

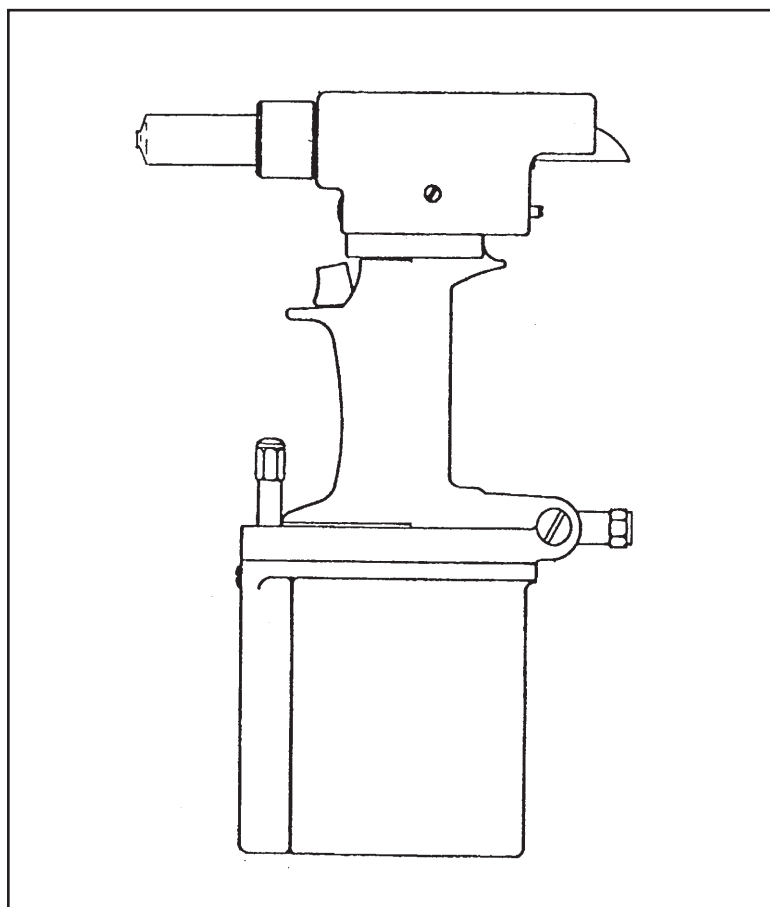
Alcoa
Fastening
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INSTRUCTION MANUAL

MODEL 200

PNEUDRAULIC INSTALLATION TOOL

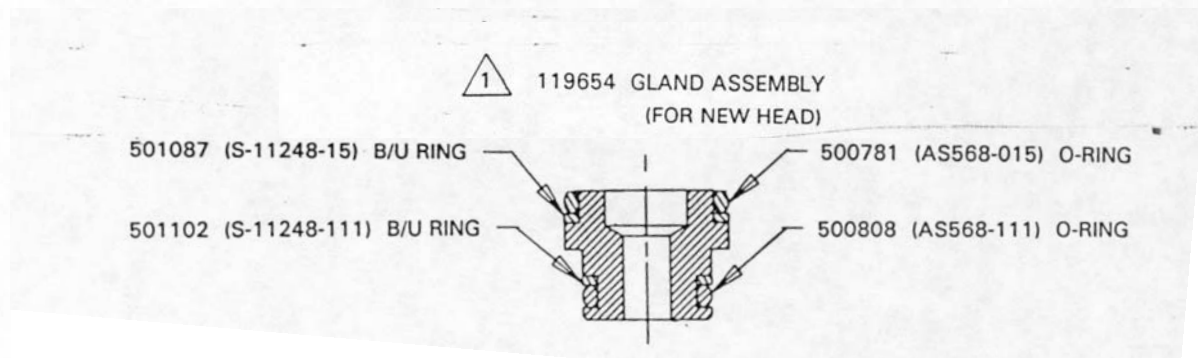
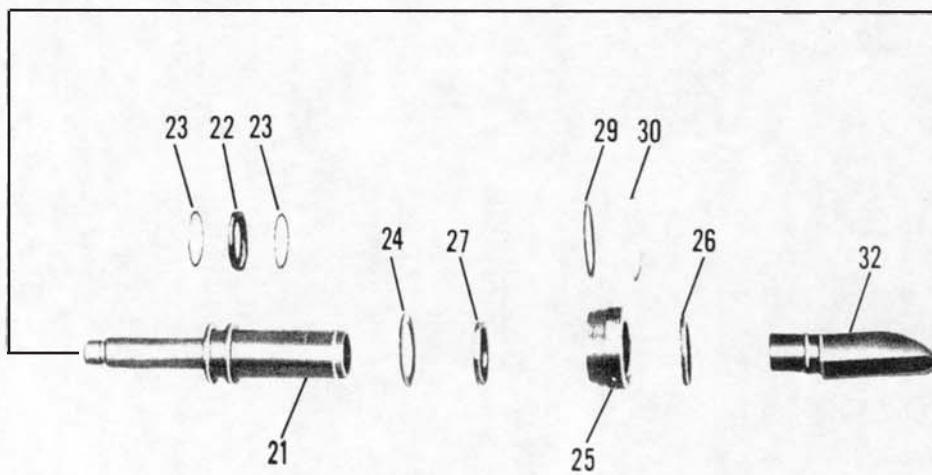
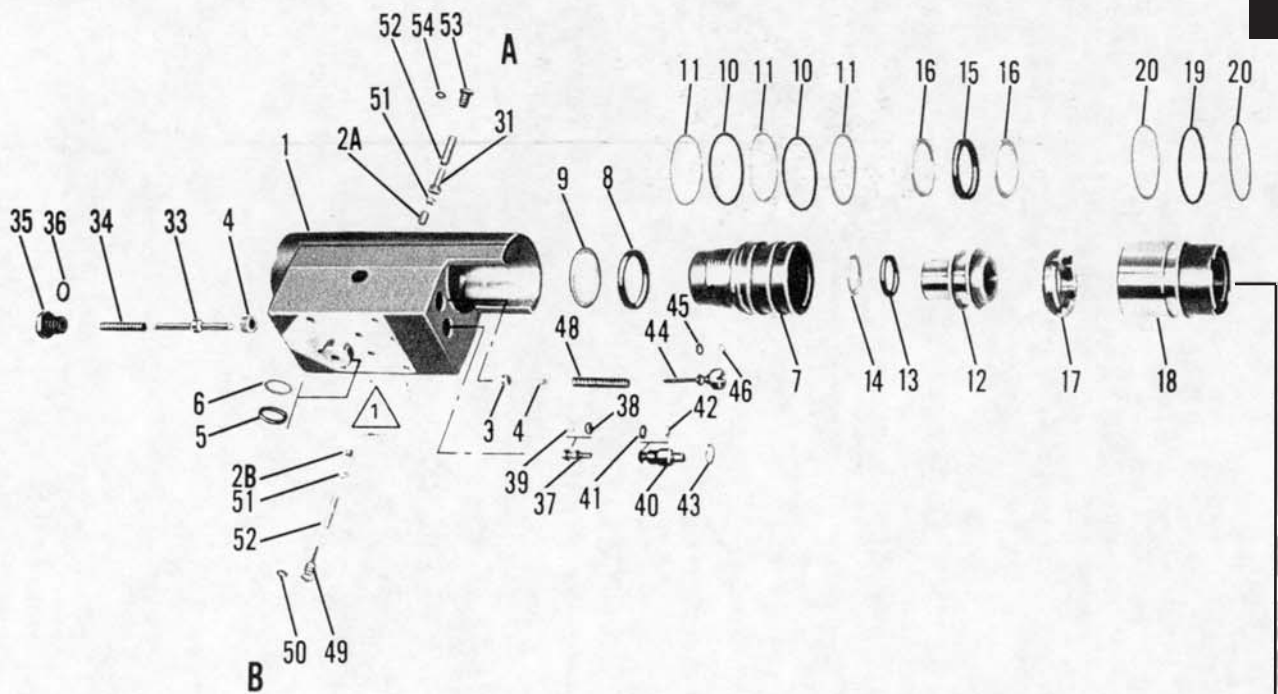


Makers of Huck®, Marson®, Recoil®
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Form HK 154
03-05-2004



Fig. 2



Head Assembly 100366

Table 2 – PARTS LIST

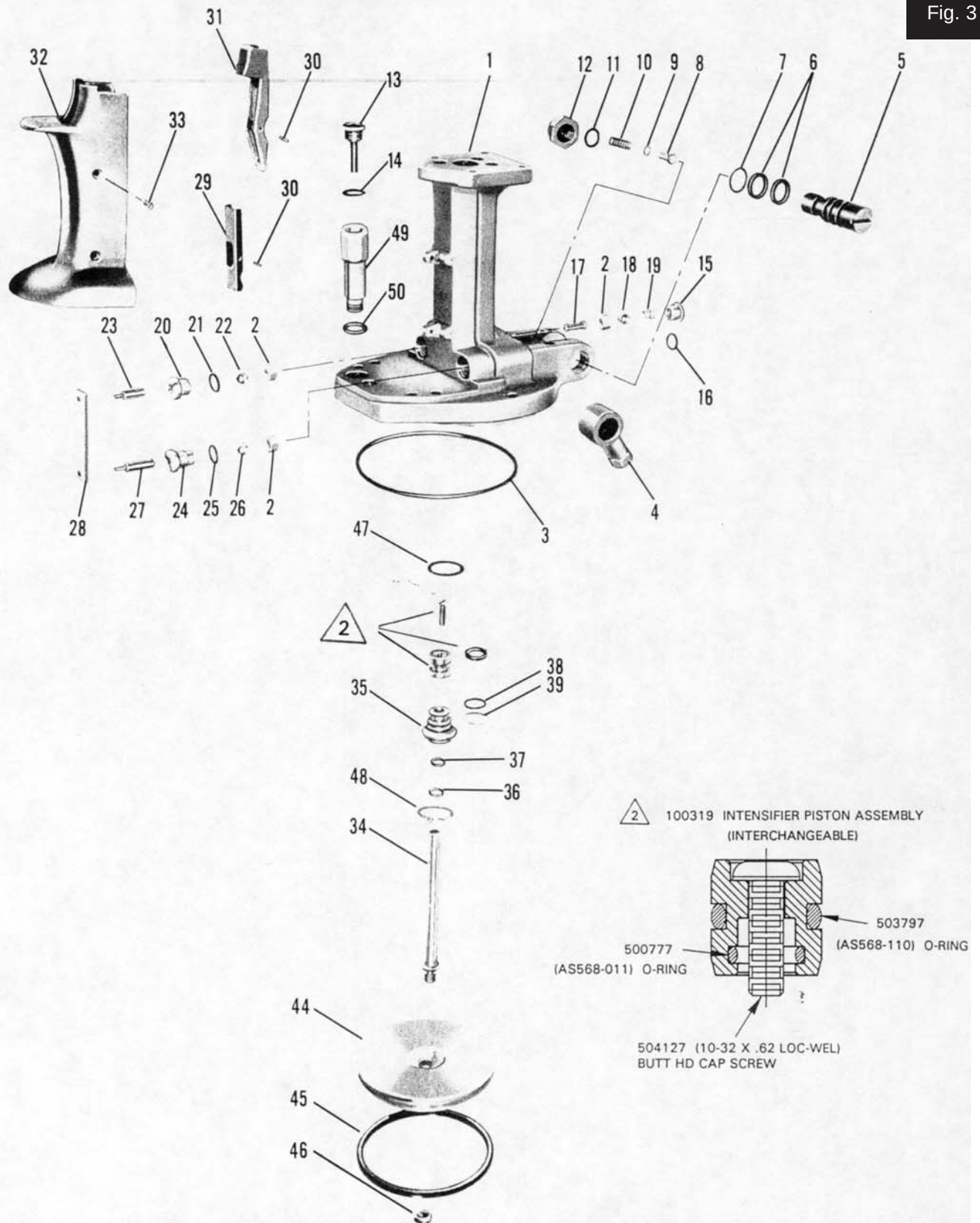
REF. NO.	PART NO.	QUANTITY	PART NAME
1-1	100366	1	Head Assembly (Complete)
2-1	110656	1	(1) Head, Seats & O-ring Assembly
2-2A	111139	1	Seat – Ball Check “A”
2-2B	100858	1	Seat – Ball Check “B”
2-3	100859	1	Seat – Relief Valve
2-4	100889	1	Seat – Balance Valve
2-5	500808	1	O-ring AS568-111
2-6	501102	1	Back-up Ring S-11248-111
2-7	104272	1	Nose Gland & O-ring Assembly
2-8	501417	1	Quad Ring – MR-Q4211 (Inside)
2-9	501138	1	Back-up Ring – S-11248-211 (Inside)
2-10	500793	2	O-ring – AS 568-027 (Outside)
2-11	501099	3	Back-up Ring – S-11248-27 (Outside)
2-12	104274	1	Shift Piston & Quad Ring Assembly
2-13	501170	1	Quad Ring – MR-Q4114 (Inside)
2-14	501105	1	Back-up Ring – S-11248-114 (Inside)
2-15	501172	1	Quad Ring – MR-Q4213 (Outside)
2-16	501140	2	Back-up Ring – S-11248-213 (Outside)
2-17	100371	1	Piston Locator
2-18	104275	1	Piston Cylinder & O-ring Assembly
2-19	500793	1	O-ring – AS 568-027
2-20	501099	2	Back-up Ring – S-11248-27
2-21	111078	1	Pull Piston & Quad Ring Assembly
2-22	501172	1	Quad Ring – MR-Q4213
2-23	501140	2	Back-up Ring – S-11248-213
2-24	100376	1	Spacer
2-25	111077	1	Rear Gland & O-ring Assembly
2-26	111073	1	Wiper – Piston
2-27	501417	1	Quad Ring – MR-Q4211 (Inside)
2-29	500793	1	O-ring – AS 568-027 (Outside)
2-30	501099	1	Back-up Ring – S-11248-27 (Outside)
2-31	111067	1	Guide

Table 2 – PARTS LIST (Continued)

REF. NO.	PART NO.	QUANTITY	PART NAME
2-32	100378	1	Deflector
2-33	110416	1	Valve – Balance
2-34	100381	1	Spring – Balance Valve
2-35	110413	1	Retainer & O-ring Assembly
2-36	500777	1	O-ring – AS 568-011
2-37	104281	1	Plunger & Quad Ring Assembly
2-38	501409	1	Quad Ring – MR-Q4006
2-39	501078	1	Back-up Ring – S-11248-06
2-40	104283	1	Bleed Screw & Quad Ring Assembly
2-41	501410	1	Quad Ring – MR-Q4007
2-42	501079	1	Back-up Ring – S-11248-07
2-43	500933	1	Retaining Ring – Truarc N5000-37
2-44	104287	1	Relief Valve Retainer & O-ring Assembly
2-45	500772	1	O-ring – AS 568-006
2-46	501078	1	Back-up Ring – S-11248-06
2-47	502929	1	Ball – 3/16 Dia. (Stainless Steel)
2-48	100968	1	Spring – Relief Valve
2-49	111086	1	Ball Check Screw & O-ring Assembly – B
2-50	505438	1	O-ring – AS 568-006
2-51	502929	2	Ball – 3/16 Dia. (Stainless Steel)
2-52	100874	2	Spring – Ball Check
2-53	111079	1	Ball Check Screw & O-ring Assembly – A
2-54	505438	1	O-ring – AS 568-006

(1) Indentions indicate the components or (sub) assemblies are included in the assembly immediately above it.

Fig. 3



Handle & Piston Assembly 101103

Handle and Piston Assembly
Table 3 - Parts List

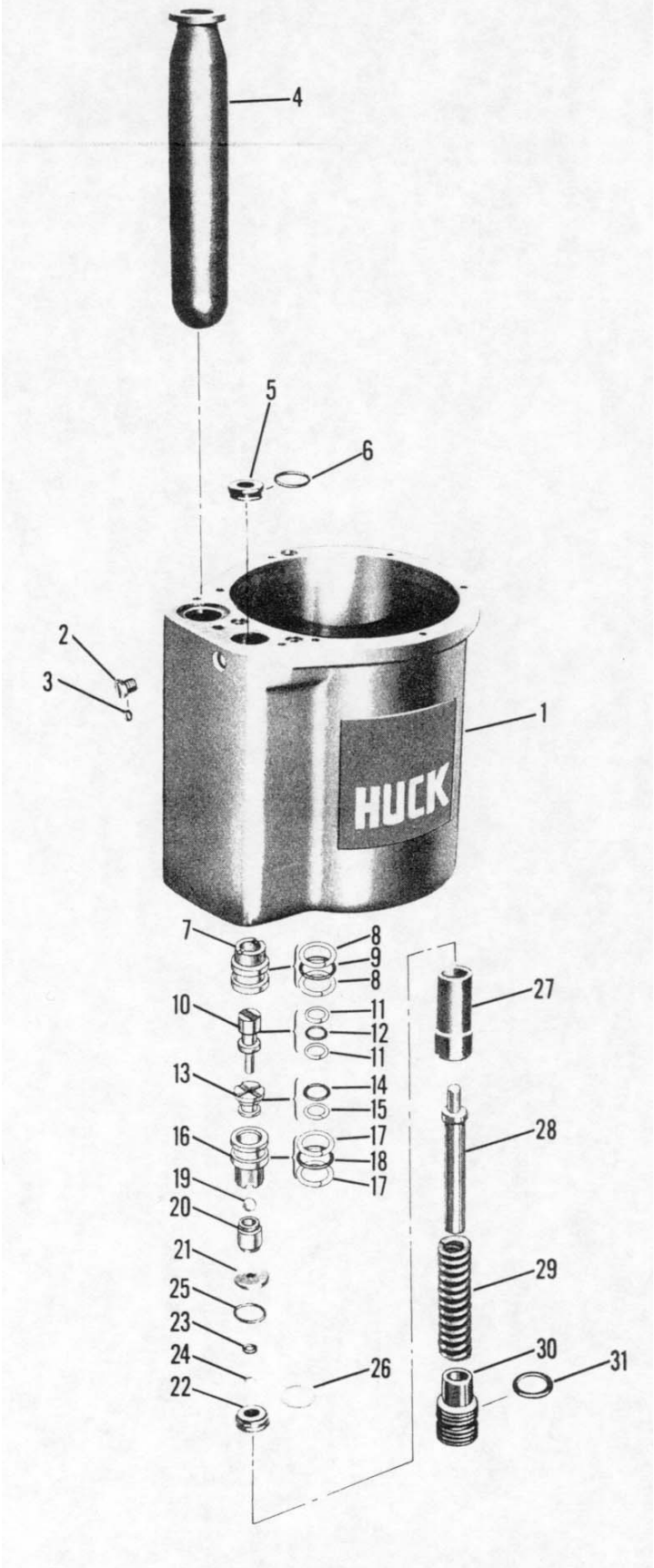
REF. NO.	PART NO.	QUANTITY	PART NAME
1-4	101103	1	Handle & Piston Assembly (Complete)
—	100880	1	(1) Handle Assembly
3-1	100881	1	Handle & Inserts Assembly
3-2	100341	3	Insert
3-3	500872	1	O-ring — AS 568-240
3-4	100933	1	Swivel Connector (Air)
3-5	104296	1	Bolt & Quad Ring Assembly
3-6	501414	2	Quad Ring — MR-Q4111
3-7	100346	1	Gasket
3-8	100890	1	Valve
3-9	100891	VAR.	Shim (Use as Required)
3-10	100349	1	Spring
3-11	500779	1	O-ring — AS 568-013
3-12	100350	1	Acorn Nut
3-13	104294	1	Filler Plug & O-ring Assembly
3-14	500778	1	O-ring — AS 568-012
3-15	104298	1	Rear Plug & O-ring Assembly
3-16	500776	1	O-ring — AS 568-012
3-17	100355	1	Pin — Center
3-18	502934	1	Ball — 11/32 Dia. (Stainless Steel)
3-19	100353	1	Spring
3-20	104299	1	Front Plug & O-ring Assembly
3-21	500778	1	O-ring — AS 568-012
3-22	502934	1	Ball — 11/32 Dia. (Stainless Steel)
3-23	100360	1	Pin
3-24	104400	1	Seat & O-ring Assembly
3-25	500778	1	O-ring — AS 568-012
3-26	502934	1	Ball — 11/32 Dia. (Stainless Steel)

Table 3 – PARTS LIST (Continued)

REF. NO.	PART NO.	QUANTITY	PART NAME
3-27	100361	1	Pin
3-28	100362	1	Cross Bar
3-29	100363	1	Lever
3-30	502135	2	Pin – .094 Dia. x 5/8 (Spring – Slotted)
3-31	100364	1	Trigger
3-32	100365	1	Hand Grip
3-33	504378	4	Screw – #4-40 x 1/4
—	103555	1	Piston & Rod Assembly
3-34	100316	1	Rod – Piston
3-35	104403	1	Gland & O-ring Assembly
3-36	501408	1	Quad Ring – MR-Q4011 (Inside)
3-37	500777	1	O-ring – AS 568-011
3-38	500780	1	O-ring – AS 568-014
3-39	503167	1	Back-up Ring – Parbak 8-014
3-44	104402	1	Air Piston & Quad Ring Assembly
3-45	501460	1	Quad Ring – MR-Q4342
3-46	121241	1	Lock Nut
3-47	500786	1	O-ring – AS 568-020
3-48	502259	1	Retaining Ring – Truarc 5008-100
3-49	111080	1	Collector & O-ring Assembly
3-50	500778	1	O-ring – AS 568-012

(1) Indentions indicate the components or (sub) assemblies are included in the assembly immediately above it.

Fig. 4



Cylinder Assembly 100875

Cylinder Assembly

Table 4 - Pasts List

REF. NO.	PART NO.	QUANTITY	PART NAME
1-8	100875	1	Cylinder Assembly (Complete)
4-1	101128	1	(1) Cylinder
4-2	104293	1	Bleed Plug & O-ring Assembly
4-3	505438	1	O-ring – AS 568-006
4-4	100313	1	Diaphragm (Reservoir)
4-5	104291	1	Cap & O-ring Assembly
4-6	500780	1	O-ring – AS 568-014
4-7	111083	1	Sleeve & O-ring Assembly – Upper
4-8	503167	2	Back-up Ring – Parbak 8-014
4-9	500780	1	O-ring – AS 568-014
4-10	111081	1	Plunger & O-ring Assembly
4-11	501082	2	Back-up Ring – S-11248-10
4-12	500776	1	O-ring – AS 568-010
4-13	111082	1	Seat & O-ring Assembly
4-14	500776	1	O-ring – AS 568-010
4-15	501082	1	Back-up Ring – S-11248-10
4-16	111084	1	Sleeve & O-ring Assembly – Lower
4-17	503167	2	Back-up Ring – Parbak 8-014
4-18	500780	1	O-ring – AS 568-014
4-19	502509	1	Ball – Steel 1/4 Dia.
4-20	111066	1	Guide – Ball
4-21	100869	1	Spacer
4-22	104292	1	Gland & O-ring Assembly
4-23	501410	1	Quad Ring – MR-Q4007 (Inside)S
4-24	503160	1	Back-up Ring – Parbak 8-007 (Inside)
4-25	500781	1	O-ring – AS 568-015 (Outside)
4-26	503168	1	Back-up Ring – Parbak 8-015
4-27	101101	1	Sleeve
4-28	110414	1	Plunger & Spring Guide
4-29	111071	1	Spring – Shift
4-30	110415	1	Adjusting Screw & O-ring Assembly
4-31	500781	1	-O-ring – AS 568-015

(1) Indentions indicate the components or (sub) assemblies are included in the assembly immediately above it.

NOSE ASSEMBLY ADAPTER GROUP

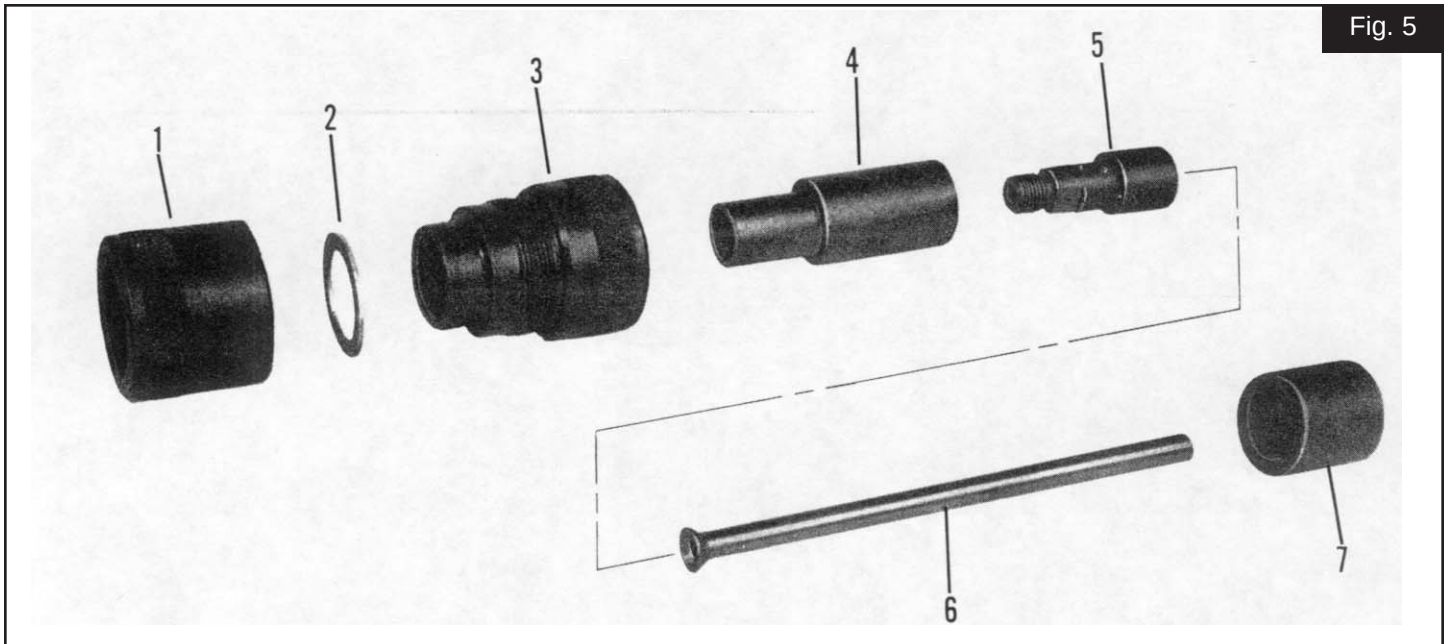


Fig. 5

NOTE

Use Ref. Nos. 1 (& 6 as applicable) for Series 200 Nose Assemblies (Double Action).

Use Ref. Not 1 & 2 (& 6 as applicable) & 7 for Series 352 Nose Assemblies (Single Action).

Use Ref. Nos. 1, 2, 3, 4, 5 (& 6 as applicable) for Series 350 Nose Assemblies (Double Action.)

Table 5 – PARTS LIST
Nose Assembly Adapter Group

REF. NO.	PART NO.	QUANTITY	PART NAME
5-1	100530	1	Retaining Nut
5-2	101280	1	Stop – Retaining Nut
5-3	100533	1	Nose Adapter
5-4	100532	1	Shift Sleeve
5-5	100531	1	Spindle Reducer
5-6	100534	1	Pintail Tube
5-7	100536	1	Spacer 200 Tool

NOTE

See applicable Nose Assembly Data Sheet for detailed instructions on the use of these components.

MODEL 200 INSTALLATION KITS

The Huck Model 200 Installation Tool is available in kit form which allows the purchase of one part number that includes the 200 Tool, Carrying Case, Nose Assemblies, etc. as shown below.

Table 6: 200-52 (Ref. NSN 5130-014-1979)

Part NO.	PART NAME	PART NO.	PART NAME
200	Installation Tool	104271	Inner Anvil -4
78972	Nose Assy 100V-4	83289	Outer Anvil -4
78973	Nose Assy 100V-5	83290	Thrust Bushing -4
78974	Nose Assy 100V-6	100820	Inner Anvil -5
79626	Nose Assy -8 Rivet	83294	Outer Anvil -5
99-1601T-352	Nose Assy -05 GP Tens	83295	Thrust Bushing -5
99-2555CH	Nose Assy -06 GP Chis	100799	Inner Anvil -6
99-86	Nose Assy -08 OSR	83296	Outer Anvil -6
G58-1	Grip Gage 1/8 & 5/32	83297	Thrust Bushing -6
G58-2	Grip Gage 3/16 & 1/4	42-233	Service Kit
105805	Nose Assembly Brush	110206	Carrying Case
105806	Nose Assembly Brush		

Table 7: 200-53 (Ref. NSN 5130-778-1675)

Part NO.	PART NAME	PART NO.	PART NAME
200	Installation Tool	78974	Nose Assy 100V-6
78972	Nose Assy 100V-4	42-233	Service Kit
78973	Nose Assy 100V-5	110206	Carrying Case

Table 8: 200-54 (Ref. NSN 5130-908-3262)

Part NO.	PART NAME	PART NO.	PART NAME
200	Installation Tool	110206	Carrying Case
42-233	Service Kit		

Table 9: 200-55

Part NO.	PART NAME	PART NO.	PART NAME
200	Installation Tool	83289	Outer Anvil -4
78972	Nose Assy 100V-4	83290	Thrust Bushing -4
78973	Nose Assy 100V-5	100820	Inner Anvil -5
78974	Nose Assy 100V-6	83294	Outer Anvil -5
79626	Nose Assy -8 Rivet	83295	Thrust Bushing -5
99-1601T-352	Nose Assy -05 GP Tens	100799	Inner Anvil -6
99-2555CH	Nose Assy -06 GP Chis	83296	Outer Anvil -6
99-86	Nose Assy -08 OSR	83297	Thrust Bushing -6
G58-1	Grip Gage 1/8 & 5/32	83300	Outer Anvil P-4
G58-2	Grip Gage 3/16 & 1/4	83301	Outer Anvil P-5
105805	Nose Assembly Brush	83302	Outer Anvil P-6
105806	Nose Assembly Brush	42-233	Service Kit
104271	Inner Anvil -4	110206	Carrying Case

SERVICE NOTES

ACCESSORIES

SERVICE PARTS KIT 42-236

Service Parts Kit 42-236 contains replacement parts needed when overhauling ONE Model 200 Tool, or for replacing a damaged or worn O-ring, etc.

Table 10 - PARTS LIST

PART#	QTY	PART NAME	REF. NO.
100378	1	Diaphragm	4-4
100341	1	Deflector	2-32
100313	3	Insert	3-2
100346	1	Gasket	3-7
100349	1	Spring, Air Valve	3-10
100353	1	Spring	3-19
111073	1	Wiper, Piston	2-26
100381	1	Spring, Balance Valve	2-34
100858	1	Seat, Ball Check 'B'	2-2B
100859	1	Seat, Relief Valve	2-3
100874	2	Spring, Ball Check	2-52
100889	1	Seat, Balance Valve	2-4
100891	4	Shim	3-9
100968	1	Spring, Relief Valve	2-48
104285	1	Ball Check Plug & O-ring Assembly	2-49
111139	1	Seat, Ball Check 'A'	2-2A
500056	12	Screw, Socket Head Cap #8-32 X 5/8	1-3, 1-5
500071	1	Screw, Socket Head Cap 1/4-20 X 3/4	1-6
500772	1	O-ring AS 568-006	2-45, 2-54, 4-3
504547	7	O-ring AS 568-008 Viton, 90 durometer	1-2, 1-7
500776	3	O-ring AS 568-010	4-12, 4-14
500777	2	O-ring AS 568-011	2-36, 3-37
500778	4	O-ring AS 568-012	3-14, 16, 21, 25, & 50
500779	1	O-ring AS 568-013	3-11
500780	4	O-ring AS 568-014	3-38, 4-6, 4-9, 4-18
500781	2	O-ring AS 568-015	4-25, 4-31
500786	1	O-ring AS 568-020	3-47
500793	4	O-ring AS 568-027	2-10, 2-19, 2-29
500808	1	O-ring AS 568-111	2-5
500872	1	O-ring AS 568-240	3-3
500933	1	Retaining Ring, Truarc N5000-37	2-43

Table 10 - PARTS LIST (Continued)

PART#	QTY	PART NAME	REF. NO.
501078	2	Back-up Ring S-11248-06	2-39, 2-46
501079	1	Back-up Ring S-11248-07	2-42
501082	3	Back-up Ring S-11248-10	4-11, 4-15
501099	6	Back-up Ring S-I 1248-27	2-11, 2-20, 2-30
501102	1	Back-up Ring S-11248-111	2-6
501105	1	Back-up Ring S-11248-114	2-14
501138	1	Back-up Ring S-11248-211	2-9
501140	5	Back-up Ring S-11248-213	2-16, 2-23
501170	1	Quad Ring MR-Q4114	2-13
501172	3	Quad Ring MR-Q4213	2-15, 2-22
501408	1	Quad Ring MR-Q4011	3-36
501409	1	Quad Ring MR-Q4006	2-38
501410	2	Quad Ring MR-Q4007	2-41, 4-23
501414	3	Quad Ring MR-Q4111	3-6, 3-41
501417	2	Quad Ring MR-Q4211	2-8, 2-27
501460	1	Quad Ring MR-Q4342	3-45
502135	2	Pin, Slotted .094 Dia. X .62	3-30
502259	1	Retaining Ring, Truarc 5008-100	3-48
502509	1	Ball, 1/4 Dia. Steel	4-19
502929	3	Ball, 3/16 Dia. Stainless Steel	2-47, 2-51
502934	3	Ball, 11/32 Dia. Stainless Steel	3-18, 3-22, 3-26
503160	1	Back-up Ring Parbak 8-007	4-18
503167	5	Back-up Ring Parbak 8-014	3-39, 4-8, 4-17
503168	1	Back-up Ring Parbak 8-015	4-26
503195	2	Back-up Ring Parbak 8-111	3-42
504378	4	Screw, Self-tapping #4-40 X 1/4	3-33

NOTES:

1. All part numbers shown in this manual are available from Huck. The 500000 series part numbers are standard parts which generally can be purchased locally.
2. O-ring sizes are specified as "AS" dash numbers. (AS 568 is an AEROSPACE SIZE STANDARD FOR O-RINGS and was formerly known as ARP 568).
3. The compound for O-rings and Quad Rings is SAE-ASTM SB715 BE, E₃ F₁ or F₂ (Nitrile or Buna N, 70 Durometer, except as noted).
4. Back-up rings are either W.S. Shamban & Co. Series S-11248 (MS-28774 TEFLON) or Parker Seal Co. PARBAK Series 8. Dash numbers correspond to AS dash numbers of O-rings.

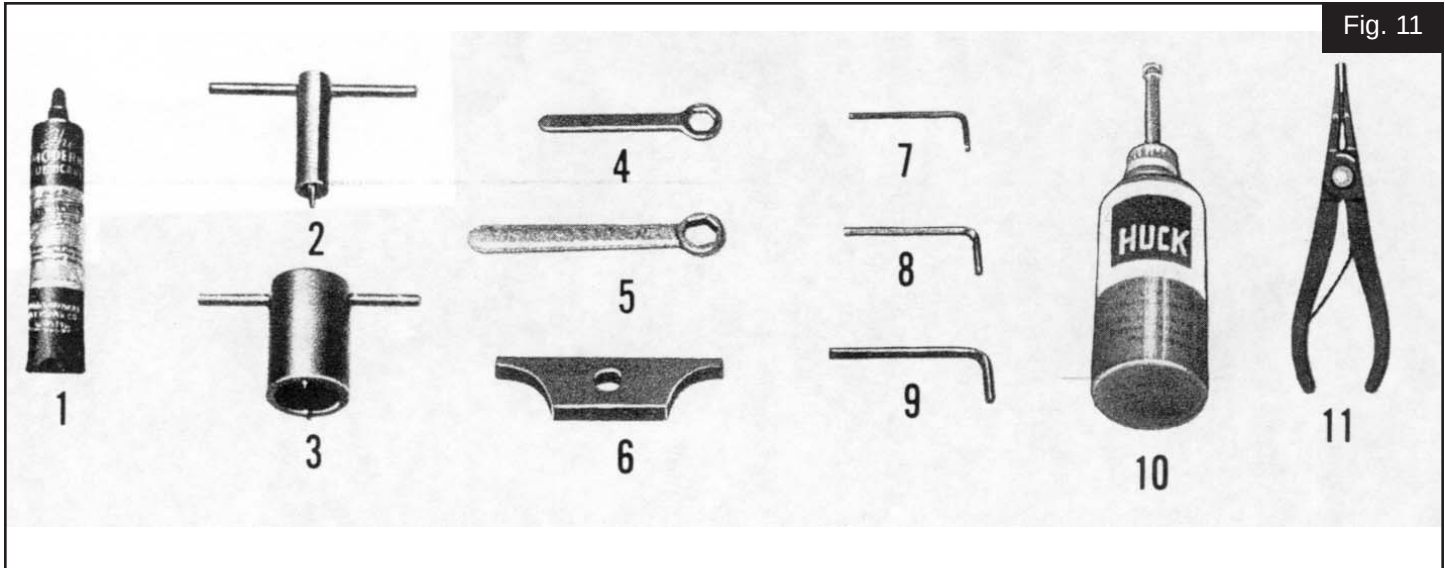


Fig. 11

SERVICE TOOL KIT 42-233

Service Tool Kit 42-233 contains the tools required (in addition to common screwdrivers, etc.) to disassemble and reassemble the Model 200 Installation Tool.

Table 11 – PARTS LIST

REF. NO.	PART NO.	PART NAME	USED ON
1	502723	Lubriplate 130AA (Tube)	Miscellaneous
2	100878	Wrench	4-21, -24
3	100556	Wrench	2-25
4	502912	Wrench – 7/16 Inch	Collets
5	502914	Wrench – 9/16 Inch	Collets
6	111239	Wrench	2-21
7	502294	Hex Key – 1/8 Inch	1-3 (Old Series)
8	502655	Hex Key – 9/64 Inch	1-3 (New Series)
9	502296	Hex Key – 3/16 Inch	1-6
10	100932	Filler Bottle & Fluid	4-4
11	502857	Truarc Pliers #0100	3-48

FILL AND BLEED UNIT MODEL 970-100

Fill and Bleed Unit, Model 970-100, is designed for the rapid and efficient filling of a tool with hydraulic fluid and bleeding air from the hydraulic system. It can be used to fill and bleed a Model 200, Model 970, 10000 or 40000 Huck Installation Tool. The Fill and Bleed Unit weighs

50 pounds as shipped, without hydraulic fluid. The outside dimensions are 14" wide x 16" long x 14" high.

The unit operates on 110 volt, single phase, 50/60 hertz electrical power.

CARRYING CASE

Carrying Case, part number 110206, is available to store or carry a Model 200 Tool. Compartments are provided for storing nose assemblies and accessories.

SHIFT SETTING KITS

Shift Setting Kit 107569 is used to check the spindle load (pounds) at shift. The tester, gage and adapters are housed in a sheet metal case.

(PREFERRED METHOD)
Table 12 – PARTS LIST (Kit 107569)

PART NO.	QUANTITY	PART NAME
107573	1	Skidmore-Wilhelm Model S Tester
107564	1	Adapter
107565	1	Plate
503910	2	Socket Head Cap Screw #5-40 x 1/4
107570	1	Carrying Case
101303	1	Air Fitting

Shift Setting Kit 101300 is used to check the hydraulic fluid pressure (psi) at shift. The gage and adapters are housed in a sheet metal case.

(ALTERNATE METHOD)
Table 13 – PARTS LIST (Kit 101300)

PART NO.	QUANTITY	PART NAME
107892	1	Pressure Gage & Adapter Assembly
101301	1	Pressure Gage
101302	1	Gage Adapter
500772	1	O-ring – AS 568-006
101303	1	Air Fitting
101304	1	Stop Nut
500772	5	O-ring – AS 568-006 (Spares)
102549	1	Carrying Case

Tool & Product Update

*This revised Bulletin obsoletes and supersedes Bulletin 141 dated 7-15-75

SPINDLE LOADS AND HYDRAULIC PRESSURES AT SHIFT FOR HUCK MODEL 200 INSTALLATION TOOL

When used to install double action fasteners, the shift valve of the Model 200 H.I.T. must be adjusted to insure the proper installation of various fasteners. Two methods of checking the shift valve setting are available:

Method #1: Shift Setting Kit No. 107569 employs a Skidmore-Wilhelm Tension Tester to check the spindle load at shift, in pounds.

Method #2: Shift setting No. 101300 employs a hydraulic pressure gauge to check the hydraulic pressure at shift, in pounds per square inch (psi).

The chart below shows the "Spindle Load at Shift" and "Hydraulic Pressure at Shift" for various fasteners. It may be necessary to retrofit some older tools prior to serial number 5161 (except 5081 thru 5090 and 5120 thru 5135), using Shift Valve and Balance Valve Retrofit Kit No. 100434, to insure repeatability of the shift valvesettings.

FASTENERS		POUNDS SPINDLE LOAD AT SHIFT USING SETTING KIT #107569		PSI (2) HYDRAULIC PRESSURE AT SHIFT USING SETTING KIT #101300
AFS 40911-460 AFS 40911-461	CKLX4	325 (1)		425 (1)
	CKLX5	500	±25	650
	CKLX6	725	±25	950
	OCKL-4	450 (1)		575 (1)
	OCKL-5	575	±25	750
	OCKL-6	775	±25	1000
NAS1919 & 1921 B04 B05 B06 B08 C04 C05 C06 M04 M05 M06	MLS-B04	350 (1)		450 (1)
	MLS-B05	500	±25	650
	MLS-B06	725	±25	950
	MLS-B08	1275	±25	1650
	MLS-EU04	875	±25	1125
	MLS-EU05	1175	±25	1525
	MLS-EU06	1875	±25	2450
	MLS-M04	775	±25	1000
	MLS-M05	1125	±25	1475
	MLS-M06	1775	±25	2325
	B-EU5	1260	±35	1650
	B-EU6	1845	±65	2400
MS90353 MS90354	B-T5	1425	±25	1850
	B-T6	2200	±50	2875
— —	OB-T5	1425	±25	1850
	OB-T6	2200	±50	2875

(1) Set as close as possible to pounds or psi shown.

(2) Plus or minus 50 psi, unless otherwise specified.

Date REVISED

8-20-75

No. 141



For the Long Haul™

A Global Organization

Alcoa Fastening Systems (AFS) maintains company offices throughout the United States and Canada, with subsidiary offices in many other countries. Authorized AFS distributors are also located in many of the world's

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