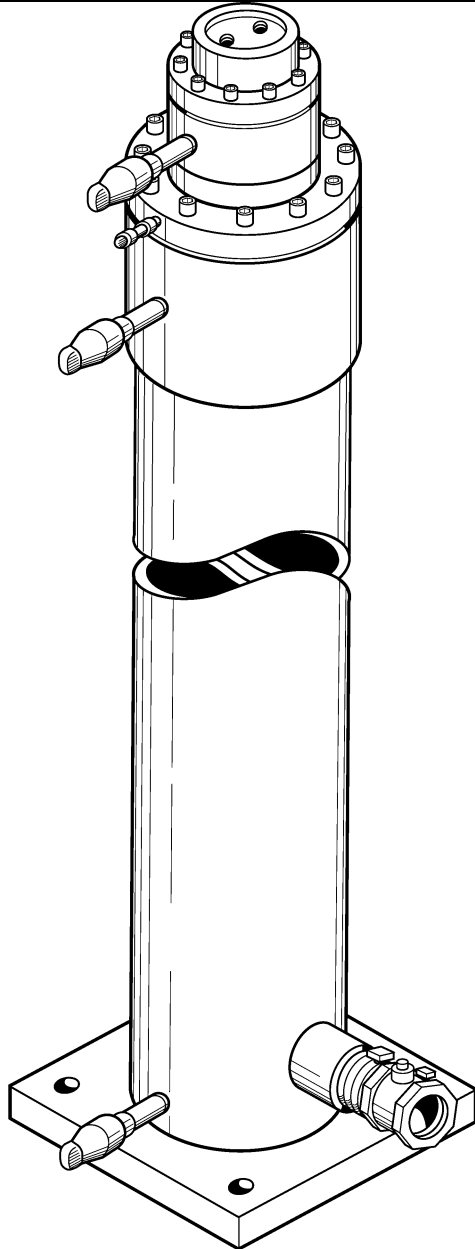


Holed/Holeless/Roped Plunger & Cylinder Parts

Spare Parts Leaflet

03-6942Y

January 11, 2023 / Page 1 of 20



03	6942AP	
	VINTAGE	
REV	EN	

AAA6942GP

WELDED
HEAD

03	6942BC	
	VINTAGE	
REV	EN	

6942Y

6942BR

6942BD

TELESCOPIC

03	6942DA	
	VINTAGE	
REV	EN	

AAA6942FW

AAA6942FX

03 R-AAA22822A

HOLELESS
&
SEMI-HOLELESS

AAA6942GN

03 R-AAA22820G

03 R-AAA22820H

ROPED
HOLELESS

OTIS

This document does not contain any technical data subject to EAR or ITAR

SERVICE ENGINEERING
Otis Elevator Company
Bloomfield, Connecticut USA

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History
03-6942Y
First Published: February 1986

Holed/Holeless/Roped Plunger & Cylinder Parts
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REVISED DATE	RESPONSIBLE ENGINEER	PRIMARY REASON FOR REVISION
February 1986	- - -	New leaflet, initial release.
April 1997	- - -	Update parts & artwork.
February 1, 2000	Troy Chicoine	Put document into new template, add history page, update parts.
August 1, 2000	Troy Chicoine	Add parts & document information
August 4, 2004	Troy Chicoine	Add parts
September 22, 2005	Troy Chicoine	Updated p. 16
July 18, 2012	Troy Chicoine	Updated vintage information on p. 14
January 11, 2023	Troy Chicoine	Correction on p. 14

Leaflet Description

This leaflet provides spare parts information for holed, holeless, and roped plunger and cylinder assemblies.

RELATED LEAFLET NUMBERS	TITLES
- - -	- - -

DRAWING REFERENCES	DRAWING REFERENCES	DRAWING REFERENCES	DRAWING REFERENCES	DRAWING REFERENCES
6942AP	6942BR	6942DA	AAA6942GN	AAA22822A
6942Y	AAA6942GP	AAA6942FW	AAA22820G	- - -
6942BC	6942BD	AAA6942FX	AAA22820H	- - -

RELATED DOCUMENT NUMBERS	TITLES
ORM 12.3.0-A	Hydro Packing Replacement Standard Work Process
TIP 12.0-8	Hydraulic Oil Additive for “Stiction” Problems (p/n VP-821620)

This document lists the lowest replaceable units (LRUs) for the standard version of the product. The LRUs are chosen by a team of Otis associates representing engineering and manufacturing. While goal of this document is to make parts identification as easy as possible, the document cannot be all-inclusive. Elevator and escalator contracts classified as “special” or “custom” are not addressed here. For such contracts, please refer to specified information, the contract folder, TIPs, Field Education Articles, Construction Letters, etc. for further information. If you have any suggestions about this document, please contact the subject matter expert listed on this page.

Troy Chicoine—OSC Service Engineering
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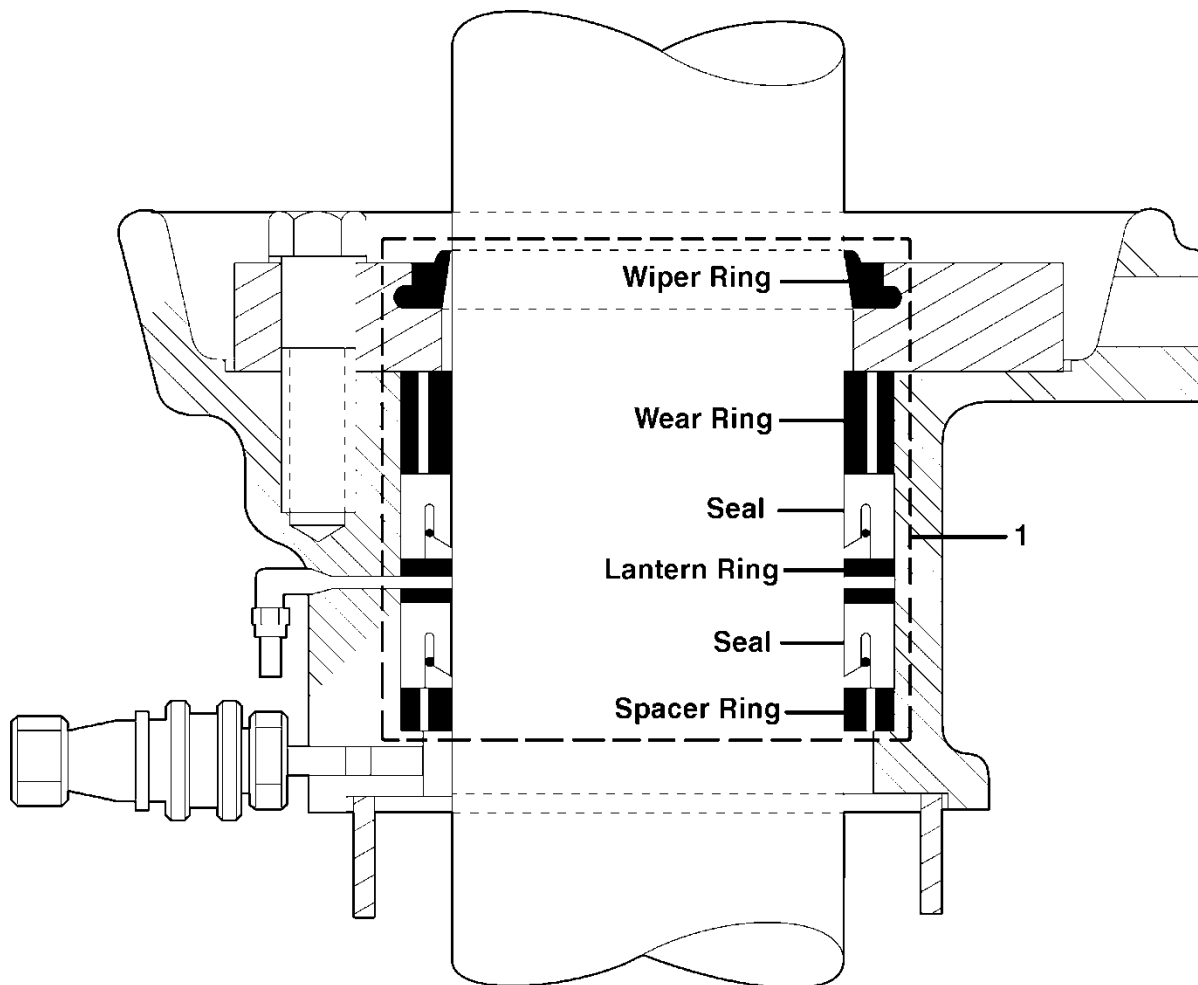
A typical method for identifying the correct replacement packing has been to obtain the plunger size from original ordering data. This information refers to the commercial size of the raw material used to manufacture the plungers, not to their “actual” final diameters. This is referred to as the “nominal” plunger diameter. During different Otis production eras, the final machined plunger diameters have changed, even though the commercial “nominal” size of the raw material has not.

It is the final diameter, along with the cylinder/head type, that determines the packing required. Therefore, since there may now exist more than one final or “actual” plunger diameter for any one “size” listed in the original ordering data, the original ordering data should no longer be used to determine the plunger size to find the appropriate replacement packing. The original ordering data may be used if it specifically refers to Otis part numbers of the packing components.

The most reliable method for determining the correct replacement packing is as follows:

- Determine the cylinder/head type (cast, welded, telescopic, holeless, semi-holeless, EECO). This information will lead you to the correct page of this leaflet.
- Using a diameter tape or other reliable method, directly measure the diameter of the plunger. Using this dimension to locate the proper replacement parts under the column “Plunger Diameter—Actual.”
- Refer to the appropriate section of this leaflet and select the appropriate packing based on this information.

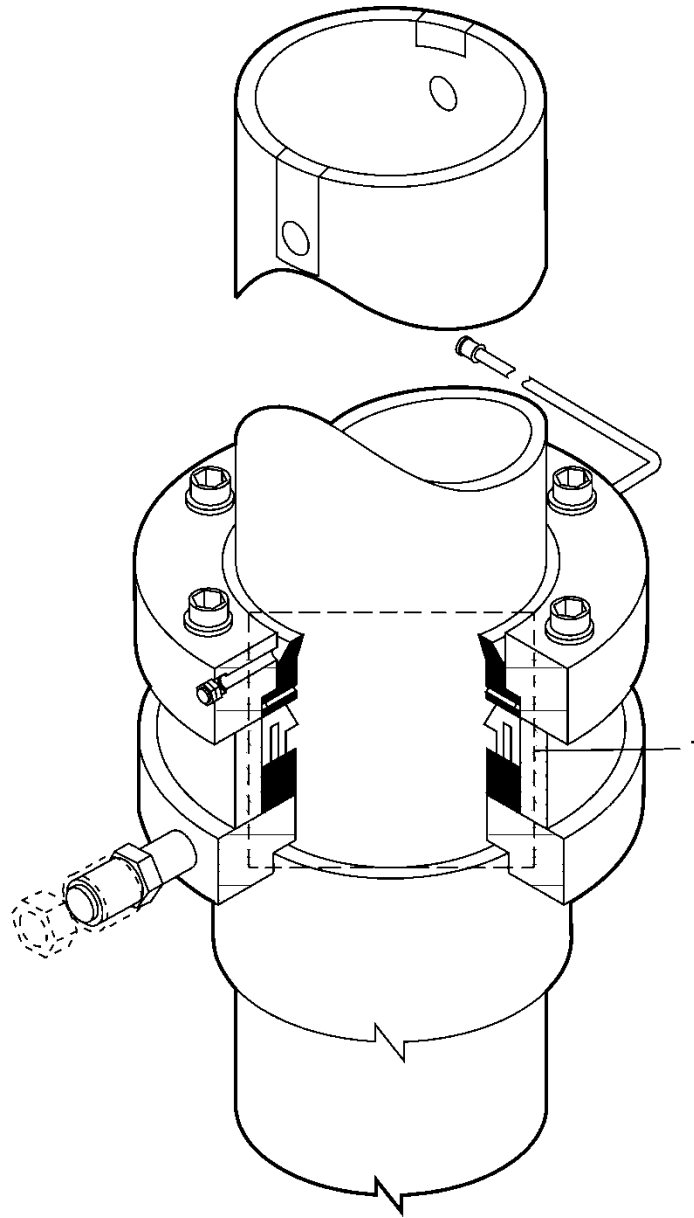
Occasionally, other information is needed to order packing. For this reason, this leaflet lists additional information such as period of manufacture, cylinder head arrangement type (found in original ordering data), and elevator model names. Also, the “actual” plunger diameter is listed along side of the “nominal” plunger diameter. It is the “actual” diameter that should be compared to the measured dimensions, but if a measurement is not available, the “nominal” diameter can be used to limit the possible replacements.



REF. NO.	W/O VINTAGE	DESCRIPTION	PLUNGER SIZE (in.)	
	PART or ML		NOMINAL	ACTUAL
1	D6942Y1	Kit, Texacone Packing. Includes Wiper Ring, Wear Ring, 2 Seals, Lantern Ring, Spacer Ring. Notes 1 & 2	4	3-7/8
	D6942Y2		4-1/2	4-3/8
	D6942Y3		5-1/2	5-7/16
	D6942Y4		6-1/2	6-1/2
	D6942Y5		7-1/2	7-1/2
	D6942Y6		8-1/2	8-1/2
	D6942Y7		9-1/2	9-1/2
	D6942Y8		10-1/2	10-5/8
	D6942Y9		12-1/2	12-5/8
	D6942Y10		14	13-3/4
	D6942Y11		16	15-3/4

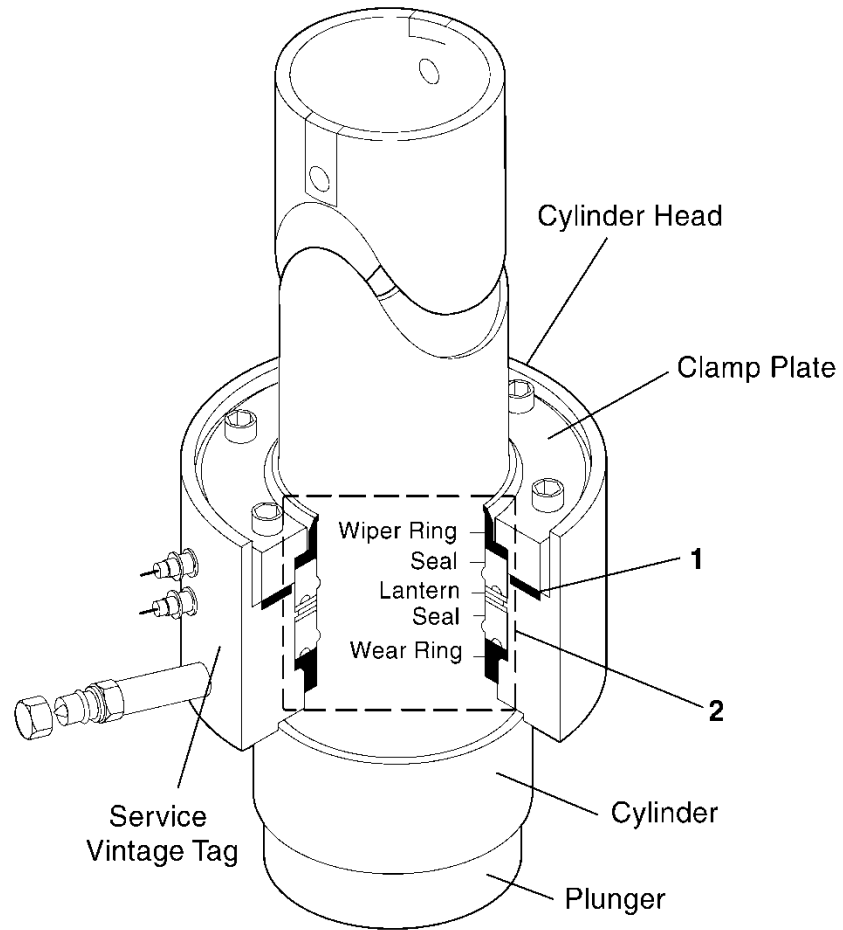
NOTE 1: These packing kits are for Otis "Cast Cylinder Head" designs made prior to 1974.

NOTE 2: The spacer ring may be substituted with a lantern ring.

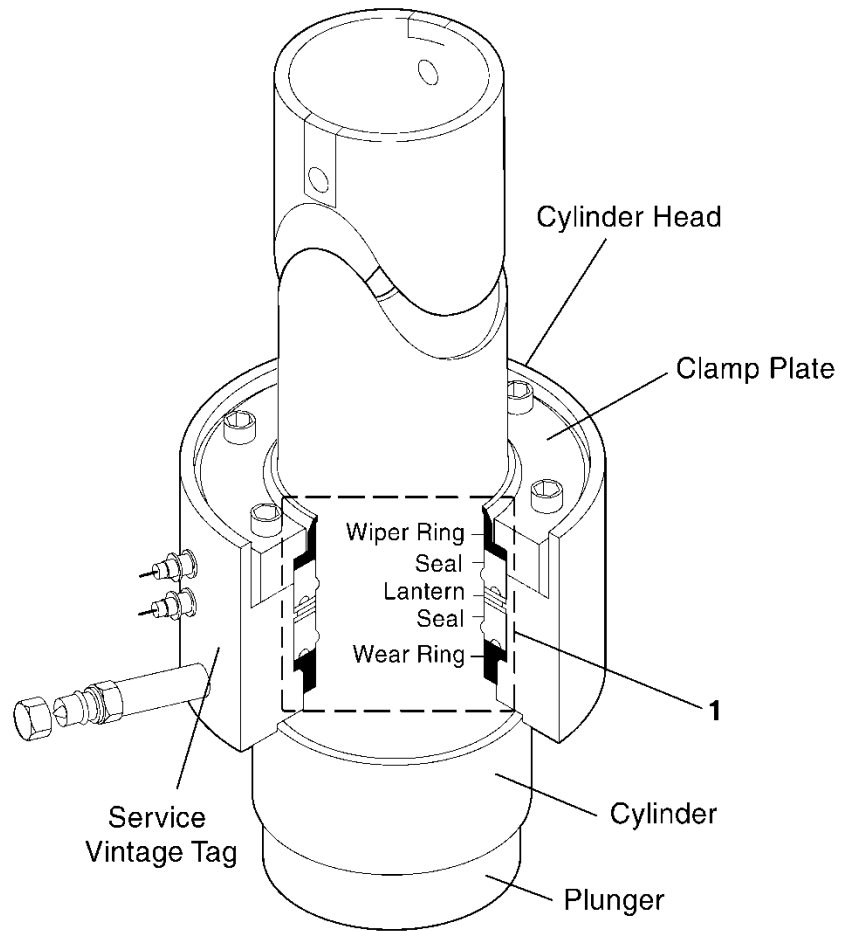


W/O VINTAGE TYPE 6942AP PROD. 1972—1974				
REF. NO.	PART or ML	DESCRIPTION	PLUNGER SIZE (in.)	
			NOMINAL	ACTUAL
1	AAA6942FT1	Kit, Texacone Packing. Includes Wiper Ring, Wear Ring, 2 Seals, Lantern Ring. Note	4	3-7/8
	AAA6942FT3		4-1/2	4-3/8
	AAA6942FT5		5	4-7/8
	AAA6942FT7		5-1/2	5-7/16

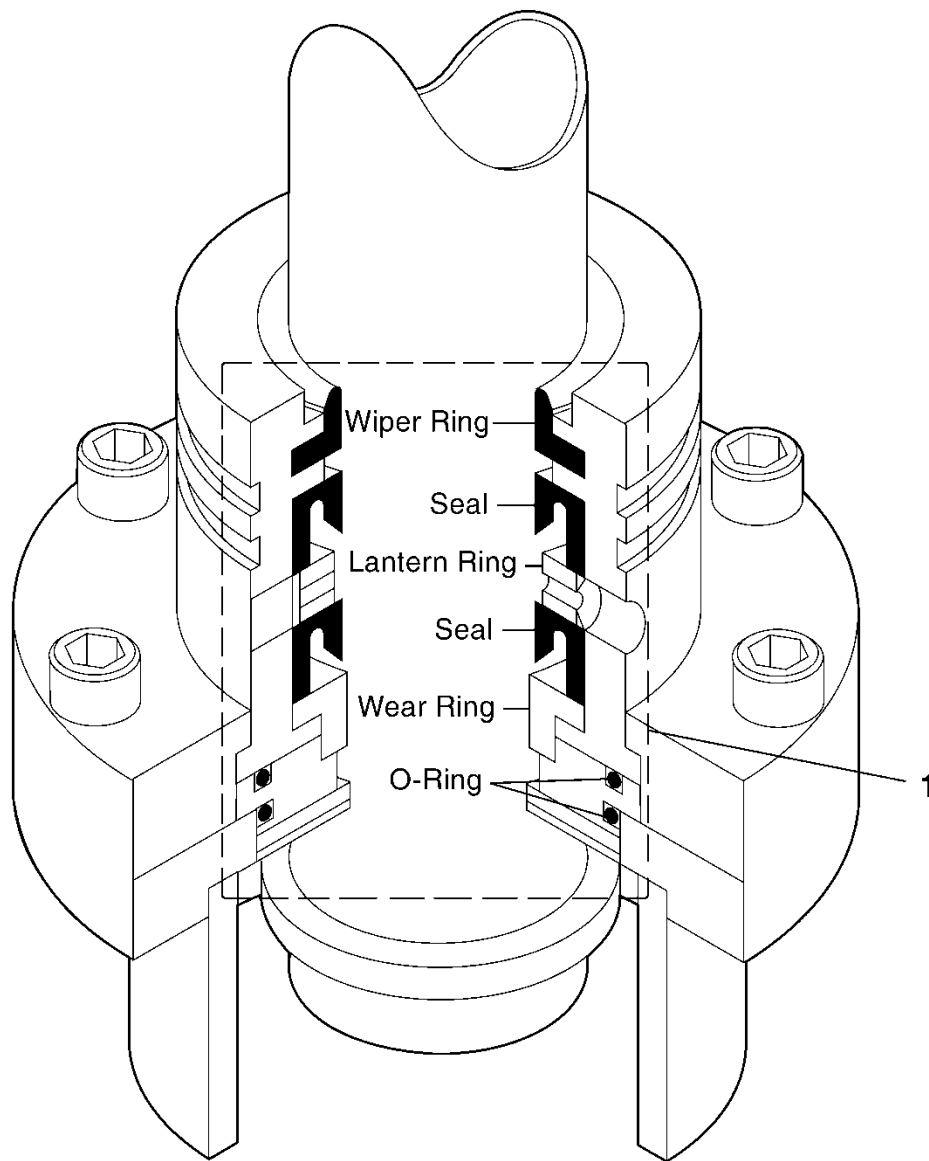
NOTE: 6942AP original equipment furnished w/single seal packing kit as illustrated. Replace packing w/double seal packing kit indicated above and install as illustrated on pp. 6 & 7.



W/O VINTAGE & Y 01				
TYPE A6942AP				
PROD. 1974—1993				
REF. NO.	PART or ML	DESCRIPTION	PLUNGER SIZE (in.)	
			NOMINAL	ACTUAL
1	376FJ1	Gasket	4	3-7/8
	376FJ6		4	4
	376FJ2		4-1/2	4-3/8
	376FJ3		5	4-7/8
	376FJ4		5-1/2	5-7/16
	376FJ5		6-1/2	6-1/2
2	AAA6942FT1	Kit, Texacone Packing. Includes Wiper Ring, Wear Ring, 2 Seals, & Lantern Ring.	4	3-7/8
	AAA6942FT11		4	4
	AAA6942FT3		4-1/2	4-3/8
	AAA6942FT5		5	4-7/8
	AAA6942FT7		5-1/2	5-7/16
	AAA6942FT9		6-1/2	6-1/2



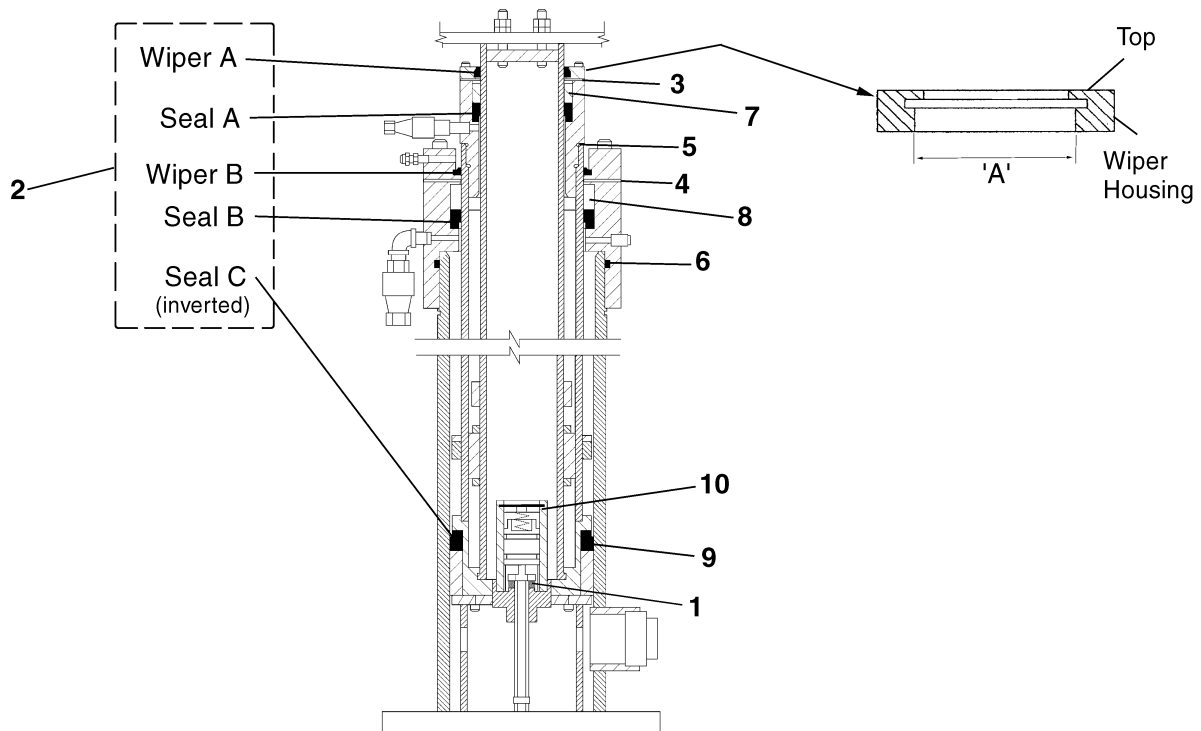
		W/O VINTAGE & Y 01 TYPES A6942AP & AAA6942GP PROD. 1993—PRESENT		
REF. NO.	PART or ML	DESCRIPTION	PLUNGER SIZE (in.)	
			NOMINAL	ACTUAL
1	AAA182AN3	Kit, Texacone Packing. Includes Wiper Ring, Wear Ring, 2 Seals, Lantern Ring.	4	3-15/16
	AAA182AN5		4-1/2	4-7/16
	AAA182AN7		5-1/2	5-1/2
	AAA182AN9		6-1/2	6-9/16
	AAA182AN13		5	4-31/32



REF. NO.	W/O VINTAGE		EECO PLUNGER SIZE (in.)	
	PART or ML	DESCRIPTION	NOMINAL	ACTUAL
1	AAA6942GT1	Kit, Texacone Packing. Includes	3-7/8	3-7/8
	AAA6942GT2	Wiper Ring, 2 Seals, Lantern Ring,	4	4
	AAA6942GT3	Wear Ring, & 2 O-Rings.	4-1/2	4-3/8

Model HHV-1500: Telescopic Plunger Components

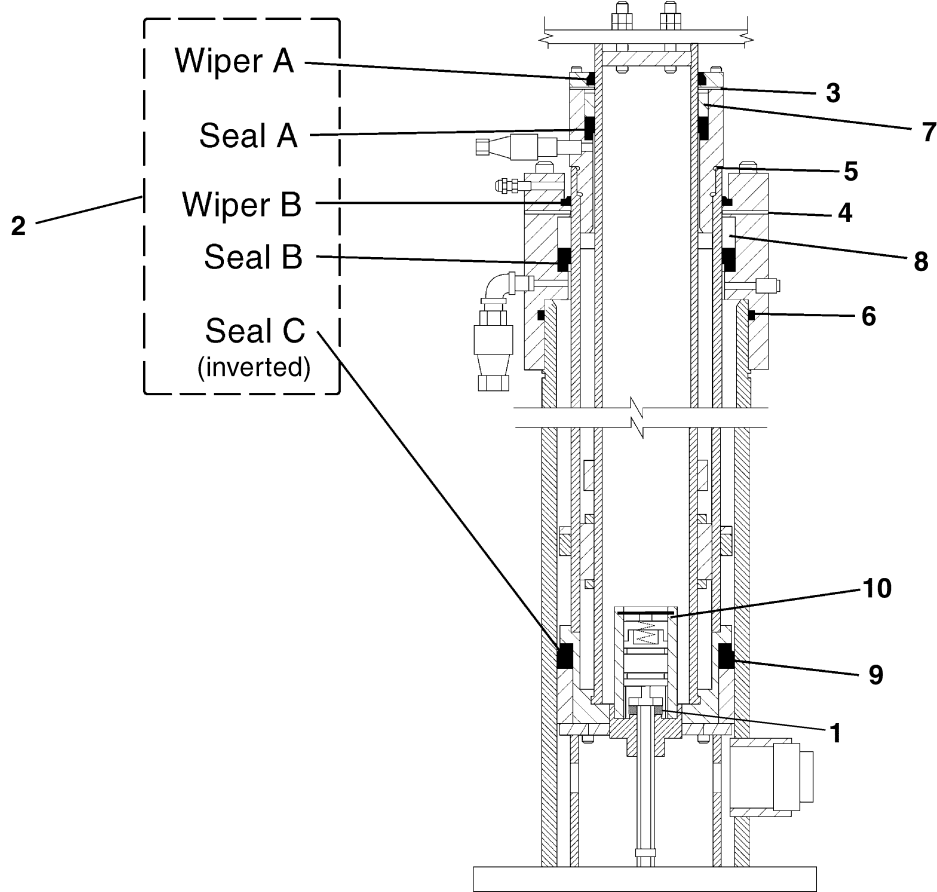
03-6942Y



REF. NO.	W/O VINTAGE		DESCRIPTION	PLUNGER SIZE (in.)		
	TYPES C6942Y, B6942Y, & A6942Y	TYPE 6942Y		NOMINAL	ACTUAL	'A' (in.)
1	DISK JENKINS CAT 164 3/4		Disk, Valve			
2	AAA6942GS5	---	Kit, Textracone Packing. Includes Wiper A, Seal A, Wiper B, Seal B, & Seal C (inverted).	4	inner 2.97 outer 4.63	3.50
	---	AAA6942GS1			inner 3.00 outer 4.63	
				Note	inner 3.00 outer 4.63	3.36
3	376FM2		Gasket			
4	376FM1					
5	182T55		O-Ring			
6	182T57					
7	172RG3					
8	172RG2		Ring, Wear			
9	172RG1					
10	271AN5		Valve, Recycle			

NOTE: The appropriate packing kit for the 4 in. telescopic plunger is determined by the wiper housing measurement shown above.

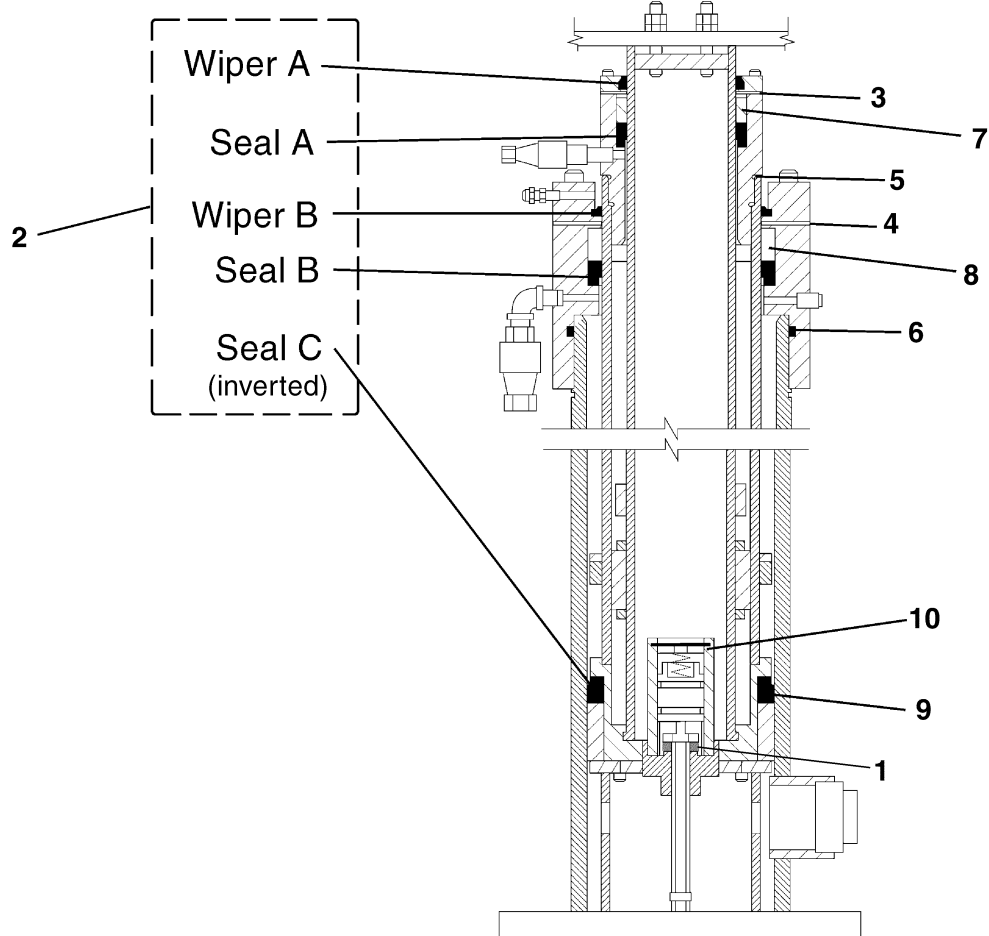
Model HLS-2000: Telescopic Plunger Components



REF. NO.	W/O VINTAGE TYPES A6942BD & 6942BD		PLUNGER SIZE (in.)	
	PART or ML	DESCRIPTION	NOMINAL	ACTUAL
1	DISK JENKINS CAT 164 3/4	Disk, Valve		
2	AAA6942GS2	Kit, Texacone Packing. 👁 p. 9 , ref. 2 Description	4-1/2	inner 3.52 or 3.50 outer 5.10
3	376FM4	Gasket		
4	376FM3			
5	182T38	O-Ring		
6	182T46			
7	172RG6	Ring, Wear		
8	172RG5			
9	172RG4			
10	271AN5	Valve, Recycle		

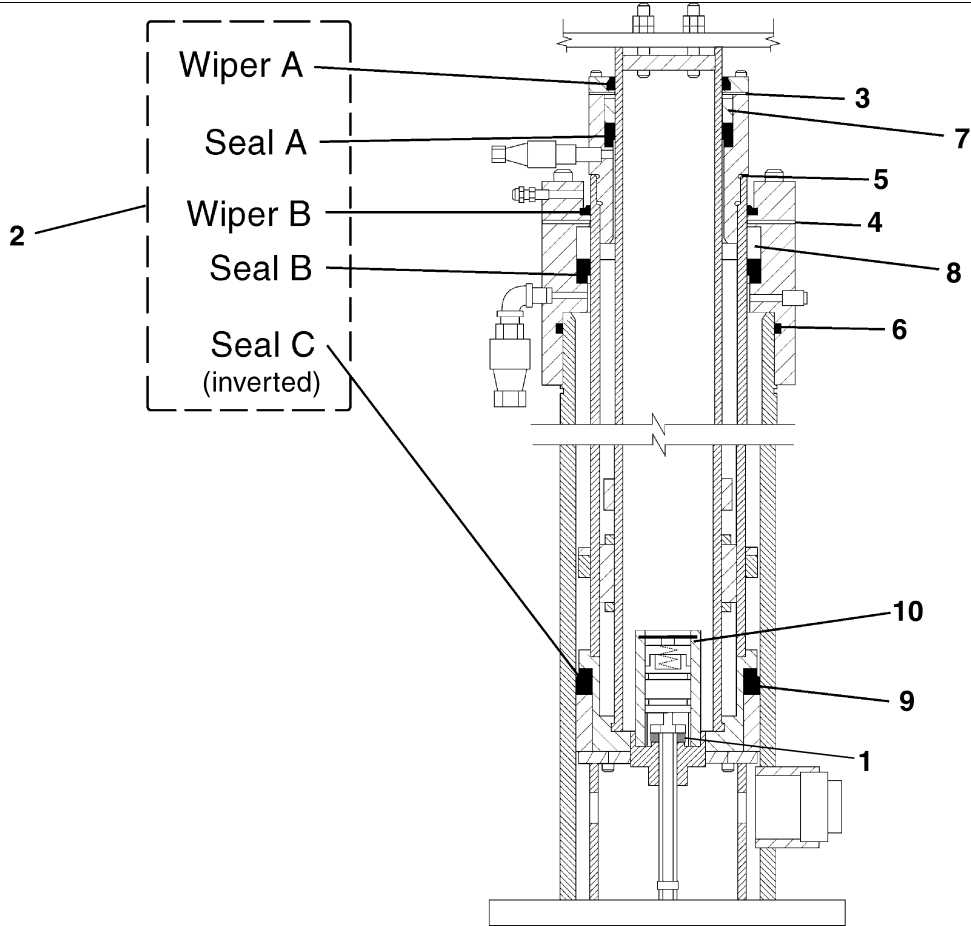
Model HLS-2500: Telescopic Plunger Components

03-6942Y



REF. NO.	VINTAGE Y 01 TYPE 6942BR		PLUNGER SIZE (in.)	
	PART or ML	DESCRIPTION	NOMINAL	ACTUAL
1	DISK JENKINS CAT 164 3/4	Disk, Valve		
2	AAA6942GS4	Kit, Texacone Packing. 👁 p. 9 , ref. 2 Description	5	inner 3.88 outer 5.70
3	376FM7	Gasket		
4	376FM8			
5	182T60	O-Ring		
6	182T34			
7	172RG10			
8	172RG11	Ring, Wear		
9	172RG12			
10	271AN5		Valve, Recycle	

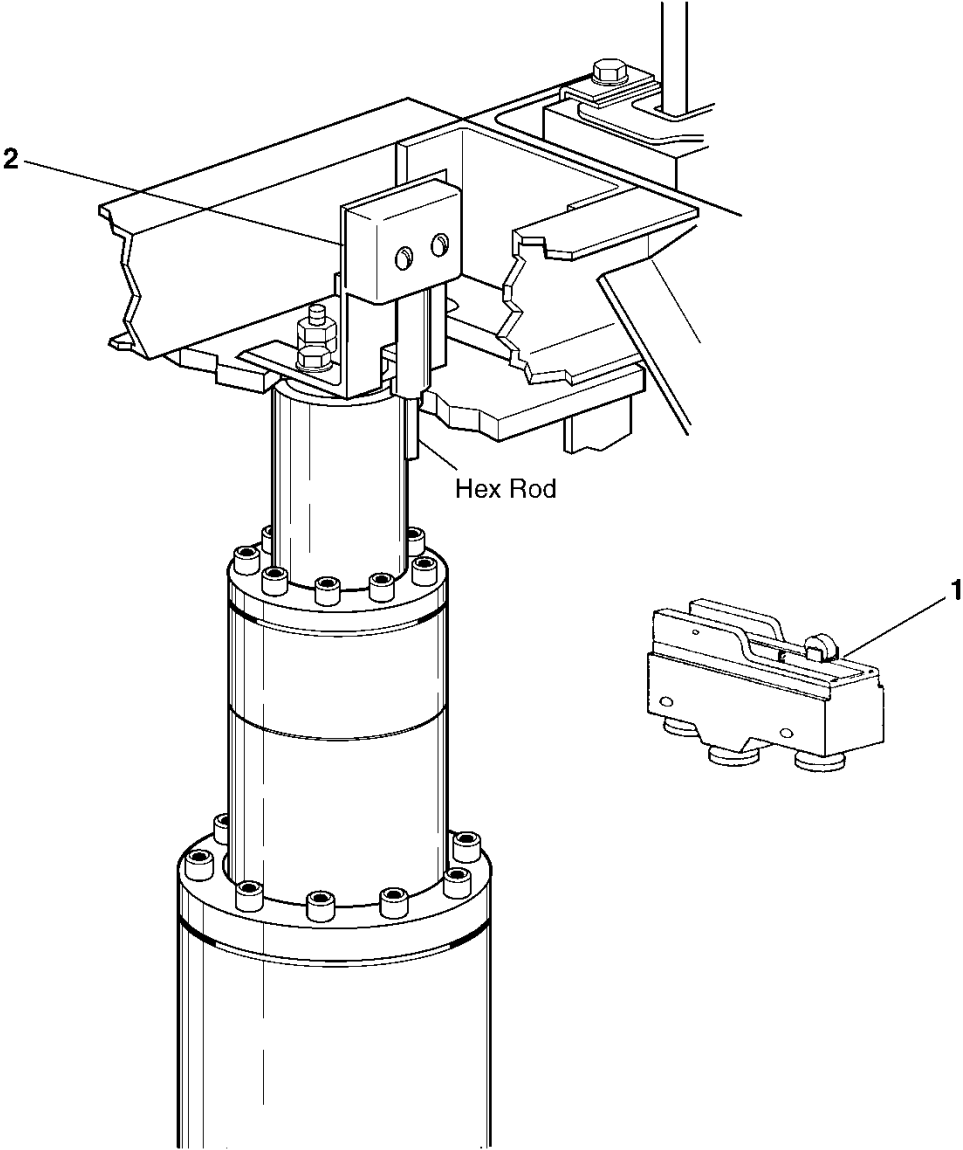
Model HLH-4000: Telescopic Plunger Components



REF. NO.	W/O VINTAGE		PLUNGER SIZE (in.)	
	PART or ML	DESCRIPTION	NOMINAL	ACTUAL
1	DISK JENKINS CAT 164 3/4	Disk, Valve		
2	AAA6942GS3	Kit, Texacone Packing. 👁 p. 9 , ref. 2 Description	5-1/2	inner 4.38 outer 6.32
3	376FM6	Gasket		
4	376FM5			
5	182T23	O-Ring		
6	182T58			
7	172RG9	Ring, Wear		
8	172RG8			
9	172RG7			
10	271AN5	Valve, Recycle		

Recycle Switch & Micro Switch

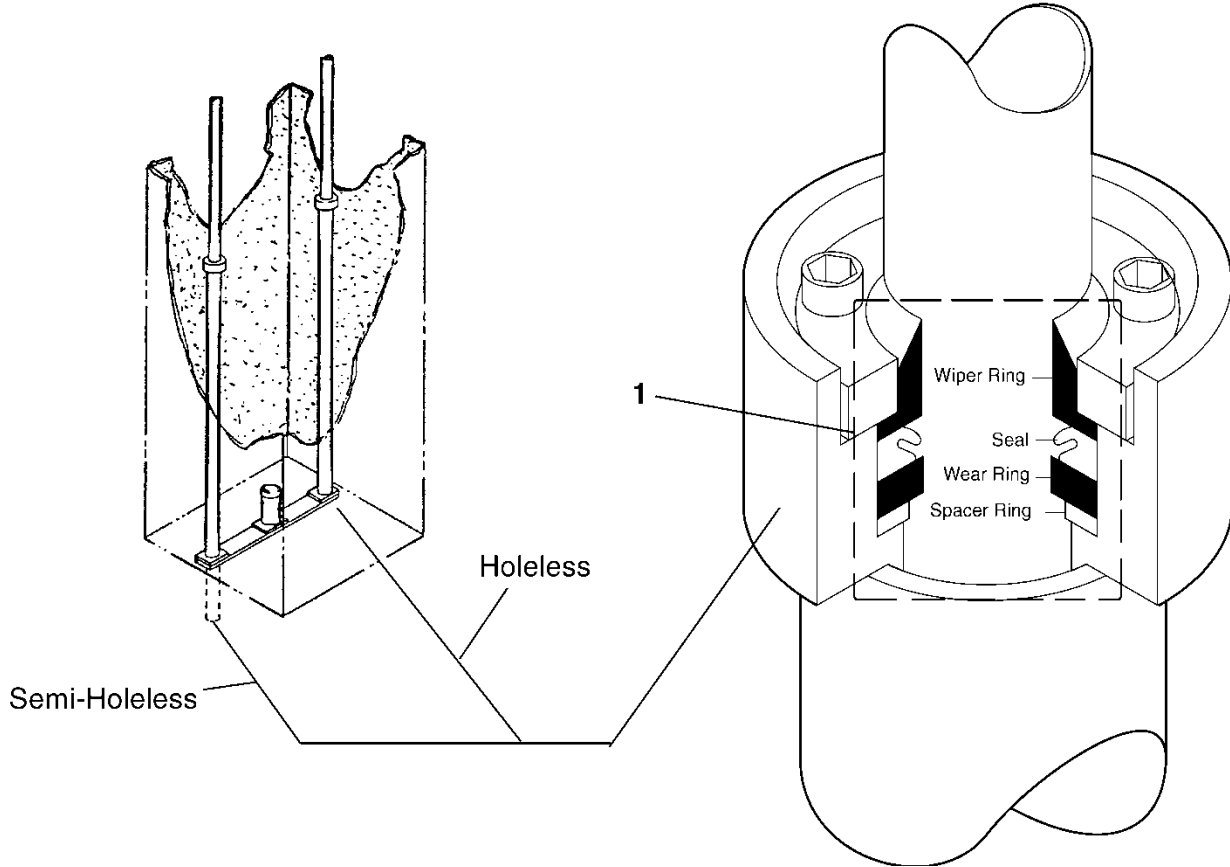
03-6942Y



W/O VINTAGE & Y 01				
REF. NO.	PART or ML	DESCRIPTION	DUTY LOADS (lbs.)	HEX ROD L (in.)
1	177BV1	Switch, Micro	---	---
2	6942BS2	Switch, Recycle	1500	11.10
	6942BS1		2000, 2500, 4000	13.10

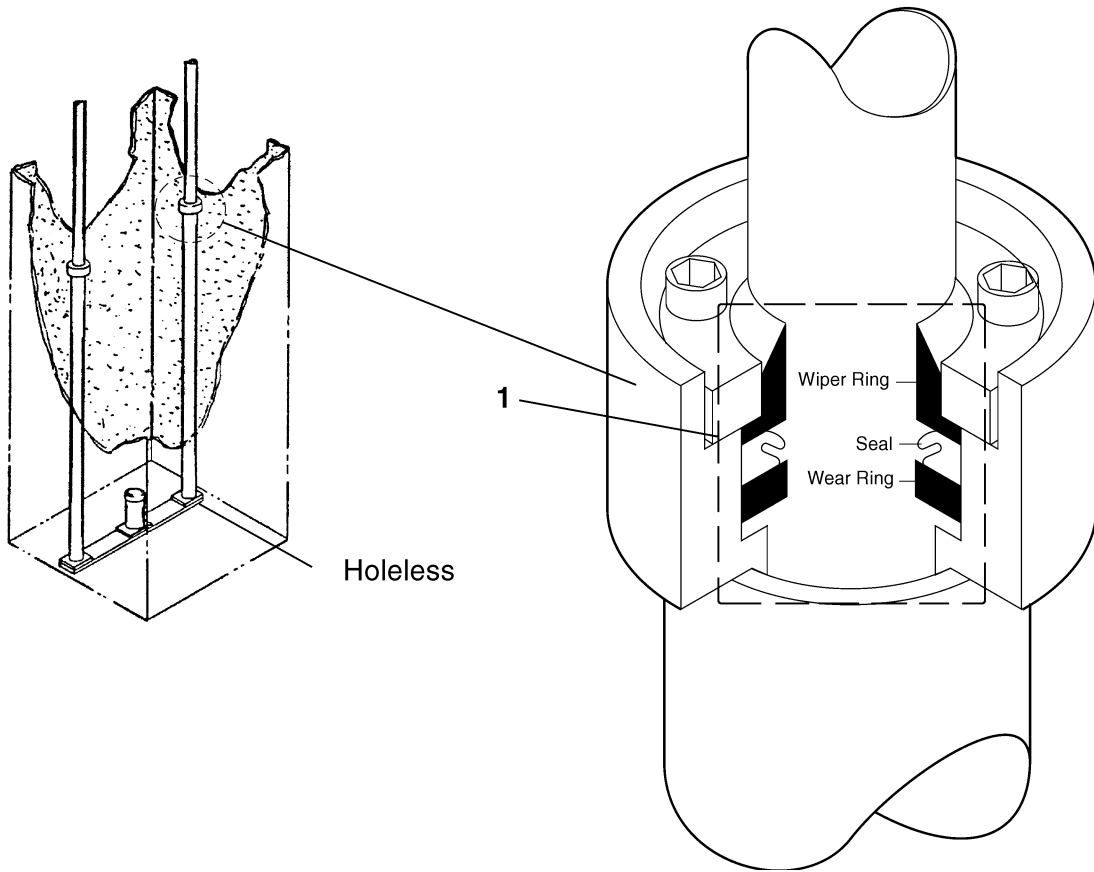
03-6942Y

Direct Holeless & Semi-Holeless Cylinder Head Packing



REF. NO.	PART or ML			DESCRIPTION	PLUNGER SIZE (in.)	
	NOMINAL	ACTUAL				
	W/O VINTAGE	W/O & Y 01 R-AAA6942FW R-AAA6942FX R-AAA6942GN				
	TYPE 6942DA	TYPES B6942DA A6942DA, AAA6942FW, AAA6942FX, & AAA6942GN		AAA22822A AAA22822E		
1	6942EJ1	---	---	Kit, Texacone Packing.	2-3/4	2.750
	AAA182AN1			Includes Wiper Ring, Seal,	2-7/8	2.840
	---	---	AAA182AN2	Wear Ring, & Spacer.	4	3.938
	---	AAA182AS1*	---	Kit, Parker Packing. Includes Wiper Ring, Seal, & Wear Ring.	2-7/8	2.840

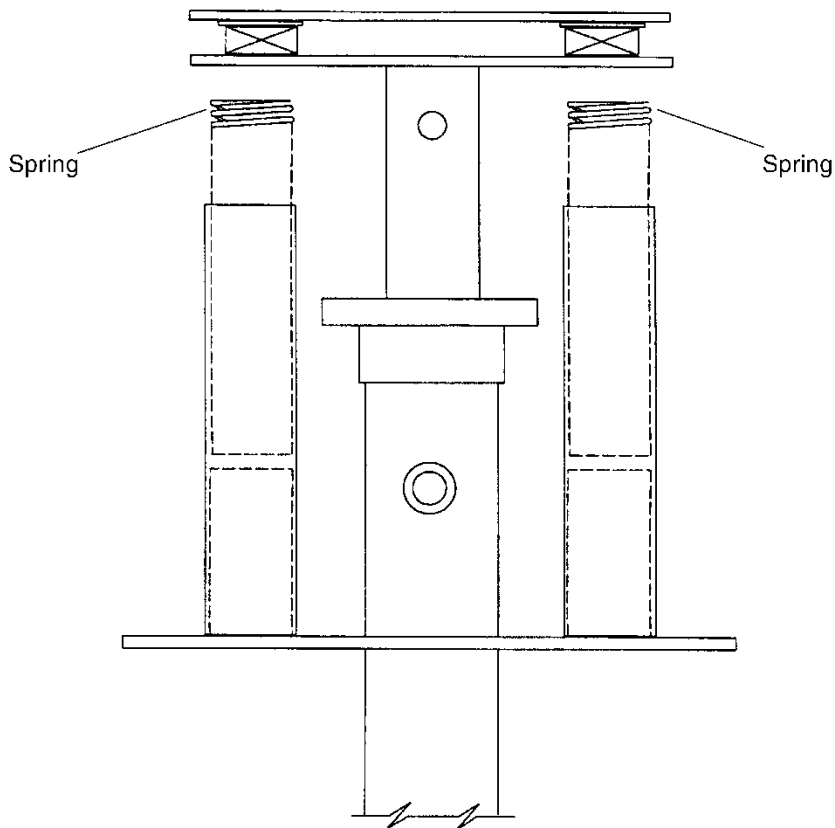
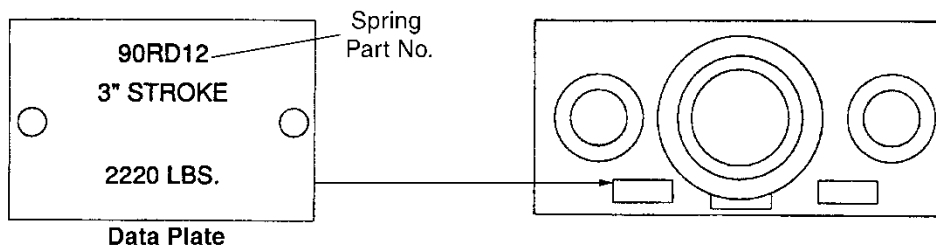
* This kit is used where there is chronic leakage or noise that cannot be addressed with standard packing.



Holeless

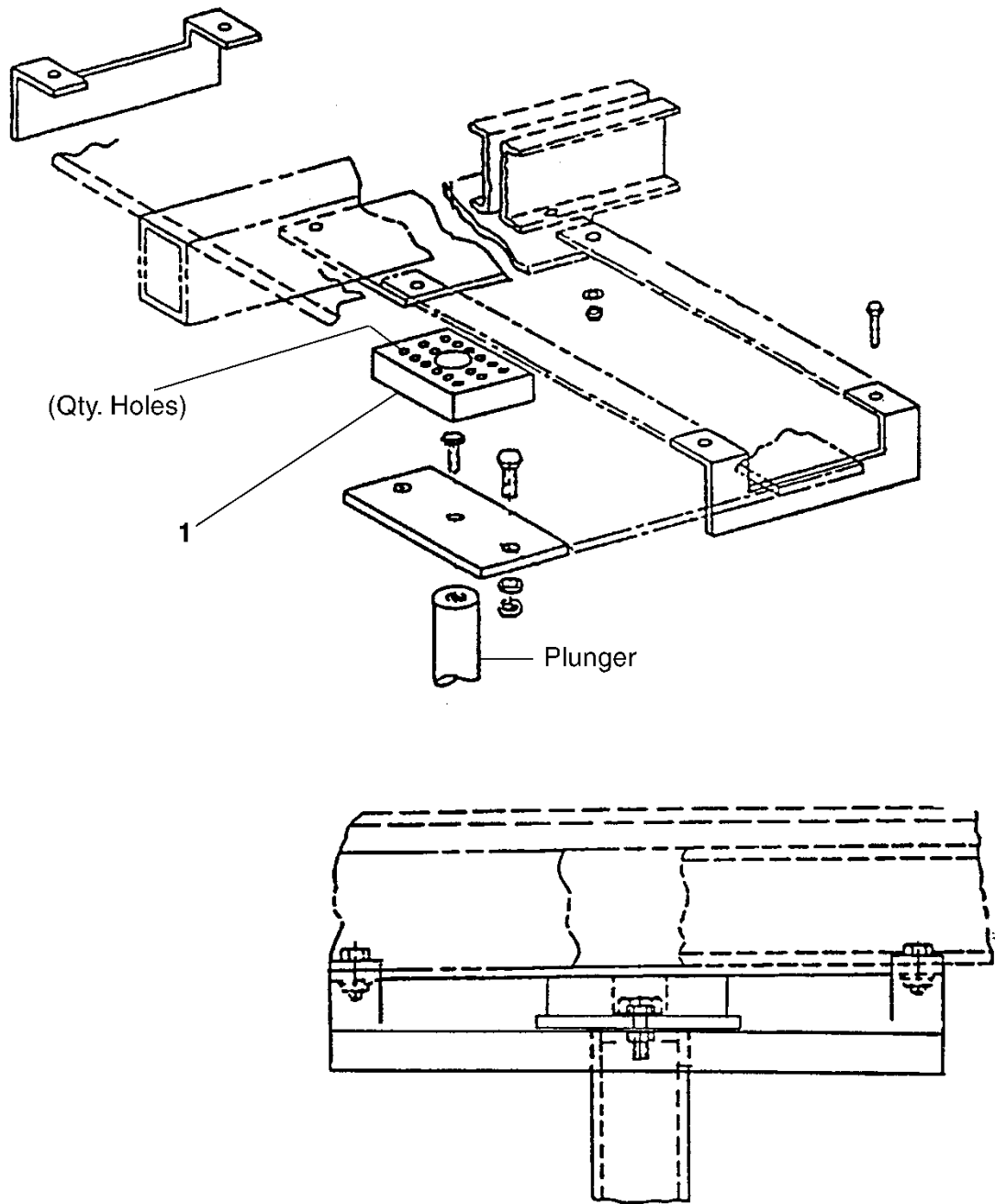
REF. NO.	PART or ML	DESCRIPTION	PLUNGER SIZE (in.)	
			NOMINAL	ACTUAL
	W/O VINTAGE & R-AAA6942GN			
	TYPES AAA6942GN, AAA22820G, & AAA22820H			
1	AAA182AN2	Kit, Texacone Packing. Includes Wiper Ring, Seal, & Wear Ring.	4	3.938
	AAA182AN11		4-1/2	4.438
	AAA182AN12		5-1/2	5.50


Buffer Spring



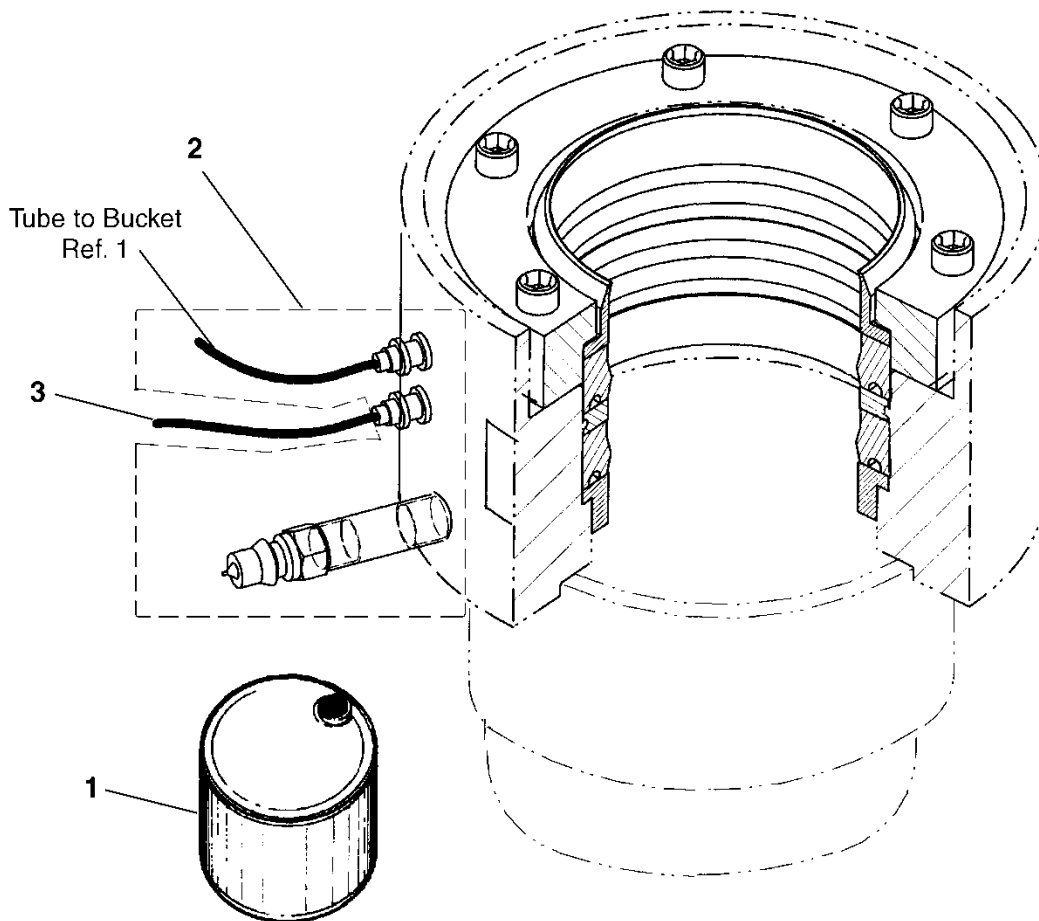
NOTE: To order a replacement spring, specify the part number stamped on the data plate.
 (p/n 90RD12 is shown as an example only)
 If data plate is not present, select spring based on dimensions below.




REF.	PART NO.	DESCRIPTION	WIRE DIAMETER (in.)	FREE LENGTH (in.)	OUTSIDE DIAMETER (in.)	# ACTIVE COILS
1	90AL2	Spring, Buffer	1.25	18.62	5.75	10
	90ND5		0.812	18.5	3.62	16
	90RD12		0.875	18.75	4.5	15
	90TD4		1	18.5	4.5	13
	90ZD3		1.5	18.5	6.88	8



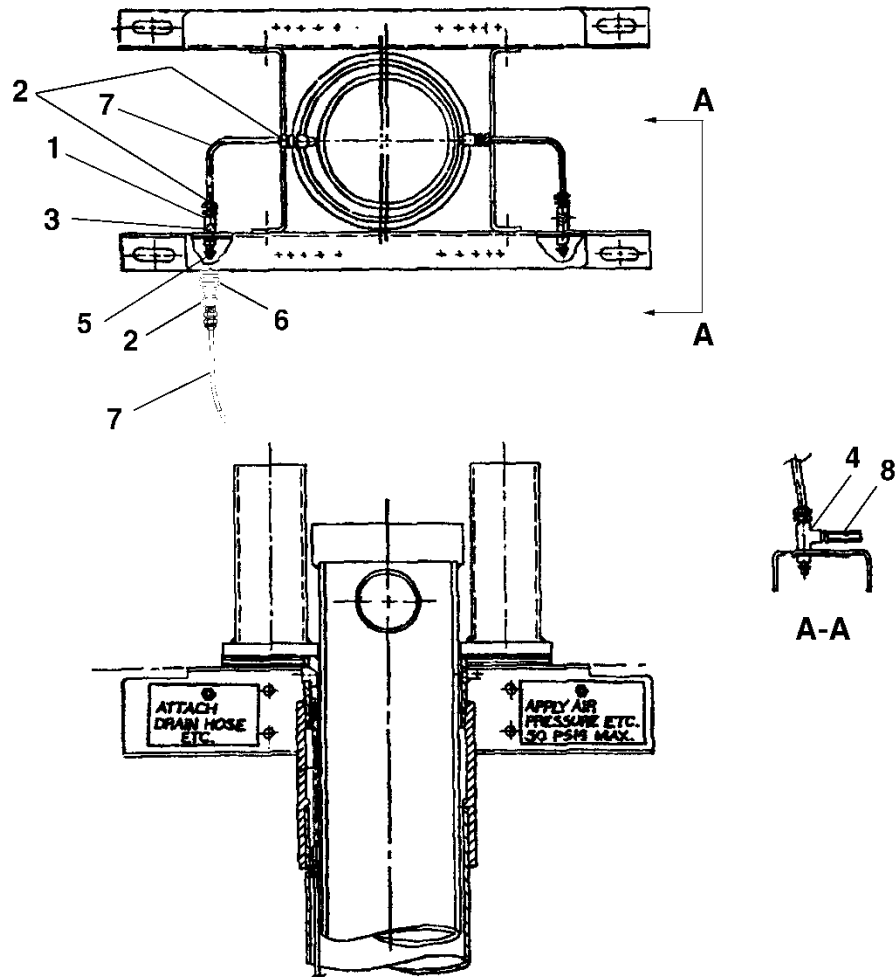
W/O VINTAGE & Y 01				
REF. NO.	PART or ML	DESCRIPTION	SIZE (in.)	HOLES
1	AAA310PJ1	Pad, Sound Isolation	8.0 x 6.0	10
	AAA310PJ2		10.0 x 6.0	16
	310JJ6	Pad, Isolation  Note	3.0 x 3.0	1

NOTE: Used on direct holeless & semi-holeless systems.




	W/O VINTAGE AAA6942GP	AAA22820G	AAA22822A	
REF. NO.	PART or ML			DESCRIPTION
1	AAA508AE1			Bucket, 5-Gallon, Translucent Hydro Pit
2	AAA6942GP400	AAA22820G400	AAA22822A400	Kit, Oil Return/Overflow  Note
3	137AP996			Tubing, Plastic, Oil Return Line, 3/8 in. O.D.,  Note
	137AP999			Tubing, Plastic, Oil Return Line, 1/4 in. O.D.,  Note

NOTE: Oil return line must be ordered separately. Specify length per contract.



REF. NO.	W/O VINTAGE PART or ML	DESCRIPTION
1	377CX2	Coupling
2	AAA00441AAC001	Fitting, Plastic Tube
3	441DK1	Pipe, Nipple, Close
4	377EG1	Pipe, Tee
5	377DR2	Plug, 2-Way-Shut-Off
6	AAA444EE2	Socket, 2-Way-Shut-Off
7	AAA137AV2	Tube
8	AAA271BH1	Valve, Safety

Packing Replacement & Related Tools

PART or ML	DESCRIPTION	PURPOSE
MT-111003	Spanner Bar	Used to remove clamp rings on holeless, semi-holeless cylinder heads when replacing the packing.
MT-111005	Packing Pusher	Delrin rod used to move new packing into position.
MT-111009	2-3/4 in. Sanding Sleeve	Used on pistons to smooth bad joints, polish rough spots and correct wavy pistons.
MT-111010	3-7/8 in. Sanding Sleeve	
MT-111011	4-3/8 in. Sanding Sleeve	
MT-111012	4-7/8 in. Sanding Sleeve	
MT-111013	5-7/16 in. Sanding Sleeve	
MT-111014	6-1/2 in. Sanding Sleeve	
MT-111021	Diameter Tape	Used to measure piston diameter directly (1/64 in. increments).
MT-111022	Packing Replacement Kit  Table Below	Used for removal and replacement of packing kits.
MT-111023-1	Roped Hydro Packing Replacement Tool	Used to support the ram head sheave assembly to facilitate packing change
VP-821620	Hydraulic Oil Additive	Used to alleviate packing noise, friction and “stiction”

PACKING REPLACEMENT KIT INCLUDES:

QUANTITY	DESCRIPTION
2	# 2 Flexible Packing Removal Hooks
2	# 10 Screw Tips for Lantern and Wear Ring Removal
2	# 1 Flexible Packing Removal Hooks
3	Wooden Packing Pushers
1	Diameter Tape Measure
1	Air Valve for Pressure Removal Packing
1	6 in. Vernier Calipers
1	Mini Flashlight
1	Fraction/Decimal Conversion Chart