

Replacing Rotary Valve and Reverse Valve Bushings in BU7A Winches

These instructions will assist personnel to correctly install new Rotary Valve and Reverse Valve Bushings in the Motor Housing. For complete disassembly and assembly instructions, refer to Form P5710 Parts, Operation and Maintenance Manual.

REPLACEMENT INSTRUCTIONS

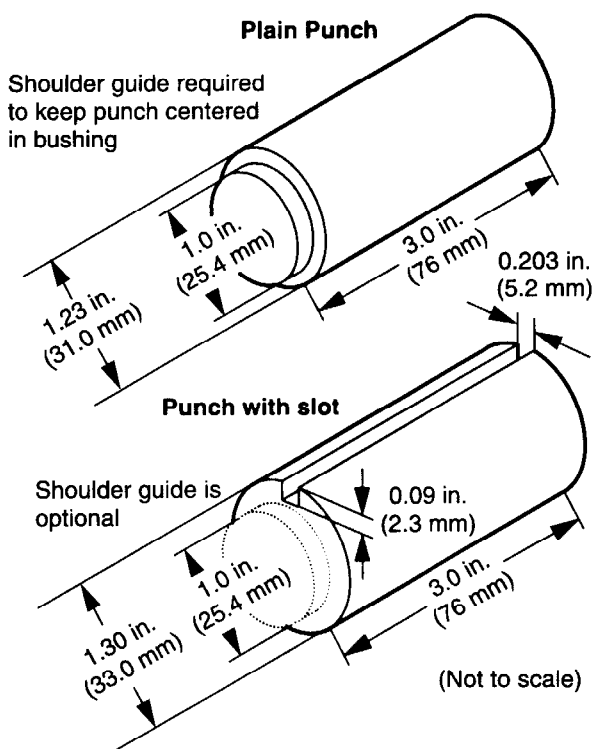
Disassembly Instructions

Prior to disassembling winch, follow directions for draining lubricant in the "Lubrication" section of the Parts, Operation and Maintenance Manual, Form P5710.

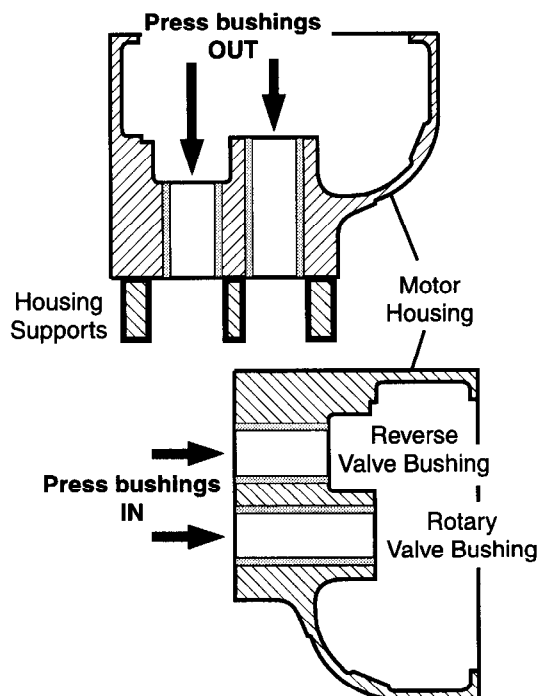
Referring to disassembly instructions in the "Maintenance" section of Form P5710, separate motor from winch and remove crankshaft, piston assemblies, rotary valve (15), and reverse valve (10) from the motor housing.

Rotary Valve Bushing Removal (BU7A-K525)

1. Fabricate one of the two punches shown in Dwg. MHP1461, the first punch will clear the bushing key (30), the second one has a slot to clear the bushing key. Press old rotary valve bushing (14) out of motor housing (28).
2. Measure motor housing bore, if greater than 1.313 in. (33.35 mm) replace housing.



(Dwg. MHP1461)



(Dwg. MHP1463)

CAUTION

- Press rotary valve bushing out from inside motor housing only. Bushing has a groove to clear bushing key (30).
- Support motor housing to prevent damage during pressing.

Bushing Installation

1. Clean bushing bore in motor housing with Loctite® 790 cleaner. Ensure that entire bore is clean then clean then dry using low pressure, filtered compressed air.
2. Apply a thin even coat of Loctite® 609 to the entire outside surface of the new rotary valve bushing (14).
3. Using a swab, apply a thin even coat of Loctite® 609 to the entire inner bore of the motor housing.

REPLACEMENT INSTRUCTIONS (CONTINUED)

NOTICE

• Applying Loctite® 609 to both surfaces is necessary to ensure an airtight seal between rotary valve bushing and motor housing.

4. Align groove in rotary valve bushing (14) with bushing key (30) in motor housing. Press rotary valve bushing into motor housing until bushing is flush with housing.

Reverse Valve Bushing Removal (BU7A-K945)

1. Fabricate one of the two punches shown in Dwg. MHP1461, the first punch will clear the bushing key (30), the second one has a slot to clear the bushing key. Press old reverse valve bushing (12) out of motor housing (28).
NOTE: This bushing is only 2 inches (51 mm) long.
2. Measure motor housing bore, if greater than 1.313 in. (33.35 mm) replace housing.

CAUTION

- Press reverse valve bushing out from inside motor housing only. Bushing has a groove to clear bushing key (30).
- Support motor housing to prevent damage during pressing.

Bushing Installation

1. Clean reverse valve bushing bore in motor housing with Loctite® 790 cleaner. Ensure that entire bore is clean then dry using low pressure, filtered compressed air.
2. Apply a thin even coat of Loctite® 609 to the entire outside surface of the new reverse valve bushing (12).
3. Using a swab, apply a thin even coat of Loctite® 609 to the entire inner bore of the motor housing.

NOTICE

• Applying Loctite® 609 to both surfaces is necessary to ensure an airtight seal between rotary valve bushing and motor housing.

4. Align groove in reverse valve bushing (12) with bushing key (30) in motor housing. Press rotary valve bushing into motor housing until reverse valve bushing is flush with motor housing.

Checking Installation

Measure the clearance between valve and bushing. Clearance should be 0.0005 to 0.001 inches (0.013 to 0.025 mm).

Valve should rotate freely in bushing with no tightness. Any tightness can cause galling and excessive heat. This may cause erratic winch operation.

If valve is tight, the bushing must be lightly honed, do not exceed clearance values.

Assembly Instructions

Follow instructions for winch assembly specified in Form P5710. Fill winch with lubricant according to instructions in "Lubrication" section.

Adjust and test winch as specified in Form P5710.

KIT COMPONENTS

Kit BU7A-K945 includes		
DESCRIPTION OF PART	QTY TOTAL	PART NUMBER
Reverse Valve Bushing	1	BU7A-945
Loctite® 609	1	RC-60921

Kit BU7A-K525 includes		
DESCRIPTION OF PART	QTY TOTAL	PART NUMBER
Rotary Valve Bushing	1	BU7A-525
Loctite® 609	1	RC-60921