

Date December 14, 2005	Technical Newsletter	No 7.2	<b>GRINDEX</b>
Subject Improved Hydraulic section of Matador Proline and MSHA pumps.			<a href="http://www.grindex.com">www.grindex.com</a>

The new design of hydraulic section was introduced in May 2003 and is described in TNL 7 of May 30 and TNL bulletin of 9 Sep 2003.

In order to simplify the repair or replacement works of the hydraulic section the following repair kits have been introduced for each Proline and MSHA pump models.

Part No. **5074700** Matador **N** Proline with PU polyurethane lined diffuser.

Item No.	Part No.	Denomination	Qty.
57	5062500	Diffuser ring Matador N/H	1
58	5062300	Diffuser lower PU polyurethane	1
43	5016300	Stud M10x270 mm	6
46	130836	Rubber sleeve 19/15x12 mm	6
48	5031605	Rubber sleeve 16/10x85 mm	6
47	130955	Nut M10	12

Part No. **5074701** Matador **N** Proline with GU rubber lined diffuser.

Item No.	Part No.	Denomination	Qty.
57	5062500	Diffuser ring Matador N/H	1
58	5062301	Diffuser lower GU rubber	1
43	5016300	Stud M10x270 mm	6
46	130836	Rubber sleeve 19/15x12 mm	6
48	5031605	Rubber sleeve 16/10x85 mm	6
47	130955	Nut M10	12

Part No. **5074800** Matador **H** Proline with PU polyurethane lined diffuser.

Item No.	Part No.	Denomination	Qty.
57	5062500	Diffuser ring Matador N/H	1
58	5062400	Diffuser lower PU polyurethane	1
43	5016300	Stud M10x270 mm	6
46	130836	Rubber sleeve 19/15x12 mm	6
48	5031604	Rubber sleeve 16/10x105 mm	6
47	130955	Nut M10	12

Part No. **5074801** Matador **H** Proline with GU rubber lined diffuser.

Item No.	Part No.	Denomination	Qty.
57	5062500	Diffuser ring Matador N/H	1
58	5062401	Diffuser lower GU rubber lined	1
43	5016300	Stud M10x270 mm	6
46	130836	Rubber sleeve 19/15x12 mm	6
48	5031604	Rubber sleeve 16/10x105 mm	6
47	130955	Nut M10	12

Part No. **5075200** Matador **N** MSHA with GU rubber lined diffuser.

Item No.	Part No.	Denomination	Qty.
46	5062500	Diffuser ring Matador N/H	1
47	5062301	Diffuser lower GU rubber	1
32	5011200	Stud M10 x 270 mm	6
35	130836	Rubber sleeve 19/15x12 mm	6
37	5031605	Rubber sleeve 16/10x85 mm	6
36	130955	Nut M10	12

Part No. **5075300** Matador **H** MSHA with GU rubber lined diffuser.

Item No.	Part No.	Denomination	Qty.
46	5062500	Diffuser ring Matador N/H	1
47	5062401	Diffuser lower GU rubber	1
32	5011200	Stud M10 x 270 mm	6
35	130836	Rubber sleeve 19/15x12 mm	6
37	5031604	Rubber sleeve 16/10x105 mm	6
36	130955	Nut M10	12

Note! The stated Item numbers, Part numbers, and Quantities are in accordance with specification of Matador Proline Spare Parts list 90 006 00 revision 15 and Matador MSHA Spare Parts list No. 90 019 00 revision 5.

What will happen if a pump with old design of hydraulic section needs repair or over haul of the hydraulic section?

The lower diffuser No. 130749, 130749PU, 130751 and 130751PU that fit the old diffuser ring No. 130748 only, will be available for a limited period.

The old diffuser ring No. 130748 is obsolete and is discarded as spare part. If the entire hydraulic section needs to be replaced, select a suitable repair kit from the above tables.

Note! The spacer tubes (6pcs.) for diffuser ring Item No. 44/33 are not included in any repair kit and have to be ordered separately.

Matador N Proline Spacer tube No. 50 122 02 L = 98 mm.

Matador H Proline Spacer tube No. 130 962 L = 75 mm.

Matador N MSHA Spacer tube No. 50 122 00 L = 113 mm.

Matador H MSHA Spacer tube No. 50 122 01 L = 95 mm.

New improved design of impellers:

The new impellers will be introduced in production during first quarter in 2004. Information of serial number of the first pump when a new designed impeller is being fitted will follow by separate TNL bulletin.

Item No.	Denomination	Old Part no.	New part No.
53 / 42	Impeller N 50 Hz	130 719	50 389 00
53 / 42	Impeller N 50 Hz RF	130 719 RF	50 389 02
53 / 42	Impeller N 60 Hz	130 939	50 389 01
53 / 42	Impeller N 60 Hz RF	130 939 RF	50 389 03

Item No.	Denomination	Old Part no.	New part No.
53 / 42	Impeller H 50 Hz	130 721	unchanged
53 / 42	Impeller H 50 Hz RF	130 721RF	unchanged
53 / 42	Impeller H 60 Hz	130 938	unchanged
53 / 42	Impeller H 60 Hz RF	130 938 RF	unchanged

Note! The stated Item numbers and Part numbers will be in accordance with specification of Matador Proline Spare Parts list 90 006 00 revision 16 and Matador MSHA Spare Parts list No. 90 019 00 revision 6.

When a new designed impeller is being fitted, new spacer tubes (6pcs.) must be fitted in the diffuser ring.

Item No. 44 Matador N Proline 50 Hz spacer tube No. 50 122 02 L = 98 mm.

Item No. 33 Matador N MSHA 60 Hz spacer tube No. 50 122 03 L = 118 mm.

Information regarding the new Part numbers for impellers, spacer tube will follow by separate TNL bulletin.

#### Advantages by the new hydraulic section:

The metal disc in diffuser ring and in lower diffuser is made of stainless steel.

Dismantling, replacement and assembly of the hydraulic section will be easier carried out. The clearance between the lower diffuser and impeller will be easier to adjust and set with more accuracy. Clearance should be 0,3 mm/0,012” for a PU polyurethane lined and 0,1 mm/0,004” for a rubber lined lower diffuser.

A pump with old design can be easy over hauled and upgraded to the new design of hydraulic section.

The pump performance will be unaltered according to the published Q-H performance curve and within the tolerance requirements according to the ISO 2548 standard.

The casting, heat treating and machining processes of the impeller have been improved to allow a more precise dimension of the center bore hole and key way. The impeller hub will be more solid and free of casting defects.

### Assembly instruction of the hydraulic section:

Make sure that all new and old parts being used are clean and free of any damages or burrs. Use oil or grease on threaded surfaces. Prior to assembly let pump stand steady upside down with the free shaft end facing up. Fit sleeves Item No. 44/33 (6pcs.) in the diffuser ring Item No. 57/46 and push the ring down firmly against the stator housing. Fit and tighten the nuts Item No. 45/34 (12pcs.) to secure the diffuser ring steady in its position. Fit rubber sleeves Item No. 46/35 (6pcs.) and the upper nuts Item No. 47/36 (6pcs.). Push down the lower diffuser Item No. 58/47 so that it lies flush against the vanes of impeller. Fit lower nuts Item No. 47/36 and tighten the nuts by hand against diffuser. Adjust the clearance between impeller vanes and lower diffuser to 0,3 mm/0,012" PU polyurethane or 0,1mm/004" GU rubber lined diffuser. Positioning and tightening the nuts and counter nuts Item No. 47/36 so that the lower diffuser lies flush with correct clearance facing the impeller vanes. Make sure that all threaded assemblies are secured. Do not over tighten nuts and do not use power tools for this assembly. Measure the clearance all around with a feeler gauge

