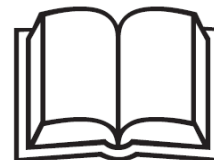
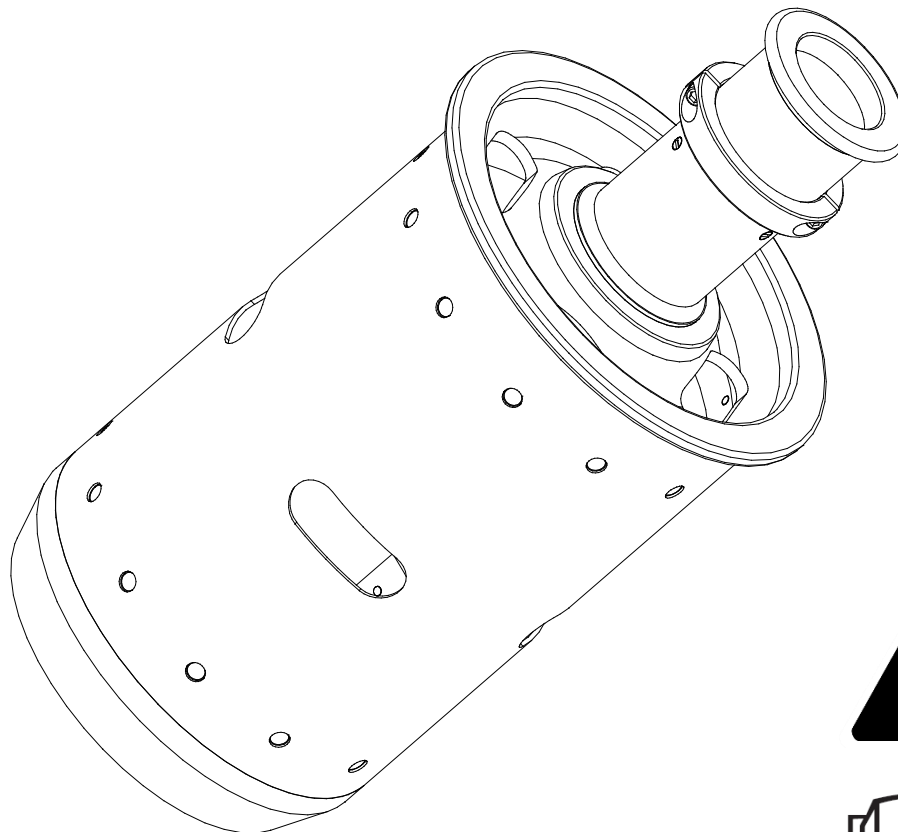




# USER'S GUIDE AND MAINTENANCE MANUAL FOR CORE PLUGS



# *USER'S GUIDE AND MAINTENANCE MANUAL FOR CORE PLUGS*

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# A. INTRODUCTION

## A.1 Introduction

We thank you for choosing Double E Company core plugs and are pleased to have you as a customer. We are confident that our product will provide you with years of satisfaction. For optimal performance, please use and maintain your core plugs as outlined in this manual.

We recommend that you read this manual carefully and refer to it whenever a problem may arise. Our Technical Support department is also always available for advice and assistance. This manual describes the installation, operation, usage precautions, and detailed information about this product's accessories and options.

The product must be used according to the instructions. Keep this manual as a reference for the future.

Double E Company reserves the right, at any time, to make changes (without any obligation of revision), felt to be useful for the product improvement or for any constructive or commercial reason. Copying, buffering and transmission in any form (electronic, mechanical, by photocopying, translating or others) of this publication is forbidden without express Double E Company authorization.

Double E Company refuses any responsibility in case supplied core plugs are set at work before the machine where they are going to be fitted has been declared to be in accordance with provision of the law 89/392 and its subsequent modifications.

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## A.3 Important

- Do not use this product before having read and understood the whole content of this manual.
- Double E Company has done everything possible to make this manual complete and correct.
- Please transfer this manual to subsequent users if the product is lent or sold.
- Should this documentation or the warning labels applied on the device be lost or damaged, please request replacements from the supplying company.

## A.4 Warranty

See general terms of sale. Our standard warranty is available on our website at [www.ee-co.com](http://www.ee-co.com).

## B. SAFETY

### B.1 Safety Instruction - Symbology

- For safe operation of core plugs, carefully read these safety instructions before use.
- Follow every WARNING and ATTENTION note, described in this section, as they are extremely important for safety.
- In this manual, warnings and are indicated by the following signal word conventions.



Indicates a potentially dangerous situation that, if not avoided, is almost certain to cause serious injuries or death.



Indicates a potentially dangerous situation that, if not avoided, can cause moderate to serious injuries, or even death.



Indicates a potentially dangerous situation that, if not avoided, can cause minor to moderate injuries or damage to the equipment.



Highlights information needed to ensure the proper use of this device.

## B.2 Safe Operation of Equipment

### **WARNING**

*Double E Company designs and manufactures core plugs with maximum safety in mind. Please take careful note of the following rules for safe operation:*

- Double E recommends always using the core plug carefully without abusing it. Avoid strong collisions and/or accidental impacts with foreign bodies. These collisions can damage the core plug's body, neck, or journal.
- There is risk of injury from the rotation of the core plug during unwinding. Keep sufficient distance during unwinding and do not touch any part of the core plug during rotation.
- Do not wear loose hair or clothing near rotating core plug for risk of entanglement.
- Do not use core plugs in working conditions different than stated in the specifications table or on any notes on the approval drawing.
- Do not exceed the operating loads of the core plugs as specified on the customer quotation and/or approval drawing. This voids core plug warranty and can be unsafe.
- Make sure all fasteners are in place before operation.
- All replacement parts on this core plug should be original equipment supplied by the Double E Company.



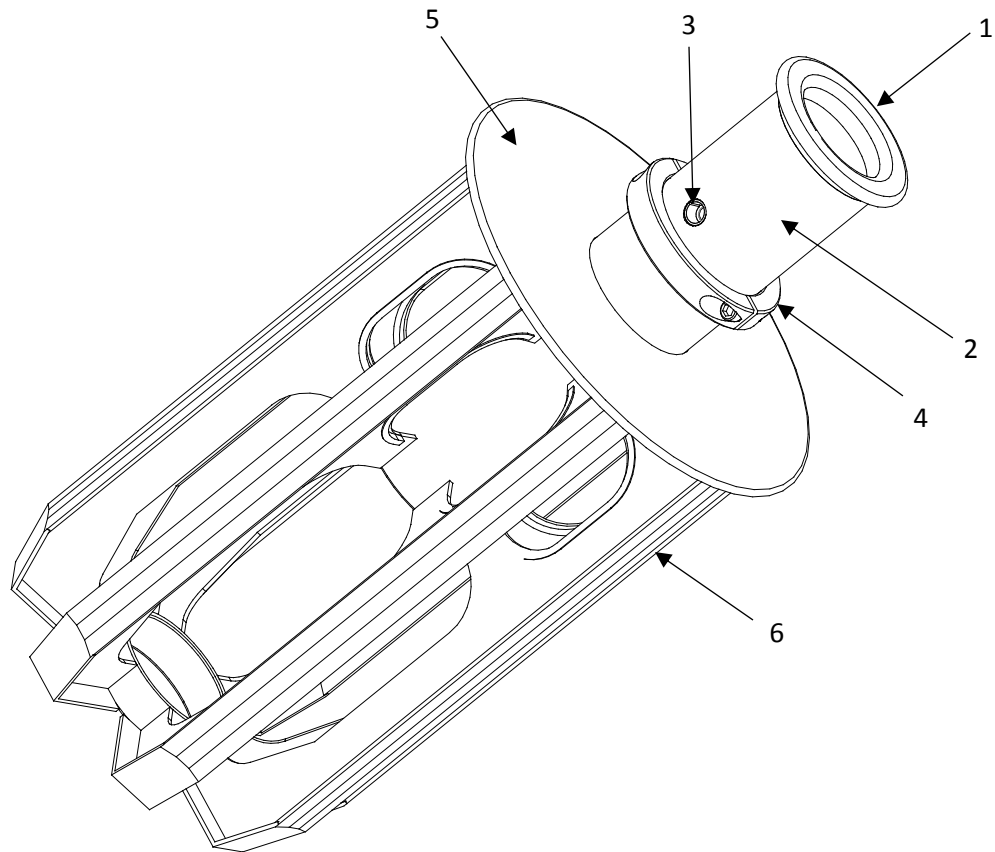
**Visually inspect the core plug prior to each use:**

- Check the body for any cracks or excessive wear.
- Check the neck for any cracks or excessive wear.
- Check the journal for any cracks or excessive wear.

**In the event that any of the above conditions are identified, do not put the core plug in service and contact Double E Company Technical Support at 508-588-8099 extension 571.**

## C. TERMINOLOGY

### C.1 CP-1000 Core Plug Components

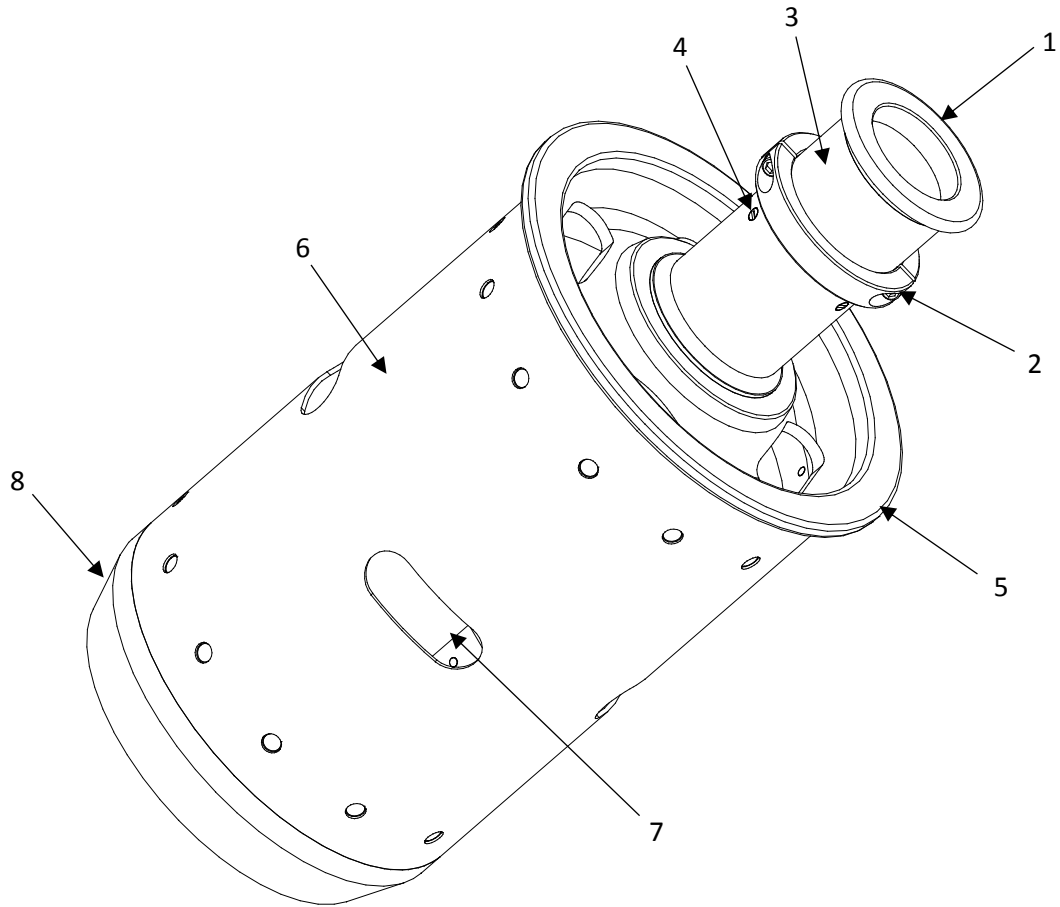


- 
- |                        |                                  |
|------------------------|----------------------------------|
| 1. UHMW Journal        | 4. Adjustable Split Clamp Collar |
| 2. Hardened Steel Neck | 5. Steel Shield / Stop Collar    |
| 3. Journal Fastener    | 6. Steel Ribs                    |

*Drawing is for reference only. Actual configuration may vary. Please refer to your approval drawing for an exact list of components included.*



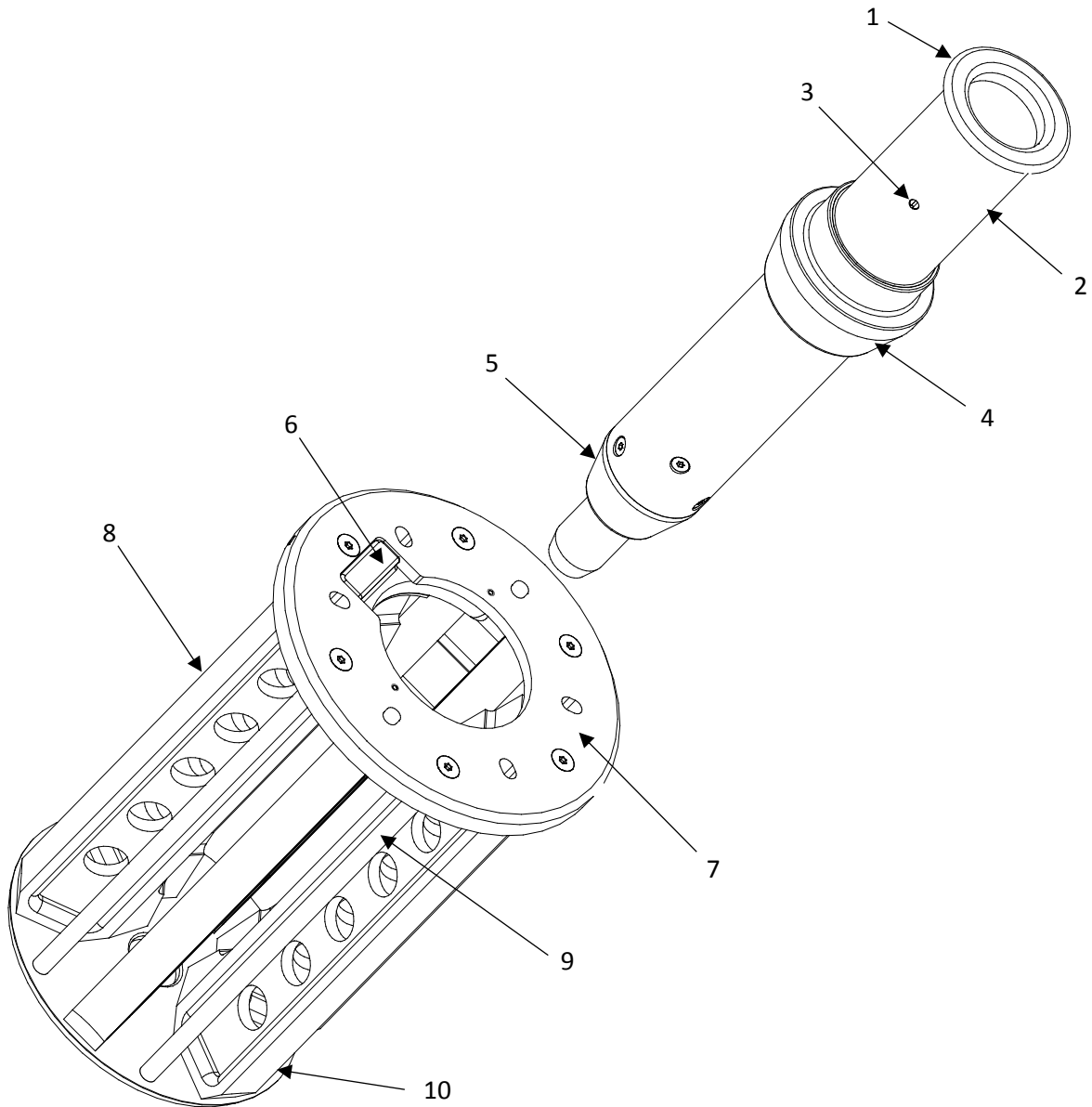
## C.2 CP-2000 Core Plug Components



- 
- |                                  |                              |
|----------------------------------|------------------------------|
| 1. UHMW Journal                  | 5. Aluminum Flange Cap       |
| 2. Adjustable Split Clamp Collar | 6. Outer Sleeve              |
| 3. Hardened Steel Neck           | 7. Carbon Fiber Central Beam |
| 4. Journal Fastener              | 8. Aluminum End Cap          |

*Drawing is for reference only. Actual configuration may vary. Please refer to your approval drawing for an exact list of components included.*

### C.3 MCP-2000 Core Plug Components



- 
- |                         |                        |
|-------------------------|------------------------|
| 1. UHMW Journal         | 6. UHMW Handle Lock    |
| 2. Hardened Steel Neck  | 7. Aluminum Core Stop  |
| 3. Journal Fastener     | 8. UHMW Expanding Ribs |
| 4. Upper Expansion Cone | 9. Aluminum Brace Rods |
| 5. Lower Expansion Cone | 10. Aluminum End Cap   |

*Drawing is for reference only. Actual configuration may vary. Please refer to your approval drawing for an exact list of components included.*

## D. PRODUCT DESCRIPTION

### D.1 CP-1000

One-piece core plugs constructed mainly of steel. Eight metal ribs are welded to a central tube and a shield to make up the insertion diameter. It has a heat-treated steel neck and UHMW journal.

### D.2 CP-2000

One-piece core plugs constructed of a combination of carbon fiber, steel, aluminum, and wound fiberglass or spun nylon. A carbon fiber tube runs through the center of the plug from end to end. It has a heat-treated steel neck and UHMW journal.

### D.3 MCP-2000

Two-piece core plugs constructed of carbon fiber, steel, aluminum, and UHMW. Six UHMW ribs are connected to an aluminum shield and end cap to make up the insertion diameter on the expanding cage. The activating shaft utilizes a full length carbon fiber tube. It has a heat-treated steel neck and UHMW journal.

## E. OPERATING INSTRUCTIONS

### E.1 Core Plug Installation

All Double E core plugs are intended to be installed into the core manually. The core should be of good quality and absent of any major dents, delamination, or other imperfections. Once visually inspected, the core plugs can be inserted into the cores. Manually insert the core plug all the way until the stop flange hits the core.

### E.2 Connecting the Core Plug to the Machine

With the core plugs inside the core, the roll should be moved to line up with the bullets on the machine. The bullets on the machine can then be activated, moving inward until they are fully mated with the core plug journals. The recommended side force from the bullet is 60% of the roll weight. Do not grease the face of the bullet or the internal taper of the journal.

### E.3 Removing the Core Plugs

When the roll has finished unwinding, retract the bullets from the core plugs so that they do not interfere with the plugs. Safely remove the empty core and core plugs to an area outside of the machine. Remove each core plug from the core manually.

# F. OPERATING INSTRUCTIONS

## F.1 Technical Specifications



*Do not exceed the operating parameters of the core plugs as specified in the manual. This voids the warranty and can cause serious injury.*

Standard core plugs are defined with the following specifications:

**Roll Weight:** 5500 lbs. [2500kg] maximum

**Side Arm Force:** 1200 lbs. [545 kg] minimum; 3000 lbs. [1364 kg] maximum

**Surface Speed:** 3000 feet per minute [937.5 meters per minute] maximum

**Insertion Length:** 19 inches [482.6 mm] standard

**Neck Length:** 8 inches [203.2 mm] standard

Heavy-duty core plugs have increased specifications:

**Roll Weight:** 7500 lbs. [3400kg] maximum

**Insertion Length:** 24 inches [609.6 mm] standard

Core plugs for custom duty applications are available. Inquire with your local sales representative.

## G. MAINTENANCE

### **WARNING**

*If cracks are present, remove the core plug from service and notify Double E. Cracks can lead to complete failure of the core plug.*

### G.1 Routine Inspection

Perform routine inspection *monthly*. Routine inspection can usually be accomplished without disassembly or removal of the core plug from the machine. The purpose of routine inspection is to ensure that the core plug is functioning properly prior to being used in the machine. Every 30 days, or whenever necessary, perform the following:

- Examine the internal taper of the journal and inspect for a full contact pattern.
- Examine the front of the journal to ensure that it is not damaged.
- Examine the neck of the core plug for cracks. If cracks are found, remove the core plug from service.
- Examine the insertion end of the core plug for cracks. If cracks are found, remove the core plug from service.
- Check that all hardware is present including any journal fasteners, insertion fasteners, and/or rivets.

### G.2 Annual Maintenance

Perform annual inspection/maintenance *yearly*.

- Replace the journal to ensure the correct fit between the bullet and the core plug.
- Replace journal fasteners.
- Tighten any fasteners to the proper torque.

### G.3 Non-Routine Maintenance

If the product is used under normal conditions and inspected regularly, it is rare that any non-routine or extraordinary maintenance will be needed. In the event that it is necessary, it is recommended that you contact Double E Company Technical Support at 508-588-8099 extension 571.

### G.4 Decommissioning

If the product is withdrawn or removed from service, it is necessary to make all at-risk components harmless through proper demolition. These operations must be carried out in accordance with the provisions existing in the nation or locale in which the product will be disposed.

### G.5 Product Storage

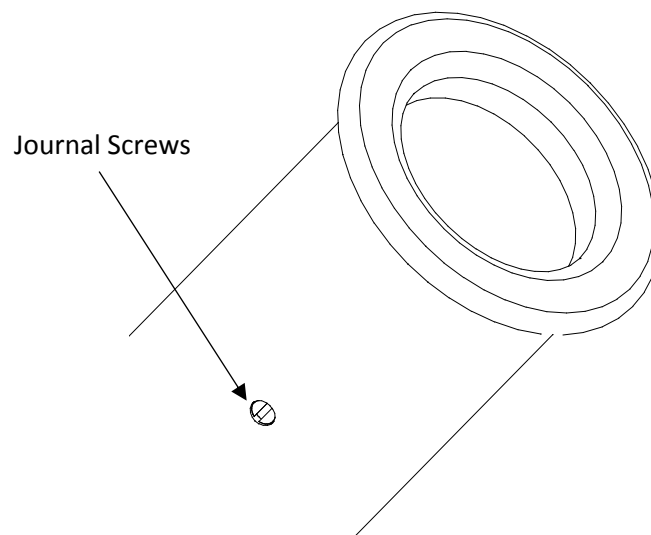
All Double E core plugs should be carefully stored when not in use. To ensure maximum performance, Double E core plugs should be rested on padded surfaces to protect the components. Storage locations should be in cool, dry environments away from high levels of human or vehicle traffic.

## H. REPLACEMENT OF COMPONENTS

### **CAUTION**

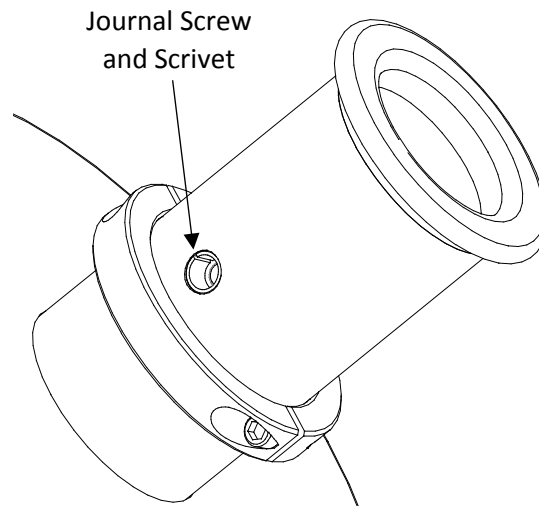
*Replace components only when the core plug is completely removed from service, away from the machine.*

### H.1 Replacing the Journal (3 Screw Design)



1. Using a flat-head screwdriver, turn the three screws inward until they no longer interfere with any part of the core plug neck.
2. Remove the journal by pulling away from the body of the plug.
3. Once removed, the screws can be threaded out of the journal in either direction.
4. Partially install screws in new journal.
5. Insert new journal, lining up the holes in the journal with holes in the core plug neck.
6. Using a flat-head screwdriver, turn the three screws outward until they bottom out.

## H.2 Replacing the Journal (Scrivet and Single Screw Design)



1. Using an allen key or allen wrench, remove the socket head cap screw.
2. Remove the scrivet from the hole
3. Remove the journal by pulling away from the body of the plug.
4. Insert new journal, lining up the hole in the journal with hole in the core plug neck.
5. Install new scrivet in bore.
6. Using an allen key or allen wrench, tighten socket head cap screw until it bottoms out.



# I. TROUBLESHOOTING

<b>Problem</b>	<b>Excessive wear on the insertion end of the core plug or the core ID</b>
Solution 1	There is a larger than normal diametrical gap between the core plug and the core ID. Check if the cores changed and that the core plug has the correct OD.
Solution 2	There is a torque differential between the bullet and the roll, causing the core plug to spin inside the core. Resolve torque differential.

<b>Problem</b>	<b>Core plug does not fit inside core</b>
Solution 1	Core ID has changed. Return to original core ID or consult with Double E for new core plugs.
Solution 2	Core has dents, delamination, or other imperfections. Remove imperfections. Remove core from service when possible.

<b>Problem</b>	<b>Journal is worn or journal is being contacted by stationary object</b>
Solution 1	Replace journal to return to existing lateral position.
Solution 2	Consult with Double E to redesign journal to avoid problem for future runs.

## J. MANUFACTURER'S DECLARATION

Buyer shall afford Double E Company prompt and reasonable opportunity to inspect any goods as to which a claim is made and Double E Company shall have the right of final determination of the cause and existence of any defect under this warranty. No material may be returned to Double E Company without Double E Company's express prior permission in the form of a return authorization number.

Correction of non-conformities, in the manner and for the period provided above, shall constitute fulfillment of all liabilities of Double E Company to Buyer with respect for the goods, whether based on contract, negligence, strict tort, or otherwise.

## K. RETURNS

Warranty and non-warranty returns are initiated through the issuance of a return material authorization (RMA) number from an authorized Double E Company sales or service/support representative. This can be obtained by calling Double E Company in West Bridgewater, MA at 508-588-8099.

The RMA number should be clearly evident on the shipping label and/or invoice and the package should be shipped freight prepaid. If questions arise or if additional information is required, please call the Inside Sales department at 508-588-8099

Product returns should be sent to the address below:

Double E Company, LLC  
319 Manley Street  
West Bridgewater, MA 02379  
ATTN: RMA # \_\_\_\_\_



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