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TECHNICAL MANUAL

FOR

E-LINE ROLLER BOGIE

2.125" NOMINAL
1-3/16" 12UN GO CONNECTIONS.

(Note: Special Wiring Kit is required to be supplied by Wireline Engineering with this tool.)

Assembly Number	**11192125-0001**

Compiled by:	B.Niven	**Date:** 25-Jul-07	**Revision** D
Checked by:	W.Ackroyd	**Date:** 25-Jul-07	
Authorised for release by:	W.Ackroyd	**Date:**	25-Jul-07

Revisions Notes

Note 1 : Changes to wording are identified by the use of underlying.

Note 2 : Sections removed are not identified.

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1.0 INTRODUCTION

E-line Roller Bogies were developed from the basic principles of the already successful Slickline version and are designed to convey E-Line tools into well bores with extended reach or extremely high angles.

E-Line Roller Bogies are connected at strategic points within the E-Line toolstring in order to lift all toolstring components off the tubing wall onto the Bogie rollers. The complete toolstring can then be rolled in and out of the well bore like a train with minimal frictional contact with the tubing wall.

2.0 HEALTH AND SAFETY, COSHH

Wireline Engineering Ltd recommends safety glasses, gloves, coveralls and safety footware as PPE for the disassembly and assembly process.
This assembly may represent a lifting and carrying hazard and as such personnel lifting and carrying these items require to be trained in and be fully aware of safe lifting and carrying practices. In all cases refer to your own company restrictions on the weights that can be safely lifted or carried. Refer to assembly drawing of tool for information on assembled weight.
Health and Safety Data sheets for the recommended greases are attached to the end of this document.

3.0 LUBRICATION

Wireline Engineering Ltd recommends a high temperature grease type Lubriplate No.930-AA P/No.L0096-001 for all internal connections and O-rings.
Wireline Engineering Ltd also recommends three high temperature greases for all grease nipples and grease holes. The recommended greases for grease nipples /holes, in order of preference, are; 'Shell Malleus Grease ET2', 'Omega 71' and 'Duron Foodmaster Clear 2'.
Duron Foodmaster Clear 2 must be used for all E-Line Bogie operation within USA waters.

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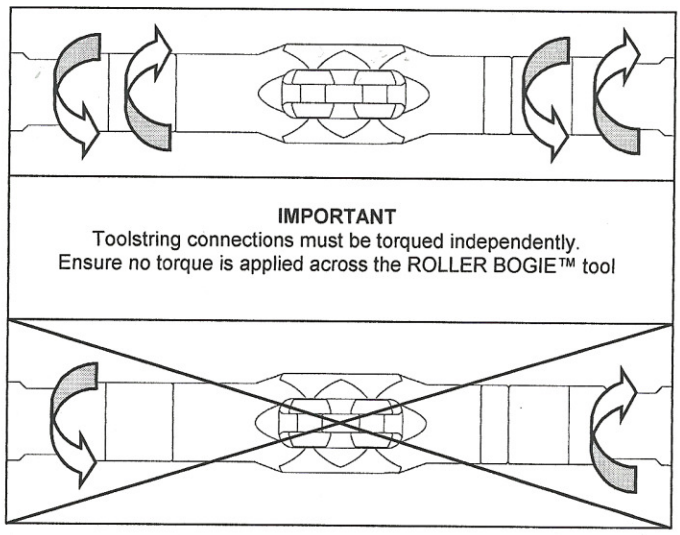
4.0 OPERATION

Attach at strategic points within the Toolstring to lift all items off the tubing wall.



5.0 MAINTENANCE

It is not necessary to totally disassemble this E-Line Roller Bogie after every individual run or operation.

It is good practice to pump in grease via holes on body and rollers after every operation. This will ensure that Roller Bogies are in good working condition whilst being stored between operations.

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6.0 DIS-ASSEMBLY

1. Grip Main Body (1) in vice.
2. Remove Thread Protectors (13 & 14).
3. Remove O-Rings (15) from Bottom Crossover (7).
4. Remove Roll Pins (12) from Main Body (1).
5. Unscrew Roller Pin (5) with screwdriver & repeat for all pins.
6. Rollers (4) should now be free to be removed from milled slot in Main Body (1).
7. Remove O-Rings (9) from Rollers (4).
8. Grip Main Body (1) over the flats.
9. Remove Grub Screws (10) from both Crossovers (6 & 7).
10. Rotate Rotating Mandrel (2) to align slot with hole in Main Body (1).
11. Insert Punch supplied, into the hole in the Main Body (1), at the same end as the crossover to be removed. Do not torque across small diameter of Mandrel.
12. Unthread first Crossover by applying torque against the inserted punch.
13. Repeat steps 10 to 12 to remove the remaining crossover moving punch to other end.
14. Remove O-Rings (8) from both Crossovers (6 & 7).
15. Remove Grub Screws (11) and unthread Rotate Pin Stop (3), which in turn will release Rotating Mandrel (2) from Main Body (1).
16. Remove Rotating Mandrel (2) from Main Body (1).

The Bogie is now totally Disassembled

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7.0 BOGIE ASSEMBLY

NOTE:- Use high temp. grease (e.g. Lubriplate No.930-AA P/No.L0096-001) sparingly on all internal connections and O-Rings.

1. Grip Main Body (1) across the flats, in a vice.
2. Insert Rotating Mandrel (2) into Main Body (1).
3. Make-up Pin Stop (3) fully to Main Body (1).
4. Fit Grub Screws (11) and torque to 22 lbf.in (1.8 lbf.ft).
5. Fit O-Rings (8) to both Crossovers (6 & 7).
6. Rotate Rotating Mandrel (2) to align slot with hole in Main Body (1).
7. Insert Punch supplied, into the hole in the Main Body (1), at the same end as the crossover to be made-up. Do not torque across small diameter of Mandrel.
8. Make-up Top Crossover (6), tighten fully, to Rotating Mandrel (2) against the inserted punch.
9. Repeat steps 6 to 8 to make-up the remaining crossover moving punch to other end.
10. Fit Grub Screws (10) to Crossovers (6 & 7) and torque to 48 lbf.in (4.0 lbf.ft).
11. Fit O-Rings (9) into Rollers (4).
12. Insert Roller (4) into milled pocket in Main Body (1).
13. Retain Roller (4) by inserting Roller Pin (5) into Main Body (1).
14. Screw Roller Pin (5) into Main Body (1) and tighten with screwdriver.
15. Repeat steps 11 to 14 for all Rollers.
16. Insert Roll Pins (12) into Main Body (1).
17. Fit O-Rings (15) to Bottom Crossover (7) and Box Thread Protector (14).

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18. Make-up Thread Protectors (13 & 14) to Top and Bottom Crossovers.
19. Apply grease through the holes in the Rollers and Main Body with the supplied grease pump.

The Bogie is now totally Assembled

8.0 DRAWINGS and COSHH SHEETS

8.1 Drawing N^0 11192125-0001.

For O-Rings and Internals use:

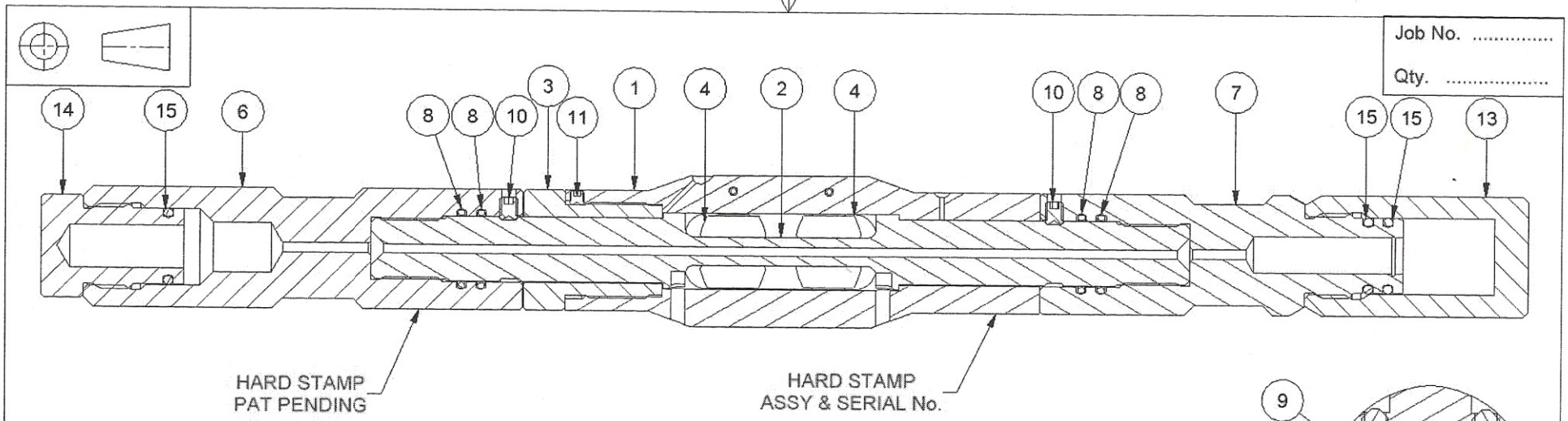
8.2 Lubriplate Grease No. 930-AA Part No. L0096-001 COSHH Sheet.

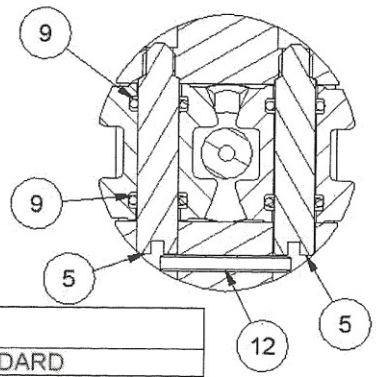
For Rollers and Grease holes use:

8.3 Shell Malleus Grease ET 2 COSHH Sheet.

8.4 Omega 71 Grease COSHH Sheet.

8.5 Duron Foodmaster Clear 2 Grease COSHH Sheet.





Parts List			
ITEM	PART NUMBER	DESCRIPTION	QTY
1	11192125-0102	Main Body	1
2	11192125-0502	Rotating Mandrel	1
3	11191950-0302	Rotating Pin Stop	1
4	11192125-0202	Roller	4
5	11192125-0306	Roller Pin	4
6	11191950-0802	Top Crossover	1
7	11191950-0902	Bottom Crossover	1
8	83890119-0000	BS 119 O-Ring	4
9	83880804-0000	BS 804 O-Ring	8
10	84000250-0205	Soc Head Set Screw	6
11	84000157-0105	Soc Head Set Screw	3
12	84100125-0199	Roll Pin 1" Long	2
13	24251187-0111	Pin Thread Protector	1
14	24251187-0211	Box Thread Protector	1
15	83890211-0000	BS 211 O-Ring Viton	3

DESIGN SPECIFICATION	
SERVICE	STANDARD
TOP CONNECTION	GO BOX CONNECTION
BOTTOM CONNECTION	GO PIN CONNECTION
MAX O/D	2.125"
MK/UP LENGTH	17.1"
WEIGHT	4.88KG (10.74LBS)

UNLESS OTHERWISE STATED

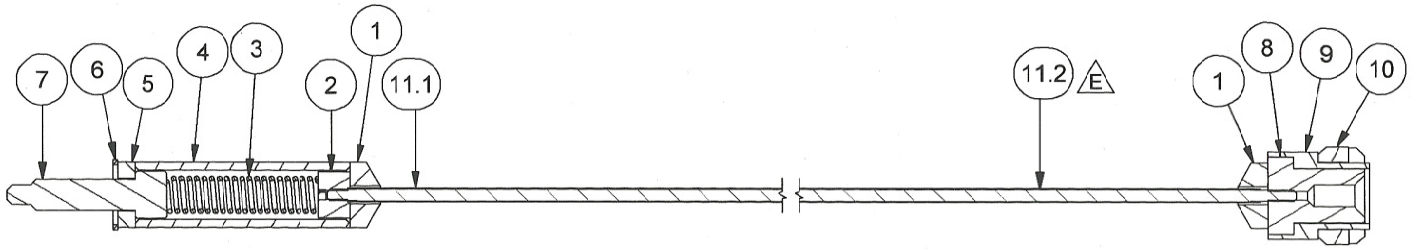
1. Remove all burrs and sharp edges.
2. Corner Radii 0.80.
3. Do not scale drawing.
4. All dimensions are in millimeters.
5. Machine finish 16
6. Concentricity with in 0.15 TIR
7. Chamfers 0.25 x 45°.
8. Machine X.X = ± 0.25
X.XX = ± 0.15
Angles = 1/2°
Drilled holes = ± 0.79
± (1/32")
9. Thread lead angle 45°
10. Thread back angle 30°

0	03/03/04	Issued
Revision	Date	Chg No.

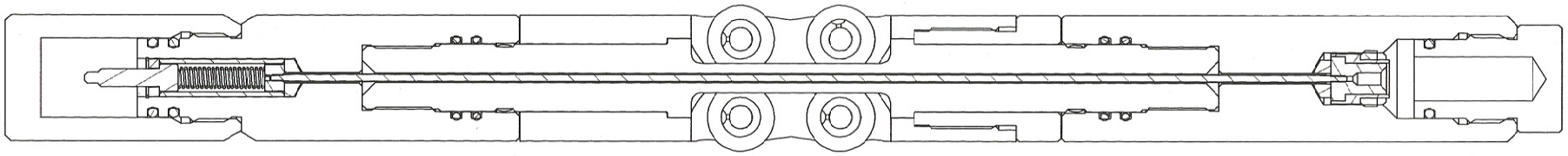
Wireline Engineering Ltd.

Description:
E-Line Roller Bogie
2.125" Nominal W/ GO Connections.

Part No:11192125-0001		Sheet 1 of 1
Drawn By: A.McCombie	Checked By: N.Walker	This drawing contains information belonging to Wireline Engineering Ltd. and may not be reproduced in any way unless permission is granted by the aforementioned Company.
Date Drawn: 02/03/04	Date Checked: 03/03/04	



WIRING KIT



WIRING KIT INSTALLED

Parts List			
ITEM	PART NUMBER	DESCRIPTION	QTY
1	24010000-0124	Cone Insulator	2
2	24010000-0231	Slotted Nut	1
3	85000073-0199	Compression Spring	1
4	24010000-0324	Spring Housing Insulator	1
5	24010000-0524	Flat Insulator	1
6	84071365-0199	Circlip	1
7	24010000-0431	Spring Contact	1
8	24010000-0831	Hex Nut	1
9	24010000-0724	Hex Nut Insulator	1
10	24010000-0631	Castle Nut	1
11	24010000-0100	Threaded Rod w/ Heatshrink	1
11.1	24010000-0931	Threaded Rod	1
11.2	24010094-0399/E	Heatshrink	1
12	24010000-1106	Installation Tool	1

Work Order Number	
Packing Instructions	
1. Insert one complete wiring kit assembly into bag 2. Enter Work Order Number onto drawing 3. Fold drawing along dashed line & insert into bag 4. Heat seal bag	

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Template No: 10765747 Rev: G | Sht. Size: A4

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. Remove all burrs and sharp edges.
. All dimensions in millimeters.
. Do not scale drawing.
. * Denotes preferred etching/stamping location.

X	± 0.5	T.I.R.	0.15		
X.X	± 0.25	Corner Radii	0.80		
X.XX	± 0.15	Chamfer	0.25 x 45°	Thread Lead	45°
Finish	1.6	Angle	± 0.50°	Thread Back	30°

UNLESS OTHERWISE STATED

Drawn By: B.Taylor	Checked By: N.Hall	Description: Electrical Components f/ 1.950in & 2.125in E-Line Bogies W/ GO Connections	
Approved By: N.Hall	Approved Date: 12-Aug-08		
ECN No: 1153	Sheet No: 1 of 1	Part No: 24010000-0001	Rev: E