

MANN+HUMMEL FM600 Oil Cleaning Centrifuge Maintenance Procedure

Applicable for the FM600-21/22/23/24/25/26/39 series Centrifuge Range

The MANN+HUMMEL FM600 Oil Cleaning Centrifuge should be cleaned at regular intervals ensuring that the thickness of the dirt deposit inside the rotor does not exceed approximately 45mm. This operation is normally carried out after a specified period of operational use and may be combined with other maintenance procedures.

Maintenance Procedure

1. Stop the flow of oil to the centrifuge by either stopping the engine or closing the centrifuge isolating valve (if fitted). Ensure the centrifuge has come to a complete stop before proceeding. *If the centrifuge is mounted on a remote mounting base (Part N°. 09111A), the compressed air supply needs to be isolated. The safety drain cock must then be opened to release air pressure from inside the assembly. This safety drain cock must be closed before the centrifuge is restarted.*

2. Remove the band clamp, unscrew the cover nut and remove the centrifuge cover assembly.

3. Allow the oil to drain out of the rotor assembly. This may be assisted by raising the rotor on the spindle. Withdraw the rotor assembly vertically upwards from the spindle. The rotor should be removed and replaced on the spindle with care in order to ensure that the rotor bearings are not damaged.

4. Secure the rotor assembly on the rotor disassembly tool (Part N°. 6905A) and secure with the nut provided. Unscrew the rotor jacking nut and carefully dismantle the rotor.

5. Remove sludge deposits from both halves of the rotor using a spatula.

6. Remove the standtube from the bottom section of the rotor. Ensure that all rotor components (including the two nozzles located in the rotor body), are thoroughly cleaned and free from debris before reassembly.

7. Replace the standtube rotating it to ensure that it is
- properly located in the recess in the rotor base.

8. Examine the rotor body O-Ring for damage and renew if necessary (Kit N°. 0761A)

9. Fit a new paper insert (Part N°.3028A) into the rotor body.

10. Replace the top half of the rotor onto the bottom half of the rotor ensuring that the location dowels in the base align with the holes in the cover. Tighten the jacking nut to a torque of 100Nm. An incorrect torque may result in rotor imbalance.

11. *If a remote mounting base is being used the control mechanism should be checked. This can be done using a thin wire with a hook formed on one end to raise the float in the remote mounting base. If the air supply to the unit is turned on, air should flow into the control mechanism. The air flow should stop if the float is lowered.*

12. Replace the rotor on the spindle and check that the rotor spins freely.

13. Examine the centrifuge body O ring for damage and renew if necessary (Kit N°. 0761A)

14. Replace the centrifuge cover and fasten the centrifuge cover nut hand tight.

15. Replace the band clamp and tighten hand tight. The band clamp must be securely fitted during operation of the centrifuge.

16. With the centrifuge running, check all joints for leaks.

Important Notes

The MANN+HUMMEL Oil Cleaning Centrifuge is designed to provide extended service without the need to replace major components. However, after extended periods of operation wear and damage to the centrifuge spindle and rotor assembly may become evident. For this reason it is recommended that the centrifuge spindle and rotor assembly bearings are visually inspected for damage and wear during the cleaning process. If excessive wear or bearing play is evident, the rotor assembly and/or the centrifuge body assembly should be replaced.

Most FM600 centrifuge assemblies are fitted with a cut off valve (C.O.V.), which is located in the filter body. The C.O.V. is designed to protect the engine by stopping the supply of lube oil to the centrifuge at start-up and during periods when the oil pressure is below the C.O.V. rating. This item is intended to provide maintenance free operation for extended periods and should only be disassembled and inspected for damage if a problem becomes evident.

Maintenance Action

Every Oil Drain Interval:

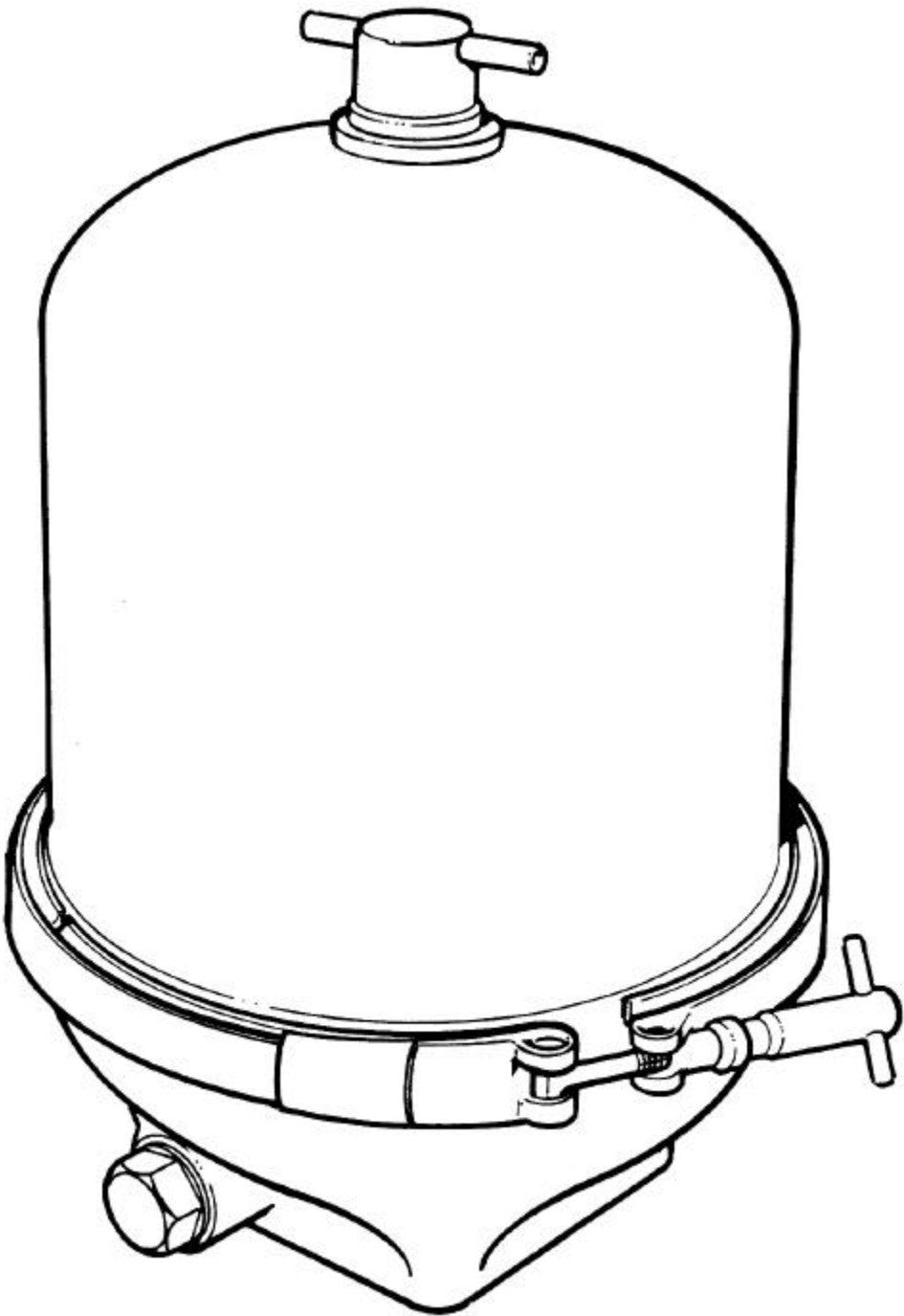
- Clean Rotor Assembly / Replace Paper Insert (Part N°. 3028A)
- Inspect Centrifuge Body O Ring & Rotor Body O Ring. Replace if Damaged (Kit N°. 0761A)
- Check Cover Nut O Ring for leaks and replace if necessary (Kit N°. 0761A) .
- Inspect Rotor Bearings for wear and replace Bearing Tube Assembly if necessary
- Inspect Spindle for wear and replace Centrifuge Body Assembly if necessary

Engine Overhaul:

- Replace Centrifuge

Please note that this should be used as a guide only. Maintenance intervals for the centrifuge are dependent on a number of factors and differ with engine type and operational environment.

OIL CONDITIONING SYSTEMS SPARE PARTS LIST



FM600 - 21/22/23/24/25/26/39 SERIES

Spare Parts List

FM600	PART No.	QTY	FM600-21 (01187A)	FM600-22 (01188A)	FM600-23 (01189A)	FM600-24 (01190A)	FM600-25 (01192A)	FM600-26 (01193A)	FM600-39 (01235A)
CUT OFF VALVE RATING (BAR)			-	3.5	2.5	2.5	2.5	2.5	3.5
OIL INLET THREAD SPEC.			3/4" BSP	3/4" BSP	3/4" BSP	1 5/16" UNF	3/4" NPT	M27x1.5	3/4" BSP

BODY ASSEMBLY	02110A	1	●						
	02111A	1		●					●
	02112A	1			●				
	02113A	1				●			
	02114A	1					●		
	02115A	1						●	

ROTOR ASSEMBLY	0434A	1	●	●	●	●	●	●	
	0486A	1							●
NOZZLE	4903A	2	●	●	●	●	●	●	●
BEARING TUBE ASSEMBLY	0516A	1	●	●	●	●	●	●	
BEARING TUBE ASSEMBLY	0570A	1							●
STAND TUBE	0541A	1	●	●	●	●	●	●	●
CIRCLIP	1205P	1	●	●	●	●	●	●	●
PIN	1006P	1	●	●	●	●	●	●	●
PAPER INSERT (NOT ILLUSTRATED)	3028A	1	●	●	●	●	●	●	●

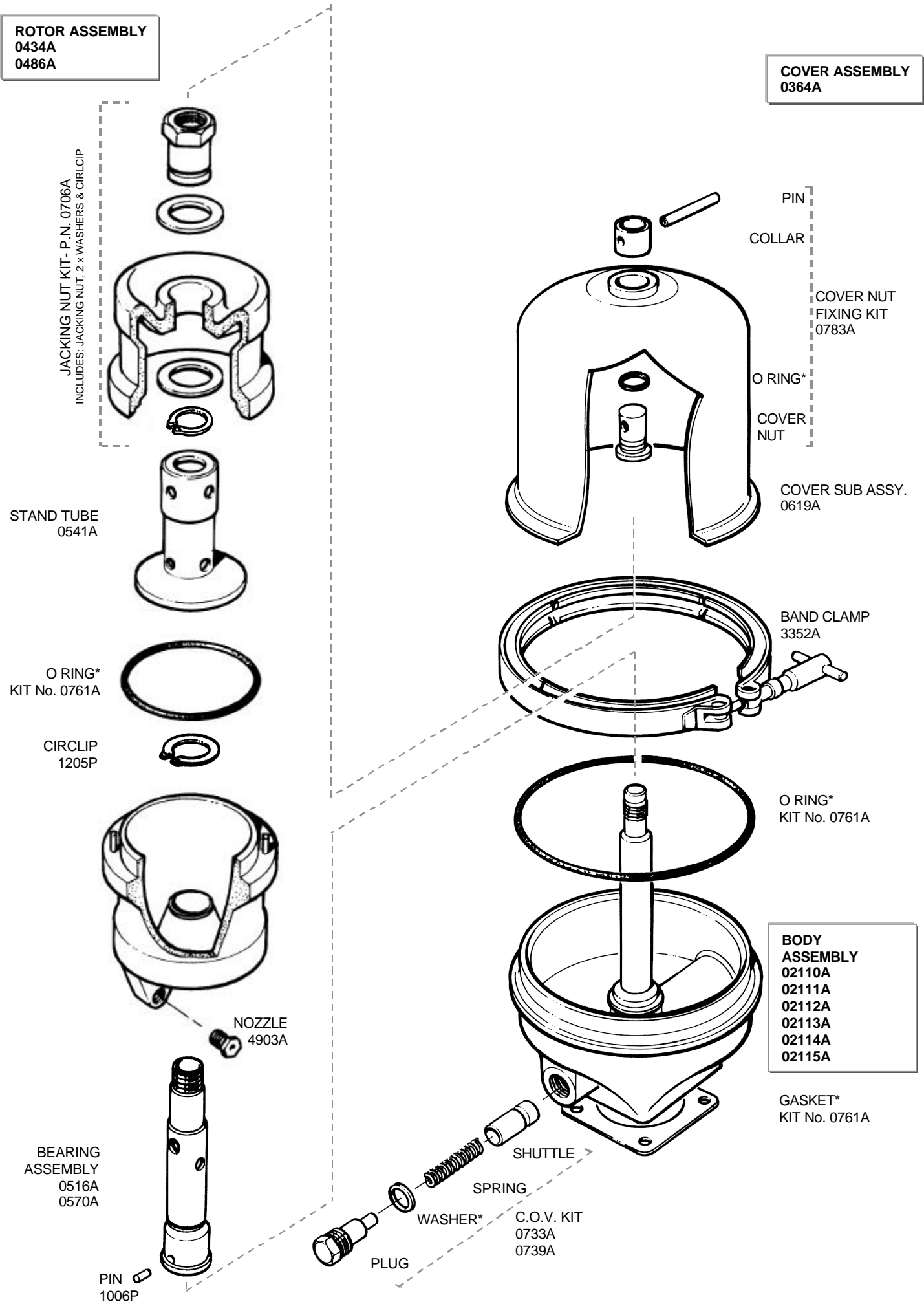
COVER ASSEMBLY	0364A	1	●	●	●	●	●	●	●
COVER SUB-ASSEMBLY	0619A	1	●	●	●	●	●	●	●

BAND CLAMP	3352A	1	●	●	●	●	●	●	●
------------	-------	---	---	---	---	---	---	---	---

FM600 KITS	PART No.	QTY	FM600-21 (01187A)	FM600-22 (01188A)	FM600-23 (01189A)	FM600-24 (01190A)	FM600-25 (01192A)	FM600-26 (01193A)	FM600-39 (01235A)
CUT OFF VALVE KIT	0733A	1		●					●
CUT OFF VALVE KIT	0739A	1			●	●	●	●	
COVER NUT FIXING KIT	0783A	1	●	●	●	●	●	●	●
JACKING NUT KIT	0706A	1	●	●	●	●	●	●	●
SEALS KIT	0761A	1	●	●	●	●	●	●	●

MANN + HUMMEL (UK) LTD.
Units 11 - 15 Chard Business Park
Leach Road, Chard
Somerset, TA20 1FA
Tel: +44 (0) 1460 238900
Fax: +44 (0) 1460 238997
Email:ocs@mann-hummel.com

MANN+HUMMEL FILTER TECHNOLOGY (S.E.A)
PTE LTD
3 Toh Tuck Link
#03-02/03 German Districentre
Singapore 596228
Tel: +65 (6465) 11 28
Fax: +65 (6465) 11 38
Email:ftsg@mann-hummel.com.sg



*SEALS KIT P.N. 0761A COMPRISES OF: C.O.V. WASHER, FILTER BODY O RING, CVR NUT O RING, RTR BODY O RING & BASE GASKET