robot base and oil plugs if in any doubt. If there is still doubt about which oil is currently in use for a specific gear box, a complete rinsing procedure according to the directions of the Product Manual should be done.



Oil Types / Oil Change Intervals IRB 7600 (*1)

Robot Model	Serial-No. Range		axis 1	axis 2 and 3	axis 4 and 5 (primary)	axis 4 and 5 (secondary)	axis 6
IRB7600		currently filled with (*2)	Optimol Optigear RMO 150	Optimol Optigear RMO 150	Shell Tivela S150	Type XP 320	Shell Tivela S150
M2000	76-20000 - 76-26999	new oil type (*2)	Optimol Optigear RO 150	Optimol Optigear RO 150	Kyodo Yushi TMO150	Mobilgear 600 XP 320	Kyodo Yushi TMO150
M2000A	76-30000 - 76-33999	change interval	12.000 h 24.000 h 36.000 h 48.000 h	12.000 h 24.000 h 36.000 h 48.000 h	6000 h 24.000 h 48.000 h	12.000 h 24.000 h 48.000 h	6000 h 24.000 h 48.000 h
M2004	76-50000 - 76-50999						
Robot Model	Ser-No. Range		axis 1	axis 2, axis 3	axis 4 and 5 (primary)	axis 4 and 5 (secondary)	axis 6
IRB7600		delivered with	Shell Tivela S150	Shell Tivela S150	Shell Tivela S150	Shell Tivela S150	Shell Tivela S150
M2000	76-27000 - (*3)	new oil type	Kyodo Yushi TMO150	Kyodo Yushi TMO150	Kyodo Yushi TMO150	Kyodo Yushi TMO150	Kyodo Yushi TMO150
M2000A	76-34000 - (*3)	change interval	24.000 h 48.000 h	6.000 h 24.000 h 48.000 h	6.000 h 24.000 h 48.000 h	6.000 h 24.000 h 48.000 h	6.000 h 24.000 h 48.000 h
M2004	76-51000 - (*3)						
Robot Model	Ser-No. Range		axis 1	axis 2, axis 3	axis 4 and 5 (primary)	axis 4 and 5 (secondary)	axis 6
IRB7600		delivered with	Kyodo Yushi TMO150	Kyodo Yushi TMO150	Kyodo Yushi TMO150	Kyodo Yushi TMO150	Kyodo Yushi TMO150
	76-xxxxx - (*4)	change interval	6.000 h 24.000 h 48.000 h	6.000 h 24.000 h 48.000 h	6.000 h 24.000 h 48.000 h	6.000 h 24.000 h 48.000 h	6.000 h 24.000 h 48.000 h
Volume							
Robot Model	axis 1	axis 2, axis 3	axis 4 and 5 (primary)	axis 4 and 5 (secondary)	axis 6		
IRB7600	7,600 ml	axis 2 - 4,800 ml axis 3 - 4,200 ml	axis 4 primary - 900 ml axis 5 primary - 750 ml	axis 4 secondary - 3,850 ml axis 5 secondary - 3,800 ml	850 ml 750 ml (with insulated tuning disk)		

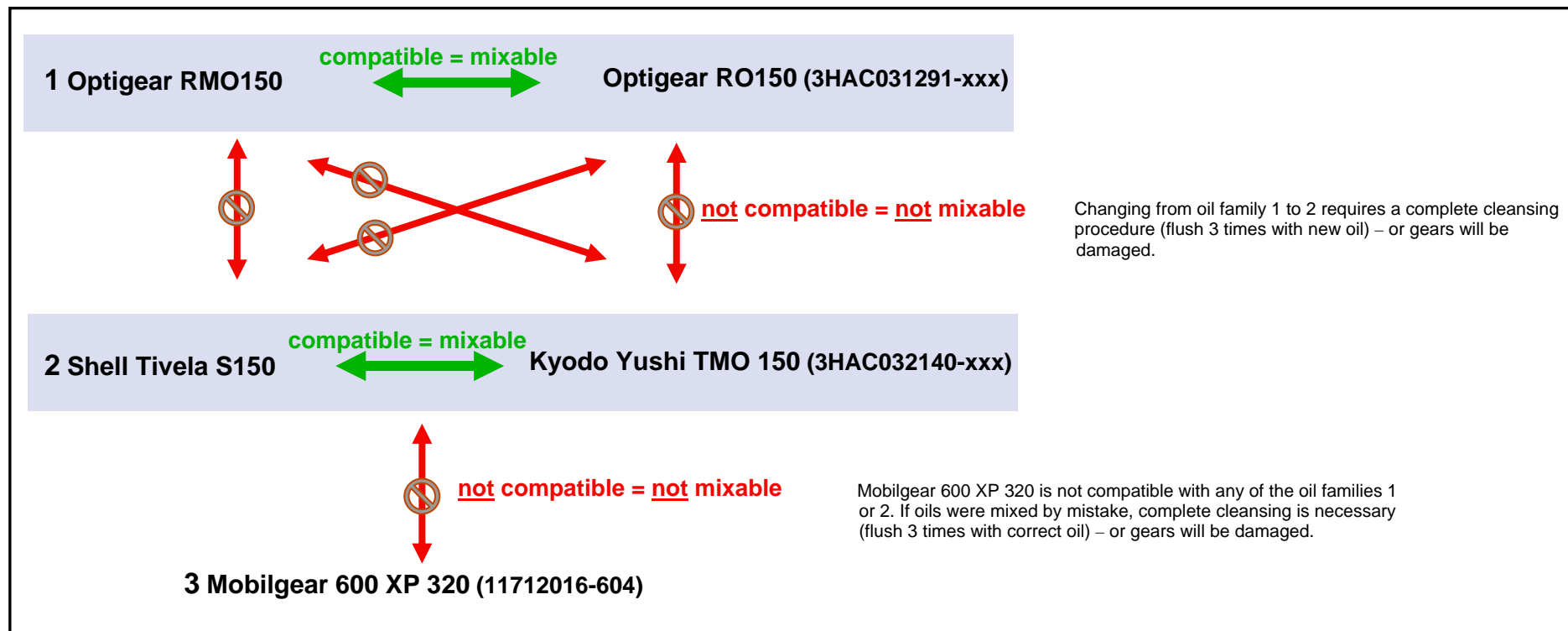
(*1) Please see special intervals for Foundry Prime robots in standard documentation. If the robot is run at ambient temperatures higher than 50°C, the equipment may require maintenance more frequently – refer to standard documentation for details.

(*2) Please double check with labels at oil plugs! Note that Optimol Optigear RMO 150 robots were delivered without oil labels. Also note that axes 4 primary, 5 primary and 6 use Shell Tivela as shown in the table (SI 10088). Some customers have upgraded to Shell Tivela in axis 1 and 2 as well. This should be possible to track via WebConfig or labels at oil plugs.

(*3) Delivered from ABB before 2008-08-11

(*4) Delivered from ABB after 2008-08-10

Compatibility and part numbers



An upgrade to Kyodo Yushi TMO 150 should be completed with the correct labels at oil plugs and/or robot base:

Part number	Description	Volume	Comments
3HAC032155-002	Stickers for IRB 6X00/7600- Kyodo Yushi TMO 150	Set/44 stickers	To be placed at oil plugs
3HAC032155-004	Sticker for IRB 7600 - Kyodo Yushi TMO 150	1	To be placed at robot base
N/A	Optimol Optigear RO 150		No labels exist