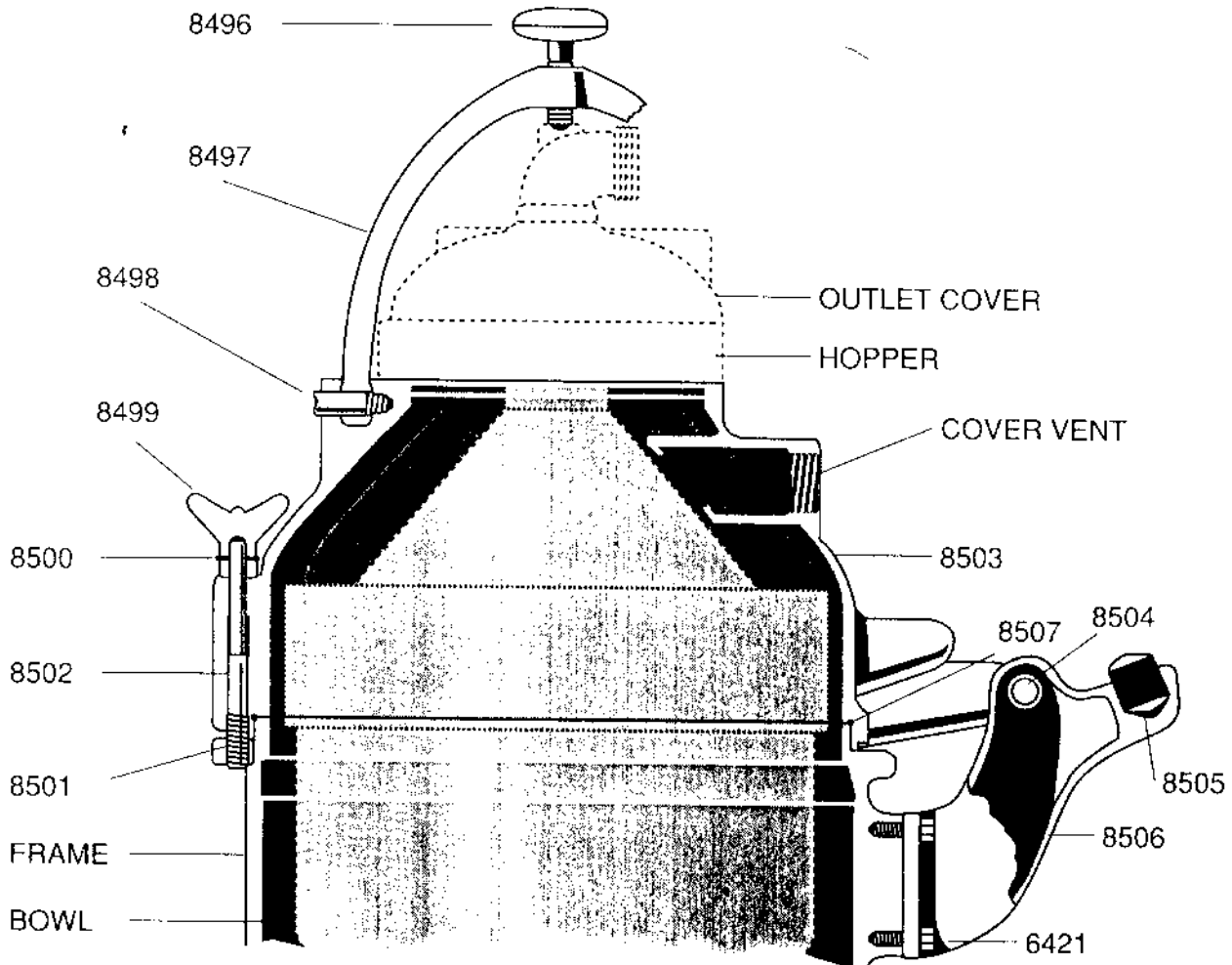


## **Hutchison-Hayes Separators, Inc.**

### **Model VO-194 Parts List With Diagrams**

**P.O. Box 2965 ♦ Houston, Texas 77252**  
**3520 East Belt ♦ Houston, Texas 77015**  
**(713) 455-9600 ♦ Fax (713) 455-7753**

# FRAME COVER



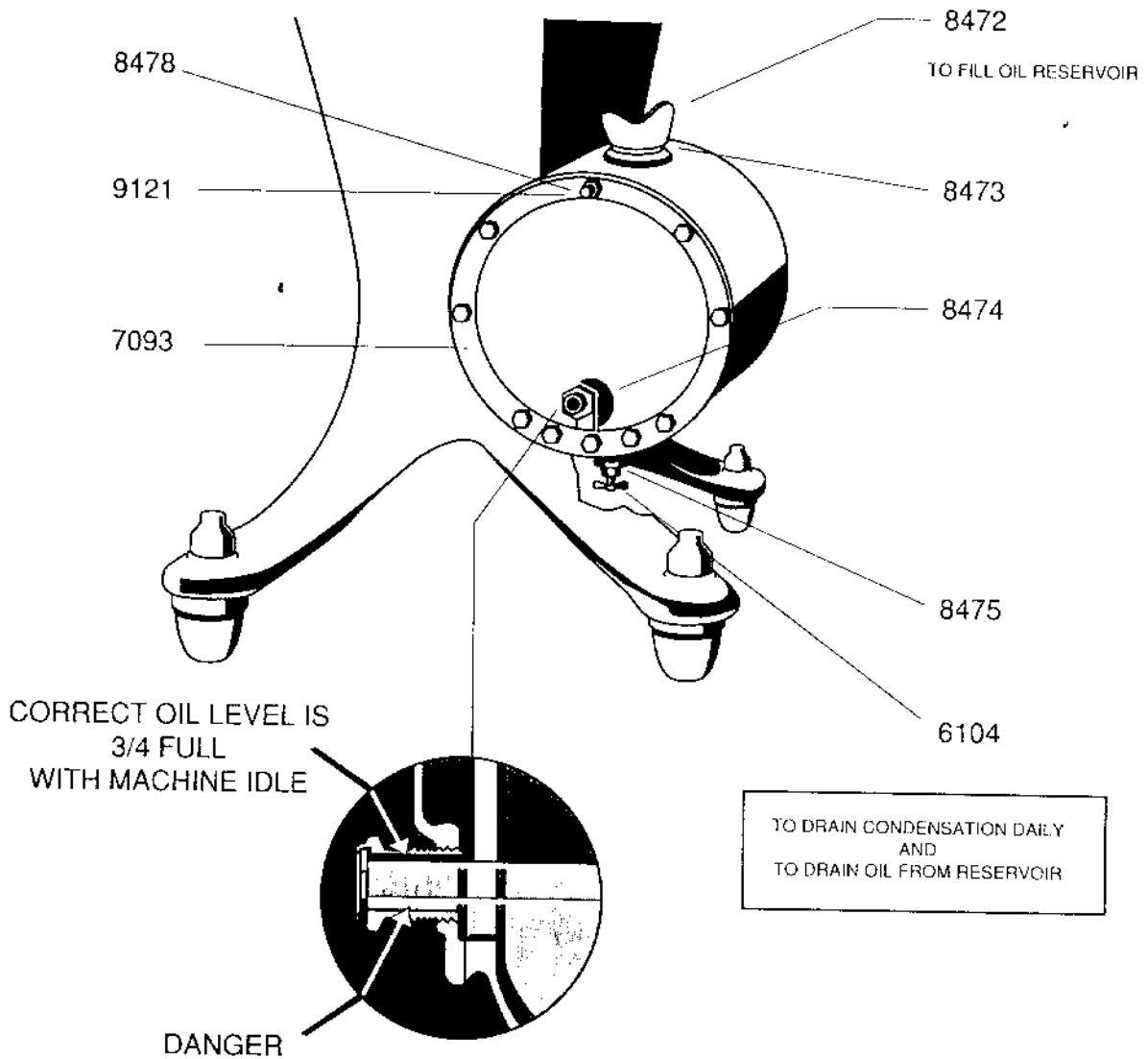
HH PN  
VO-194/S-194

ALFA PN  
VO-194/S-194

PART NAME

6421	21894	Bracket Screw
8496	34367	Handwheel
8497	34544	Locking Yoke
8498	16358	Hinge Screw
8499	34466	Cover Clamp Handle
8500	17355	Handle Pin
8501	34510	Screw
8502	17392	Bushing
8503	36026	Frame Cover
8504	36172	Hinge Pin
8505	16176	Bumper
8506	34391	Bracket
8507	8700560-01	Rubber Ring (Frame to Cover)

# LUBRICATION



HH PN  
VO-194/S-194

ALFA PN  
VO-194/S-194

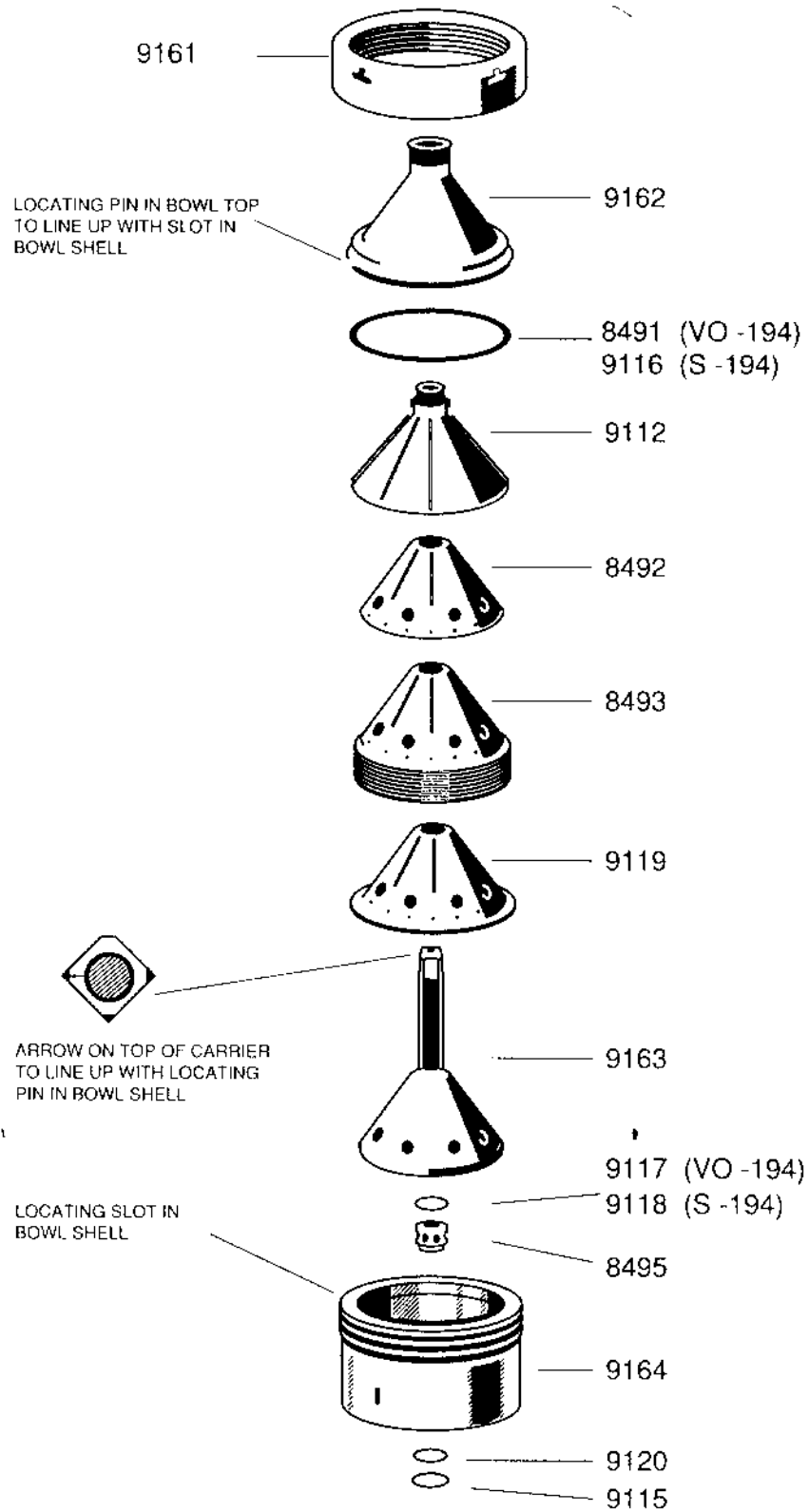
PART NAME

6104  
6421  
7093  
8472  
8473  
8474  
8475  
8478  
9121

35274  
21894  
39635  
16925  
16987  
39626  
20678  
21895  
22492

Drain Cock  
Worm Wheel Housing Cap Screw  
Worm Wheel Housing Cap Gasket  
Oil Filler Cap  
Oil Filler Cap Washer  
Oil Sight Glass  
Reducing Bushing  
Worm Wheel Housing Cap Nut  
Worm Wheel Housing Cap Stud

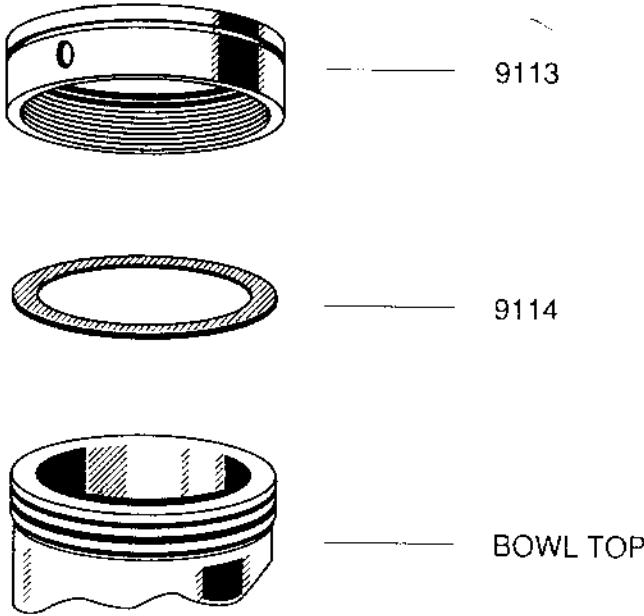
# BOWL



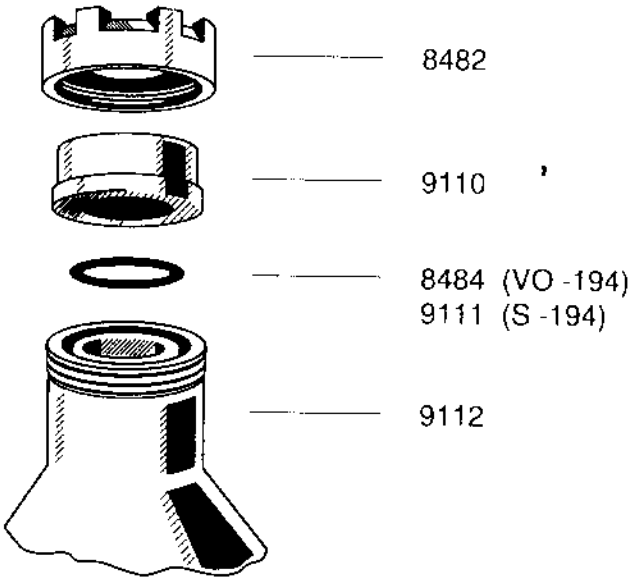
# BOWL

<u>HH PN</u> <u>VO-194</u>	<u>ALFA PN</u> <u>VO-194</u>	<u>HH PN</u> <u>S-194</u>	<u>ALFA PN</u> <u>S-194</u>	<u>PART NAME</u>
8491	25531	9116	33253	Bowl Rubber Ring
8492	8700023-80	8492	8700023-80	Intermediate Top Disc
8493	8700026-80	8493	8700026-80	Intermediate Disc
8495	38729	8495	38729	Spindle Cap Nut
9112	38730	9112	38730	Top Disc
9115	8700560-02	9115	8700560-02	Spindle Seal Ring-Large
9117	29553	9118	37157	Nave Seal Ring
9119	8701753-80	9119	8701753-80	Bottom Disc
9120	36119	9120	36119	Spindle Seal Ring-Small
9161				Coupling Ring
9162				Bowl Top
9163				Disc Carrier
9164				Bowl Shell

# BOWL TOP



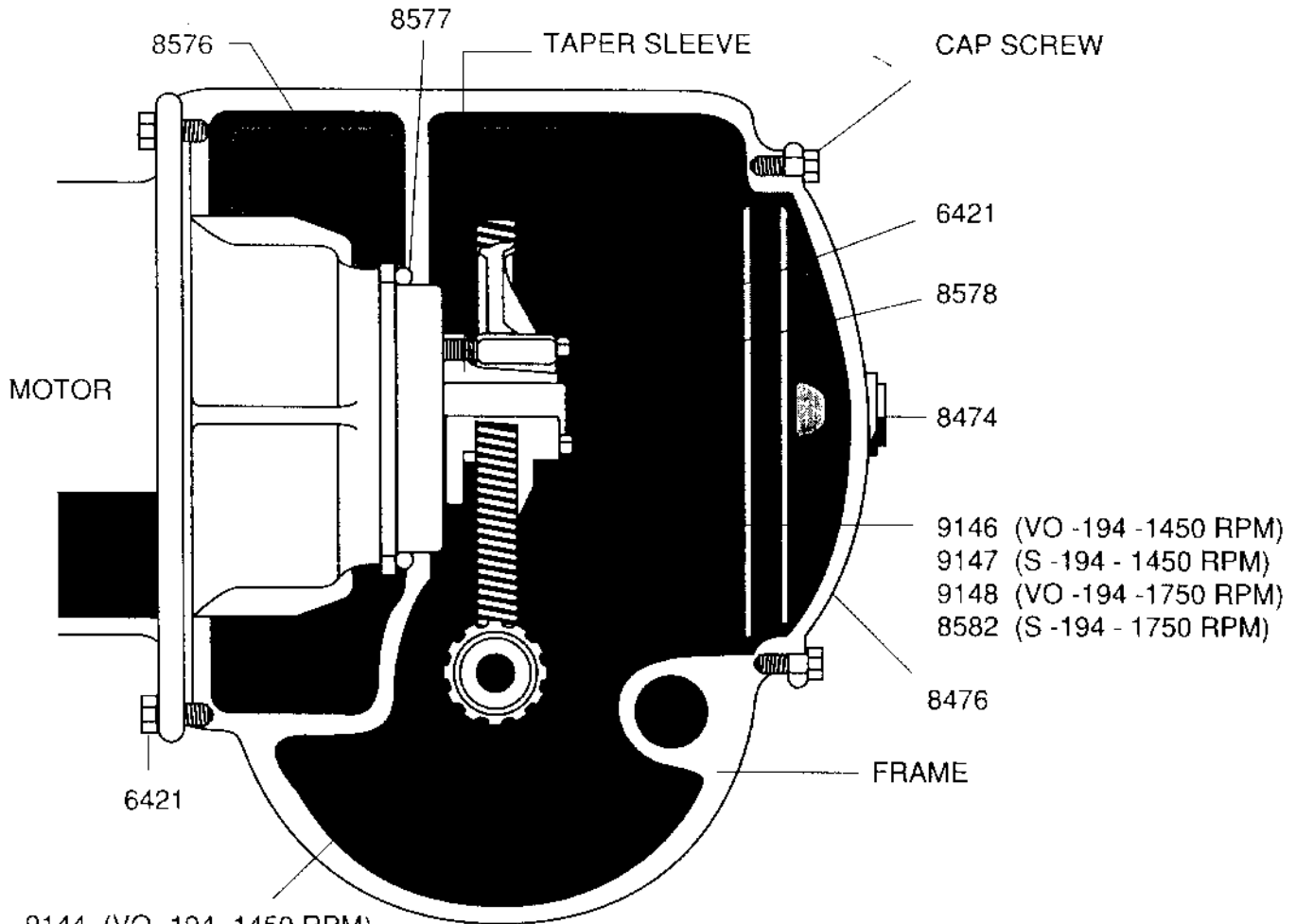
# TOP DISC



# BOWL TOP & TOP DISC

<u>HH PN</u> <u>VO-194</u>	<u>ALFA PN</u> <u>VO-194</u>	<u>HH PN</u> <u>S-194</u>	<u>ALFA PN</u> <u>S-194</u>	<u>PART NAME</u>
8482	34498	8482	34498	Top Disc Coupling Nut
9110	8700365-01	9110	8700365-01	Top Disc Wearing Ring
8484	34061	9111	36180	Top Disc Rubber Ring
9112	38730	9112	38730	Top Disc
9113	8700366-01	9113	8700366-01	Bowl Top Wearing Nut
9114	34409	9114	34409	Discharge Gasket

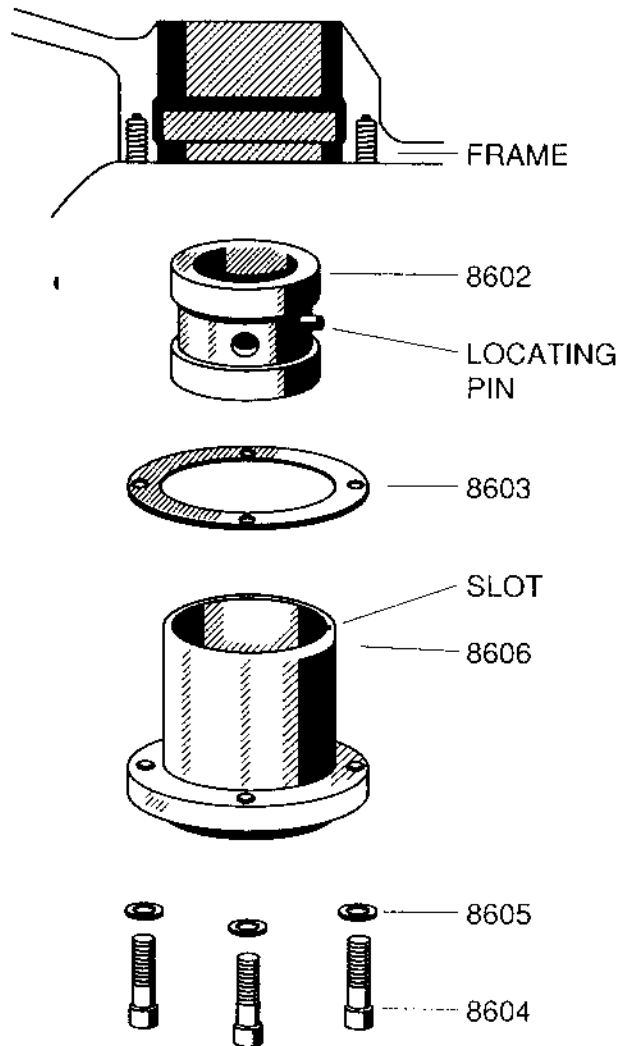
# MOTOR END OF FRAME



- 9144 (VO -194 -1450 RPM)
- 9145 (S -194 -1450 RPM)
- 8583 (VO -194 -1750 RPM)
- 6044 (S -194 -1750 RPM)

<u>HH PN</u> <u>VO-194</u>	<u>ALFA PN</u> <u>VO-194</u>	<u>HH PN</u> <u>S-194</u>	<u>ALFA PN</u> <u>S-194</u>	<u>PART NAME</u>
6421	21894	6421	21894	Motor Screw
6421	21894	6421	21894	Housing Cap Screw
8474	39626	8474	39626	Sight Gauge
8476	39635	8476	39635	Worm Wheel Housing Cap
8576	30582	8576	30582	Spacer Ring
8577	3809	8577	3809	Rubber Ring
8578	26785	8578	26785	Key
8583	25878	6044	25884	Worm Screw Shell - 1750 RPM
9144	27990	9145	25892	Worm Screw Shell - 1450 RPM
9146	8701356-84	9147	8701356-83	Worm Wheel - 1450 RPM
9148	8701356-85	8582	8701356-82	Worm Wheel - 1750 RPM
9149	35616	9150	36412	Spindle

# STEP BEARING



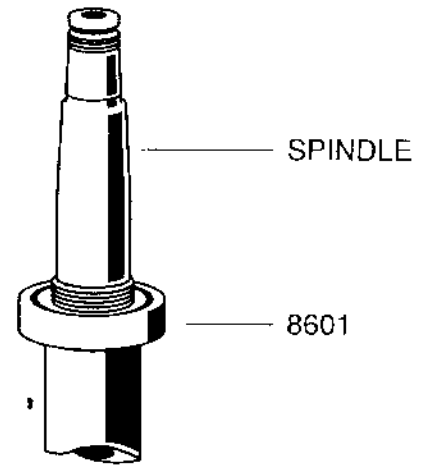
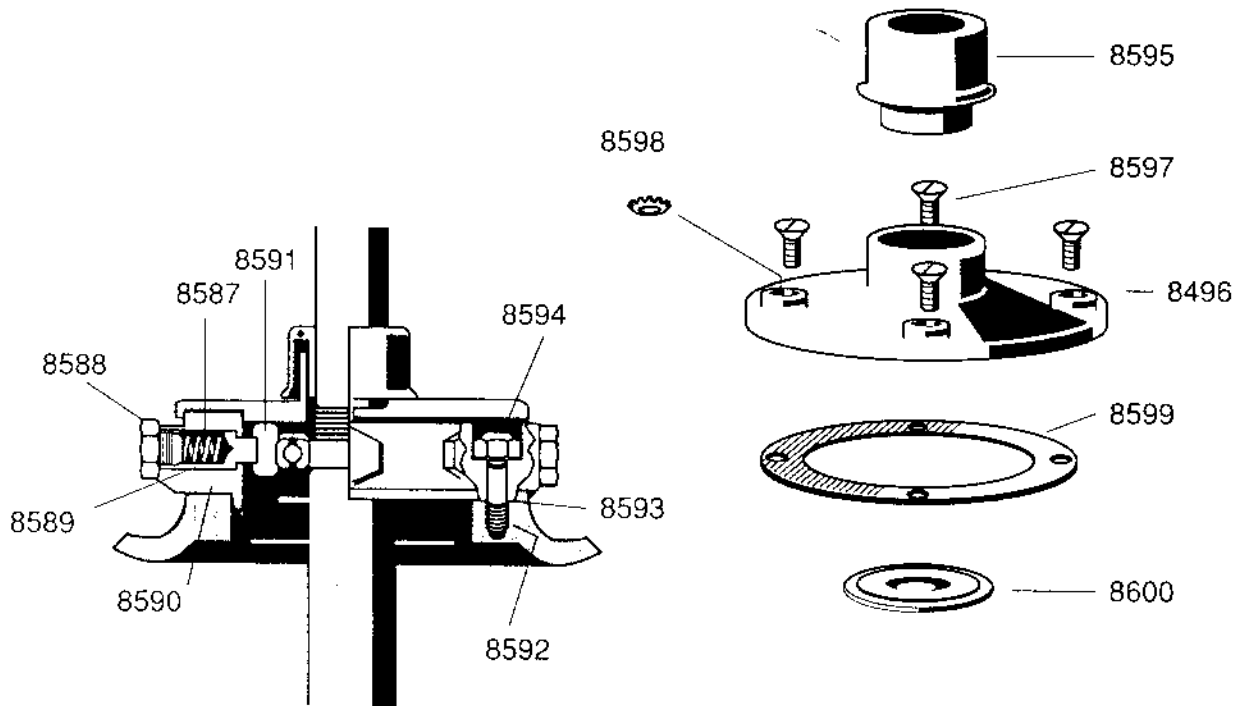
HH PN  
VO-194/S-194

ALFA PN  
VO-194/S-194

PART NAME

8602	36316	Sleeve
8603	35624	Gasket
8604	36006	Screw
8605	12102	Lock Washer
8606	35621	Step Bearing

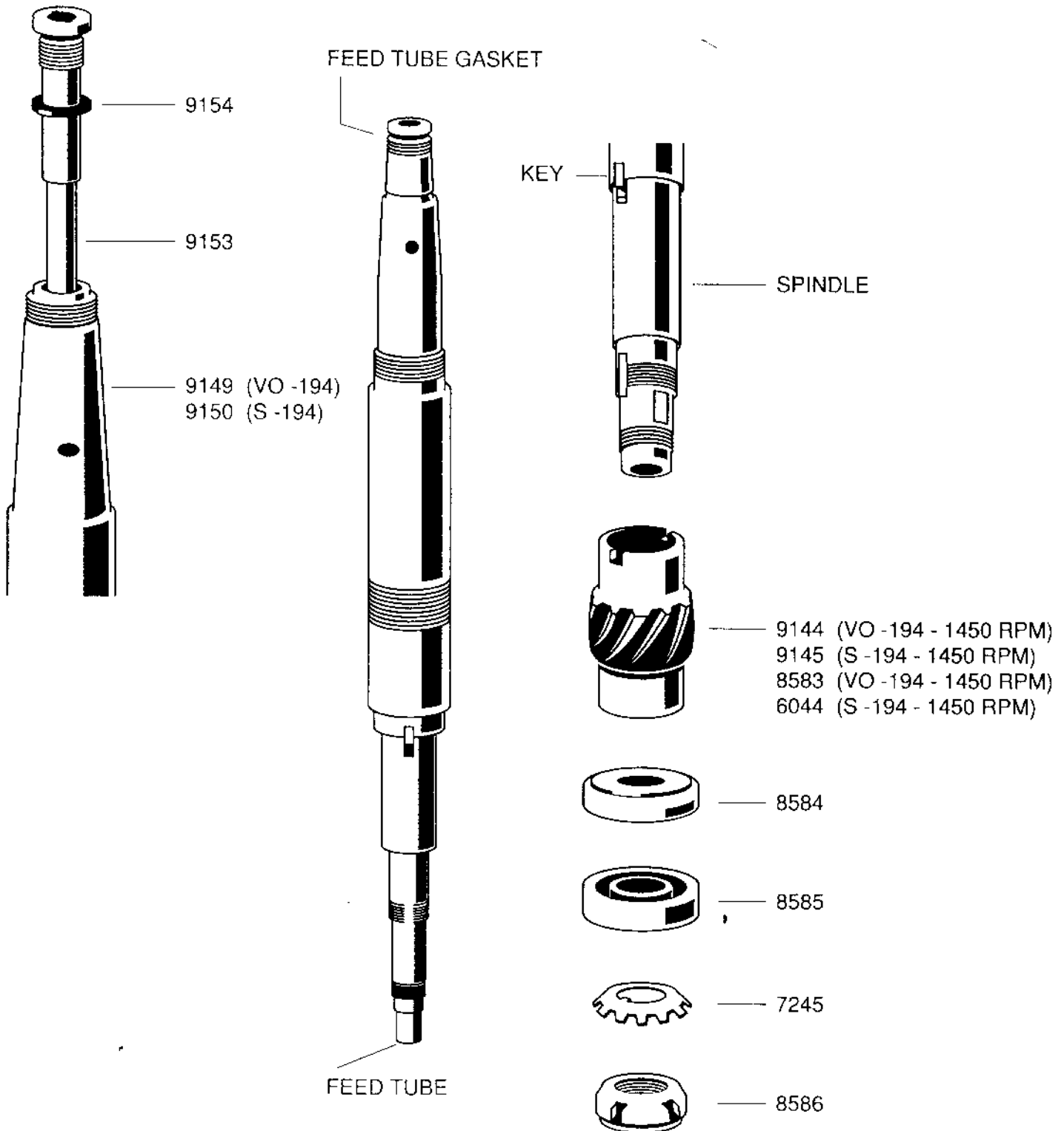
# TOP BEARING



# TOP BEARING

<u>HH PN</u>	<u>ALFA PN</u>	<u>PART NAME</u>
8587	36303	Spring
8588	36302	Adjusting Screw
8589	9740	Buffer
8590	19692	Bearing Plate
8591	19700	Sleeve
8592	19694	Stud
8593	14557	Gasket
8594	17424	Stud Nut
8595	16007	Protecting Cover
8596	29160	Bearing Cap
8597	13437	Bearing Cap Screw
8598	30408	Bearing Cap Lock Washer
8599	30406	Bearing Cap Gasket
8600	16008	Cover Plate
8601	33745	Ball Bearing

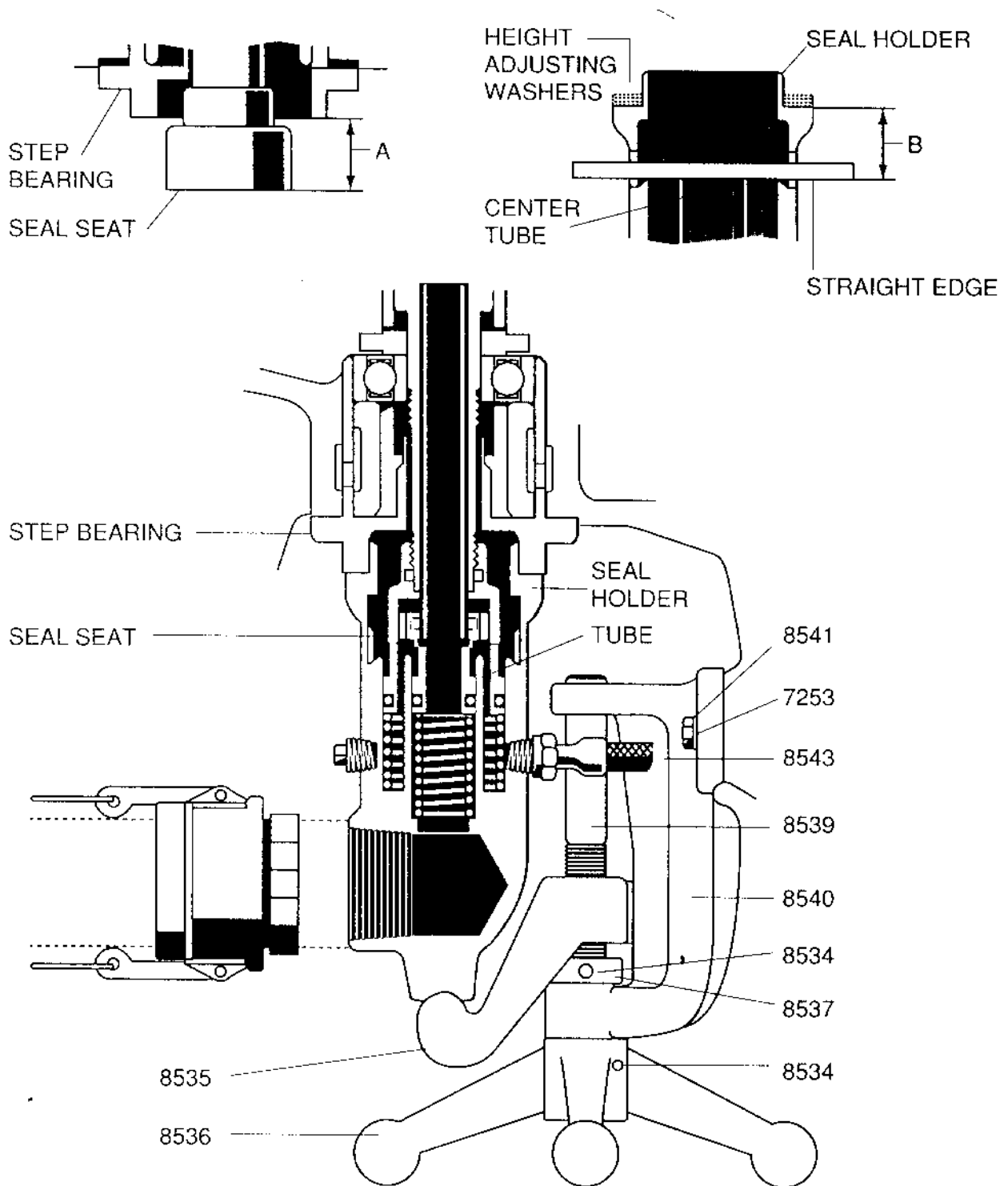
# LOWER BALL BEARING



# LOWER BALL BEARING

<u>HH PN</u> <u>VO-194</u>	<u>ALFA PN</u> <u>VO-194</u>	<u>HH PN</u> <u>S-194</u>	<u>ALFA PN</u> <u>S-194</u>	<u>PART NAME</u>
7245	14602	7245	14602	Lock Washer
8583	25878	6044	25884	Worm Screw Shell - 1750 RPM
8584	35620	8584	35620	Spacer Collar
8585	35664	8585	35664	Ball Bearing
8586	19077	8586	19077	Lock Nut
9149	35616	9150	36412	Spindle
9144	27990	9145	25892	Worm Screw Shell - 1450 RPM
9153	36413	9153	36413	Feed Tube
9154	35618	9154	35618	Feed Tube Gasket

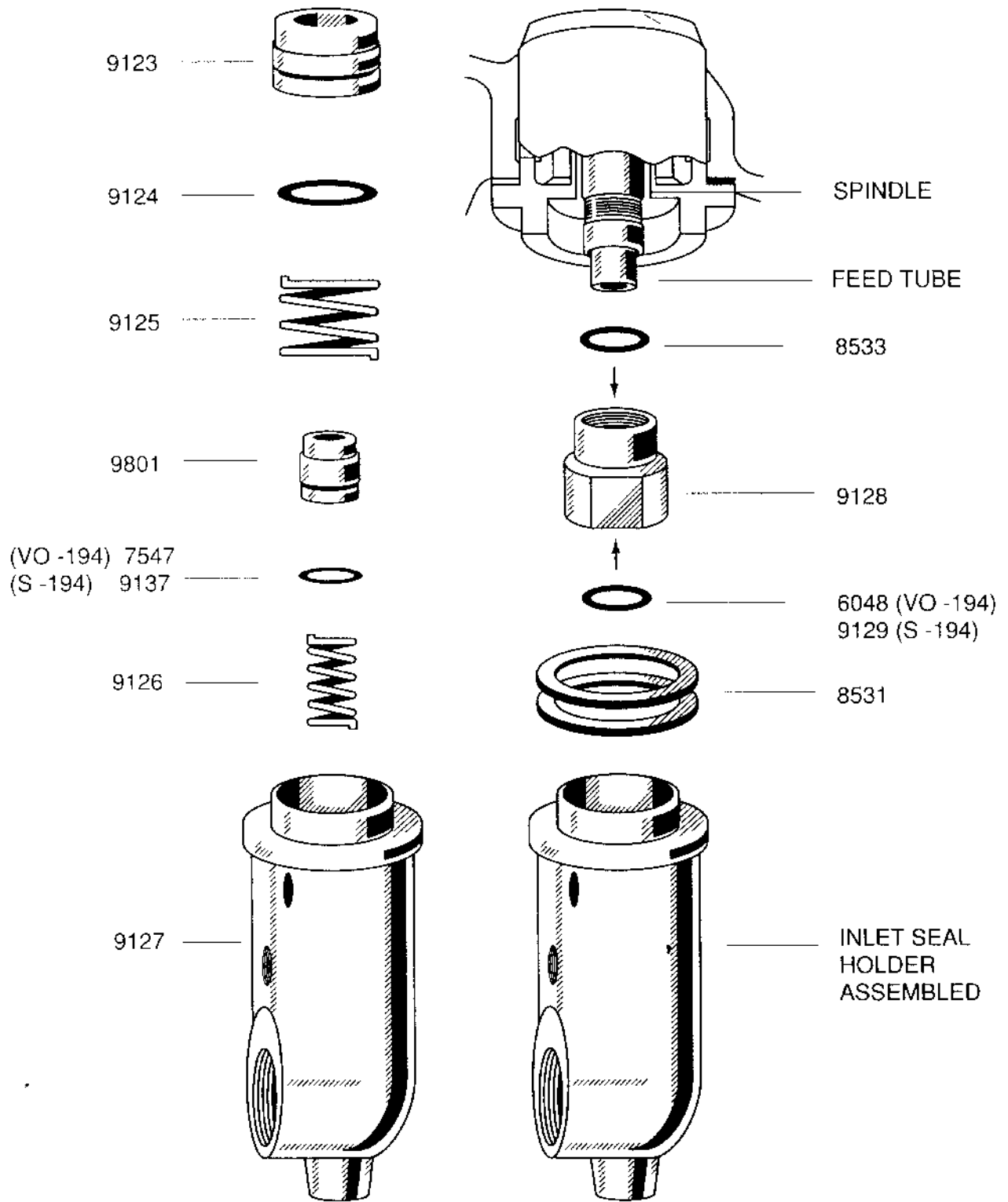
# CLAMPING DEVICE



# CLAMPING DEVICE

<u>HH PN</u> <u>VO-194/S-194</u>	<u>ALFA PN</u> <u>VO-194/S-194</u>	<u>PART NAME</u>
7253	6478	Lock Washer
8534	15953	Pin
8535	34390	Finger
8536	17343	Handwheel
8537	17342	Collar
8539	35636	Clamp Screw
8540	35635	Arm
8541	26207	Arm Screw
8542	32942	Inlet Hose
8543	39890	Seal Water Hose

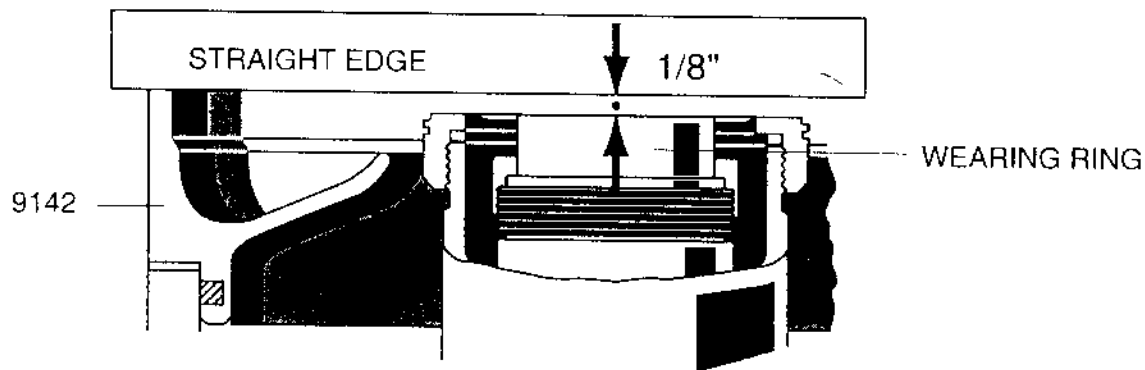
# INLET



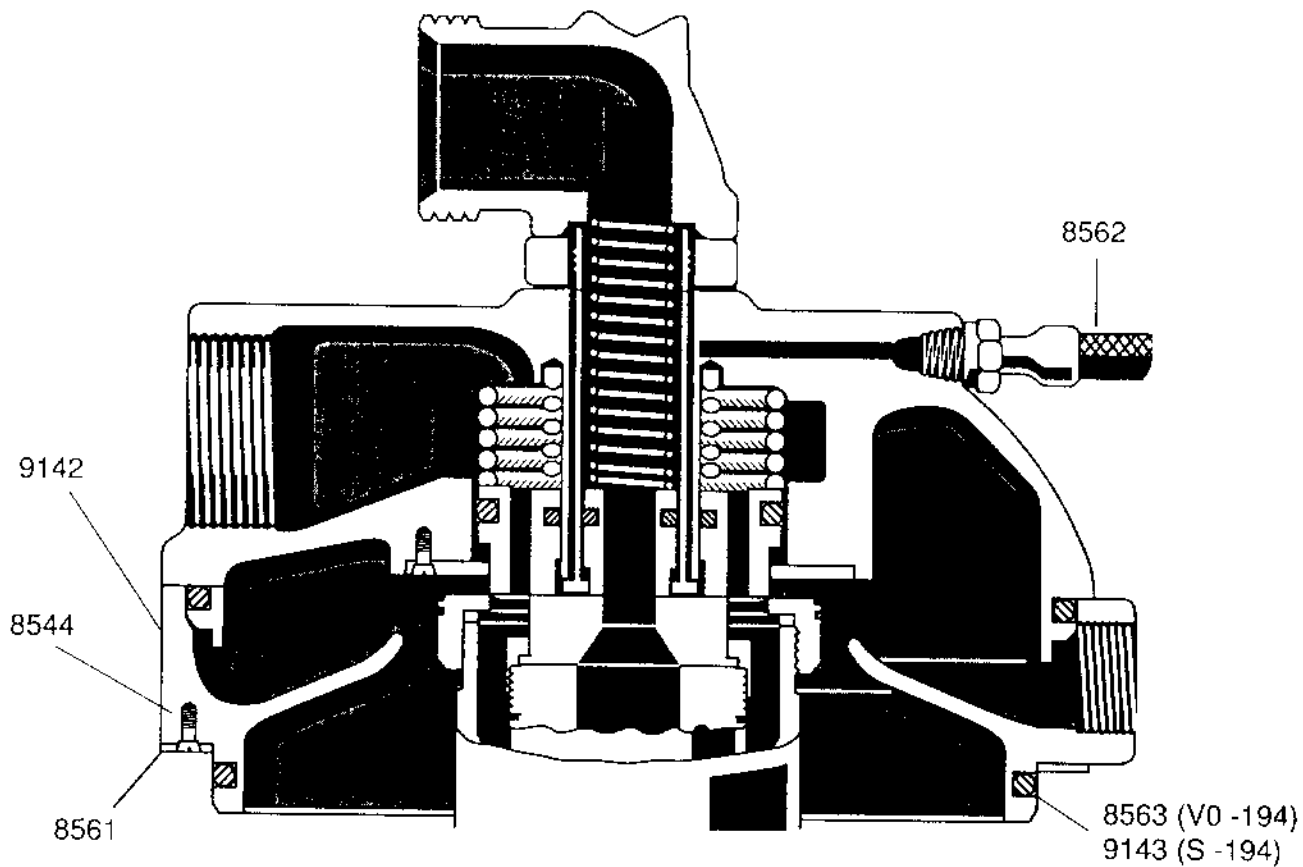
# INLET

<u>HH PN</u>	<u>ALFA PN</u>	<u>HH PN</u>	<u>ALFA PN</u>	<u>PART NAME</u>
<u>VO-194</u>	<u>VO-194</u>	<u>S-194</u>	<u>S-194</u>	
6048	22862	9129	33254	Rubber Ring - Seal Seat to Feed Tube
7547	36780	9137	36792	Inner Rubber Ring
8531	35633	8531	35633	Height Adjusting Washer
8533	33054	8533	33054	Rubber Ring - Seal Seat to Spindle
9123	36991	9123	36991	Outer Wearing Collar
9124	36784	9124	36784	Outer Rubber Ring
9125	36108	9125	36108	Outer Spring
9126	36108	9126	36108	Inner Spring
9127	36785	9127	36785	Inlet Seal Holder
9128	8700375-01	9128	8700375-01	Dual Seal Seat
9801	36990	9801	36990	Inner Wearing Collar

# OUTLET COVER, SECTIONAL VIEW



MEASURING CORRECT HEIGHT FOR SEALS



HH PN  
VO-194

ALFA PN  
VO-194

HH PN  
S-194

ALFA PN  
S-194

PART NAME

8544

02357

8544

02357

Water Hopper Screw

8561

34838

8561

34838

Spacer Ring

8562

34881

8562

34881

Flexible Hose

8563

4933

9143

33269

Water Hopper Rubber Ring

9142

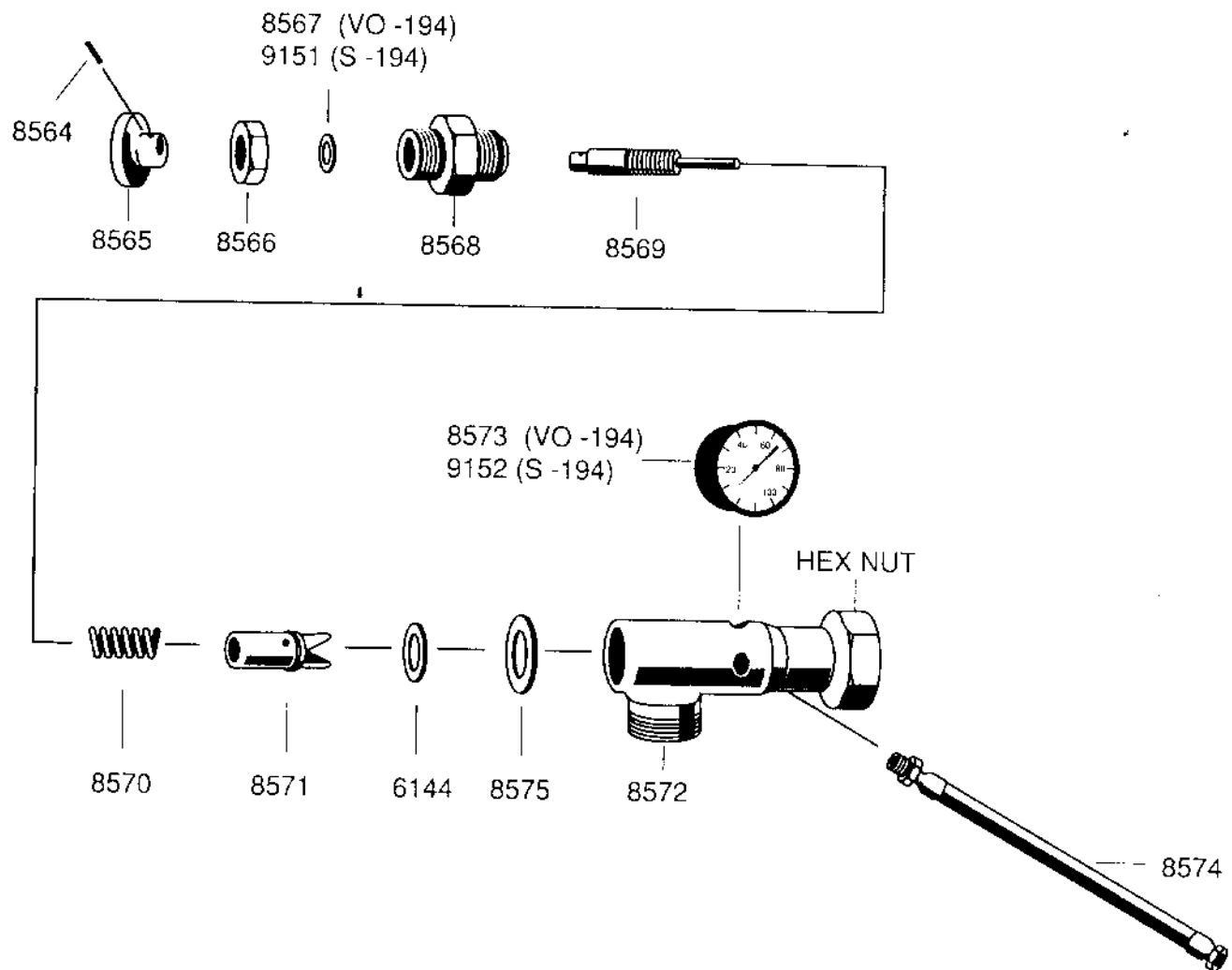
36054

9142

36054

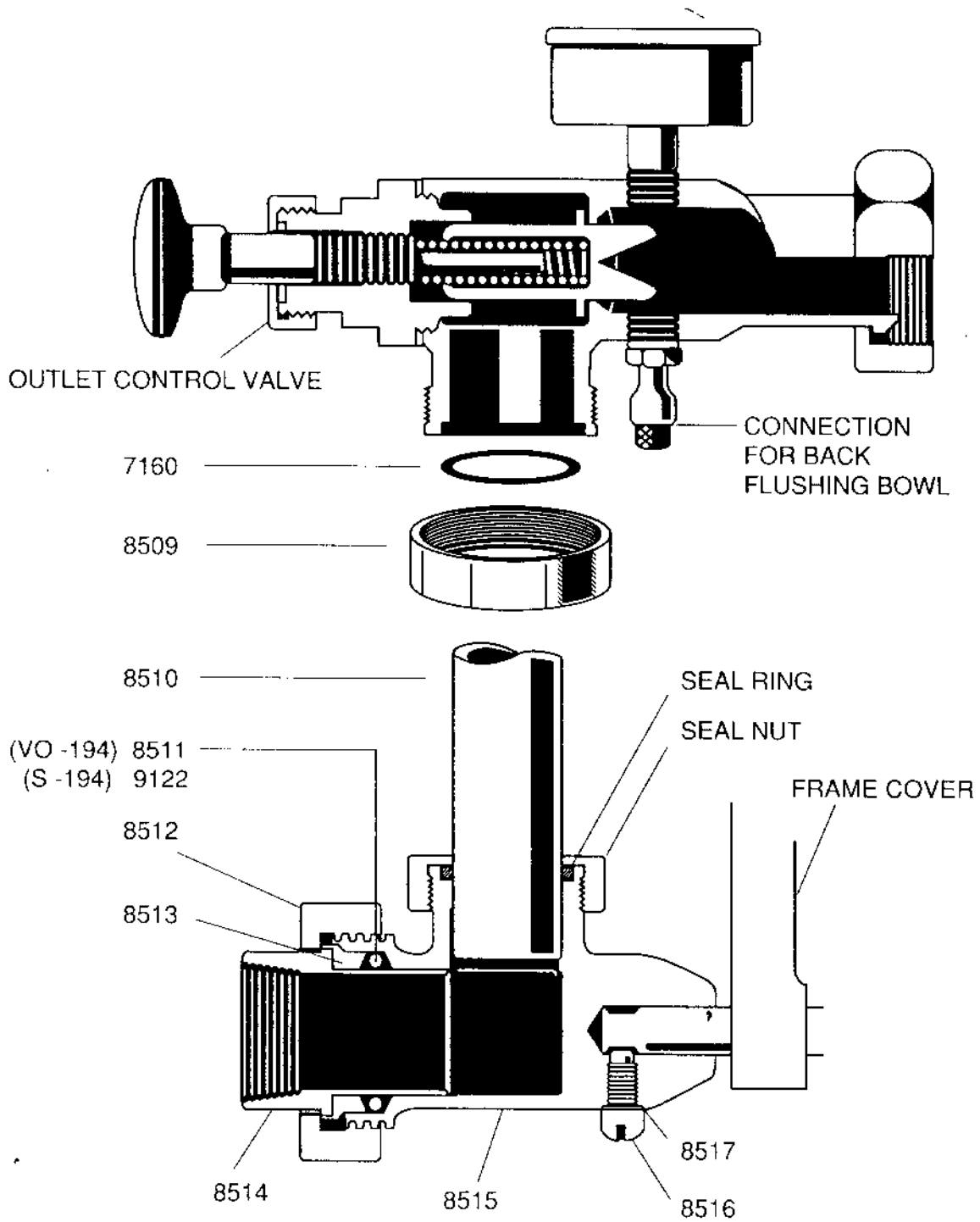
Water Hopper

# OUTLET CONTROL VALVE



<u>HH PN</u> <u>VO-194</u>	<u>ALFA PN</u> <u>VO-194</u>	<u>HH PN</u> <u>S-194</u>	<u>ALFA PN</u> <u>S-194</u>	<u>PART NAME</u>
6144	35339	6144	35339	Washer
8564	34874	8564	34874	Handle Pin
8565	34582	8565	34582	Handle
8566	35647	8566	35647	Seal Nut
8567	36117	9151	36797	Seal Ring
8568	35646	8568	35646	Body Nut
8569	35650	8569	35650	Adjusting Screw
8570	36615	8570	36615	Spring
8571	35645	8571	35645	Valve
8572	35644	8572	35644	Body
8573	35314	9152	35315	Pressure Gauge
8574	36114	8574	36114	Flexible Hose
8575	34586	8575	34586	Gasket

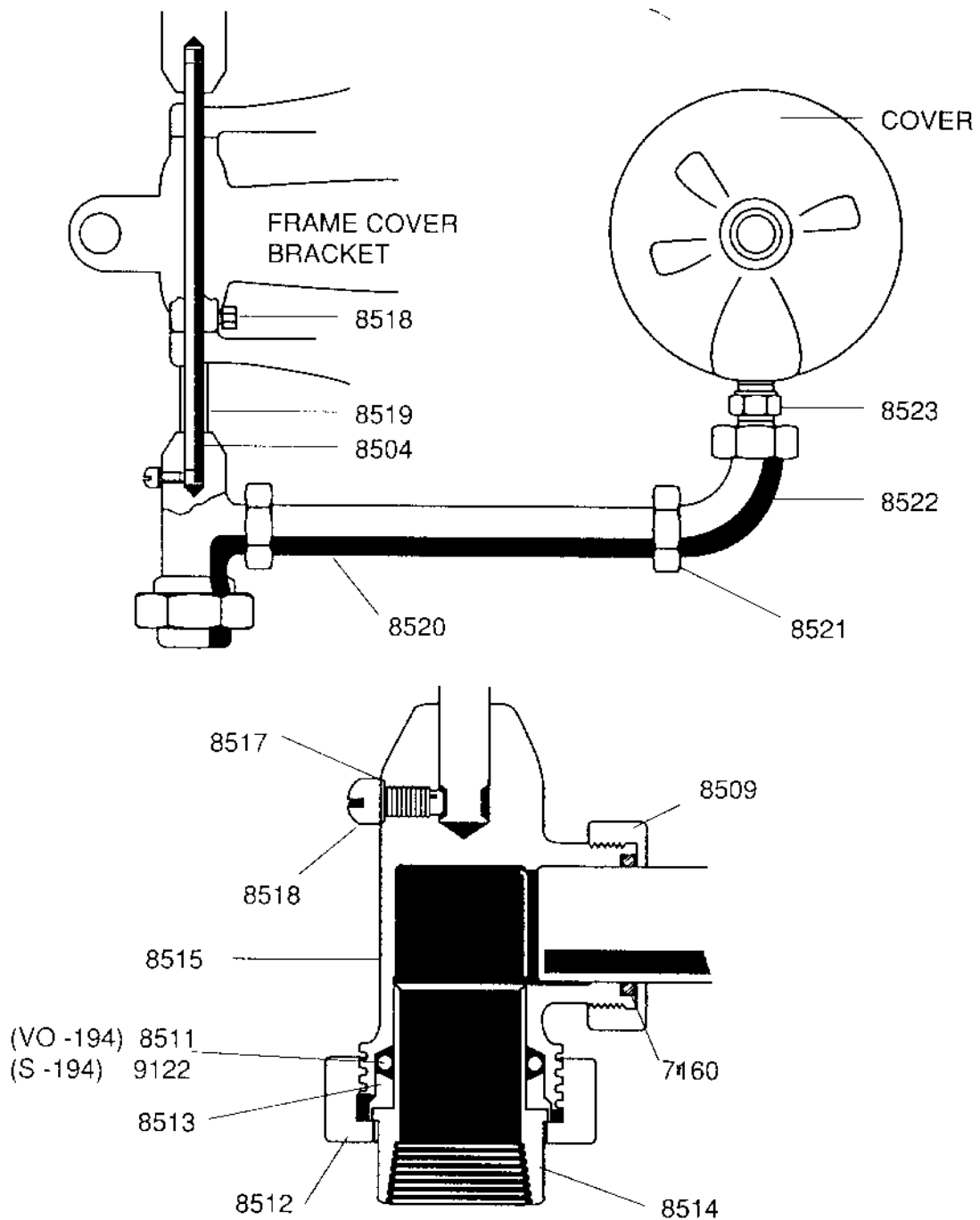
# LIGHT PHASE OUTLET



# LIGHT PHASE OUTLET

<u>HH PN</u>	<u>ALFA PN</u>	<u>HH PN</u>	<u>ALFA PN</u>	<u>PART NAME</u>
<u>VO-194</u>	<u>VO-194</u>	<u>S-194</u>	<u>S-194</u>	
7160	35333	7160	35333	Seal Ring
8509	34581	8509	34581	Seal Nut
8510	34632	8510	34632	Outlet Tube
8511	12528	9122	36796	Swivel Elbow Rubber Ring
8512	02535	8512	02535	Hex Nut
8513	34644	8513	34644	Gland Ring
8514	34645	8514	34645	Elbow Ferrule
8515	34647	8515	34647	Swivel Elbow
8516	34383	8516	34383	Stop Screw
8517	30572	8517	30572	Washer

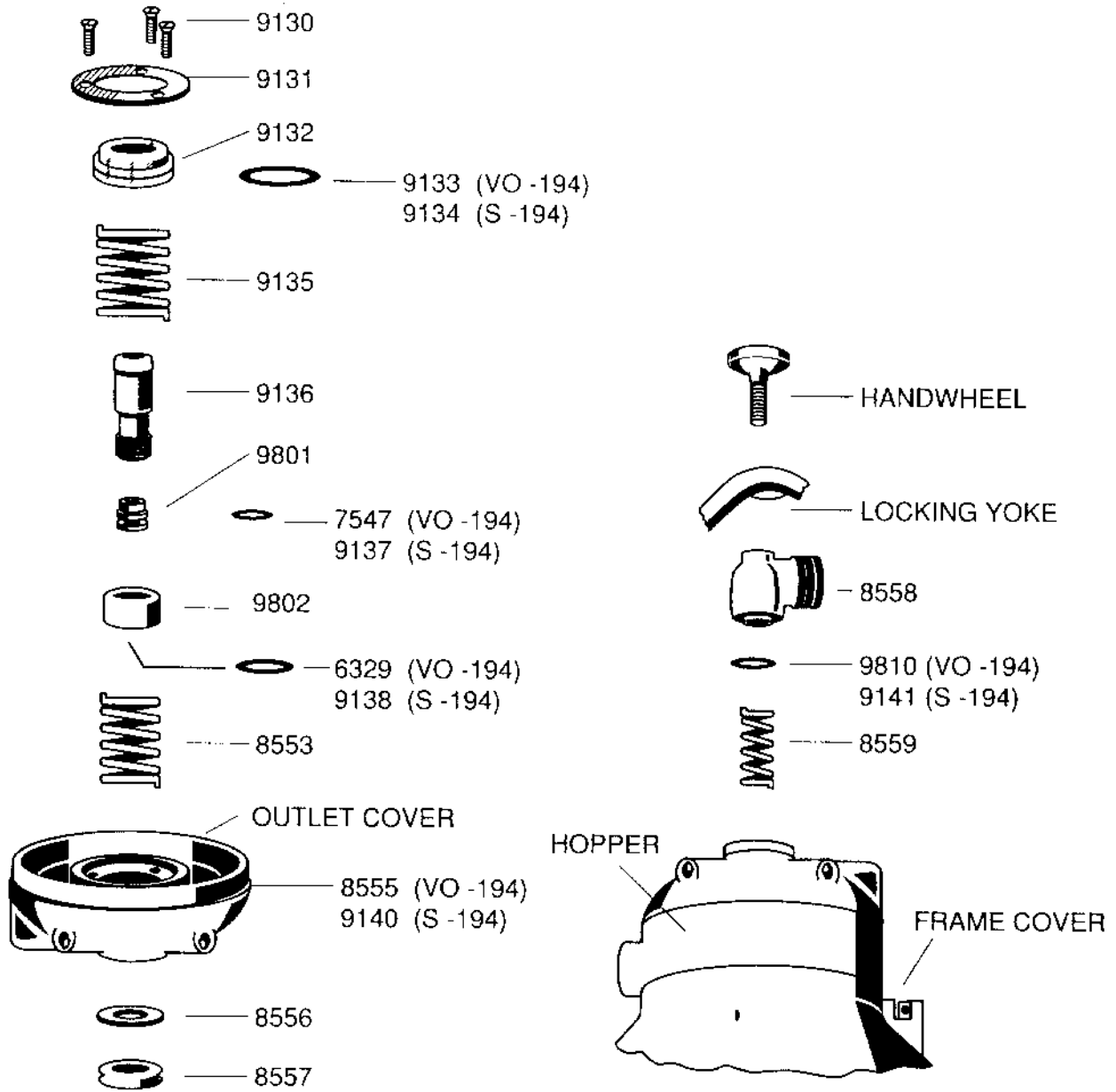
# HEAVY PHASE OUTLET



# HEAVY PHASE OUTLET

<u>HH PN</u> <u>VO-194</u>	<u>ALFA PN</u> <u>VO-194</u>	<u>HH PN</u> <u>S-194</u>	<u>ALFA PN</u> <u>S-194</u>	<u>PART NAME</u>
7160	35333	7160	35333	Seal Ring
8504	36172	8504	36172	Cover Hinge Pin
8509	34581	8509	34581	Seal Nut
8511	12528	9122	36796	Seal Ring
8512	02535	8512	02535	Hex Nut
8513	34644	8513	34644	Gland Ring
8514	34645	8514	34645	Elbow Ferrule
8515	34647	8515	34647	Swivel Elbow
8516	34383	8516	34383	Stop Screw
8517	30572	8517	30572	Washer
8518	34412	8518	34412	Set Screw
8519	36173	8519	36173	Spacer
8520	36174	8520	36174	Outlet Tube
8521	03867	8521	03867	Hex Nut
8522	04173	8522	04173	Sweep Elbow
8523	04195	8523	04195	Adapter

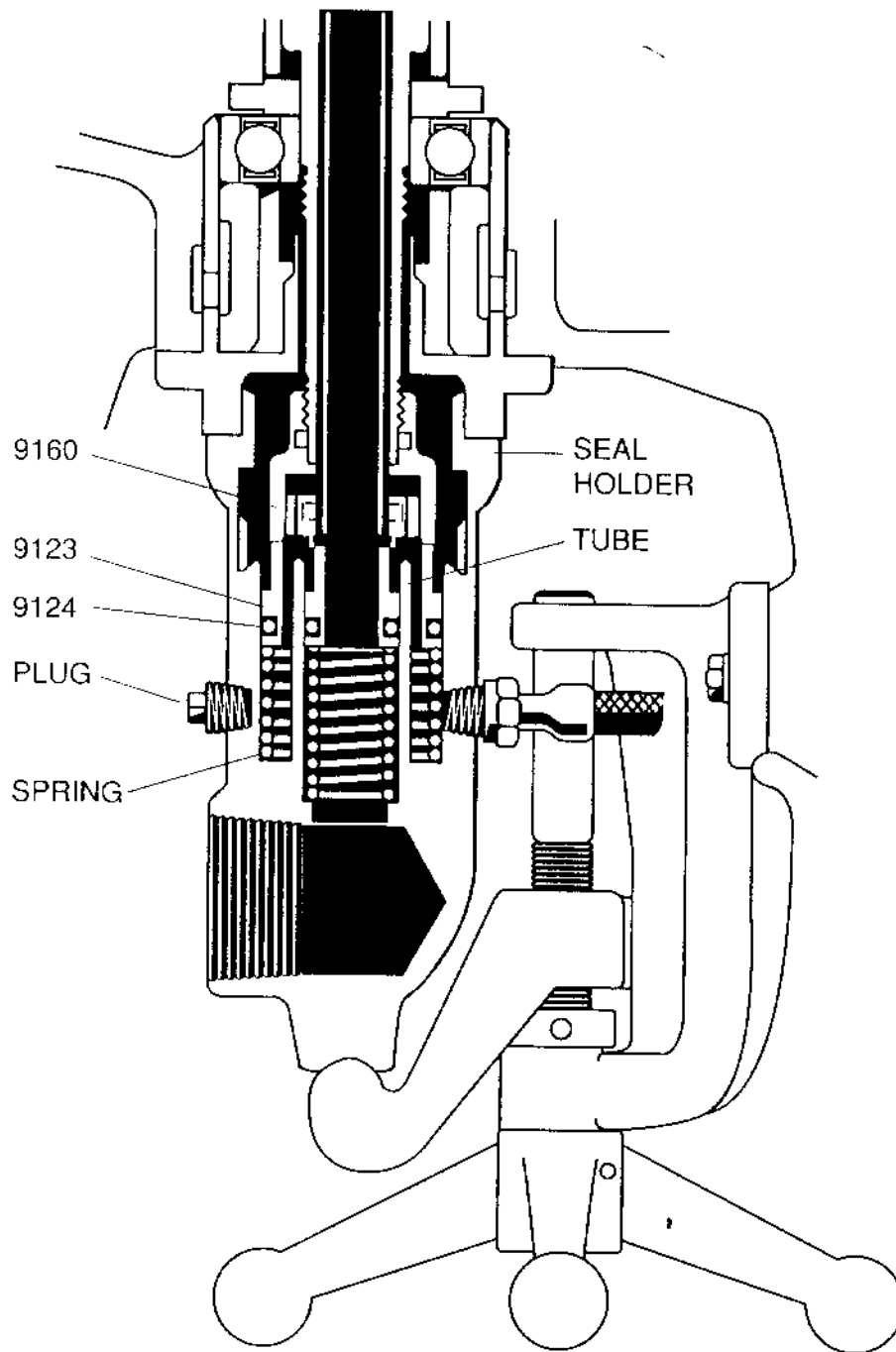
# OUTLET COVER



# OUTLET COVER

<u>HH PN</u> <u>VO-194</u>	<u>ALFA PN</u> <u>VO-194</u>	<u>HH PN</u> <u>S-194</u>	<u>ALFA PN</u> <u>S-194</u>	<u>PART NAME</u>
6329	36781	9138	36793	Middle Rubber Ring
7547	36780	9137	36792	Inner Rubber Ring
8553	35336	8553	35336	Middle Spring
8555	19147	9140	36798	Outlet Cover Rubber Ring
8556	36091	8556	36091	Inner Sleeve Gasket
8557	34470	8557	34470	Inner Sleeve Lock Nut
8558	36261	8558	36261	Outlet Connection
8559	35337	8559	35337	Inner Spring
9130	34480	9130	34480	Retaining Ring Screw
9131	35638	9131	35638	Retaining Ring
9132	36994	9132	36994	Outer Wearing Collar
9133	36783	9134	37156	Outer Rubber Ring
9135	35642	9135	35642	Outer Spring
9136	36258	9136	36258	Inner Sleeve
9139	36110	9139	36110	Outlet Cover
9801	36990	9801	36990	Inner Wearing Collar
9802	36992	9802	36992	Middle Wearing Collar
9810	36116	9141	36795	Outlet Connection Rubber Ring

# SECTION THROUGH INLET VO - 194F

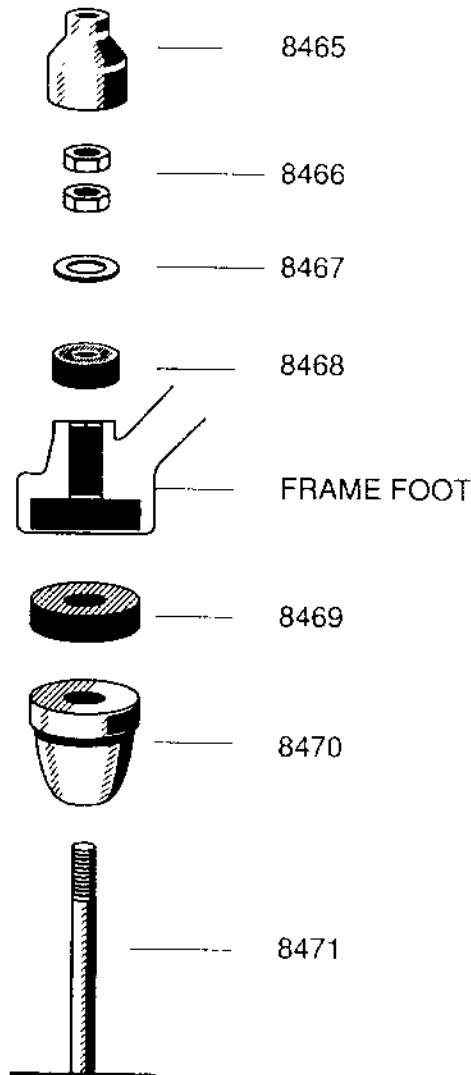


Water flush machine modified for Refining

For Refining, remove:

1. Outer wearing Collar (9123), Rubber Ring (9124), Spring.
2. Turn off, or disconnect and plug water flush.
3. Replace Seal Seat (9128) with (9160).

# BALL FOOT



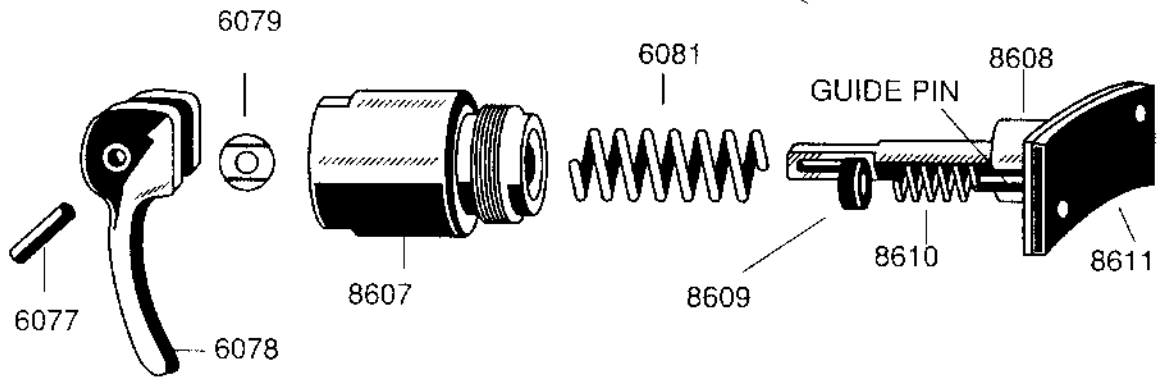
HH PN  
VO-194/S-194

ALFA PN  
VO-194/S-194

PART NAME

8465	20771	Protecting Cap
8466	20493	Jam Nut
8467	20492	Washer
8468	2600	Small Cushion
8469	20489	Large Cushion
8470	20637	Ball Foot
8471	22510	Foundation Stud

# BRAKE



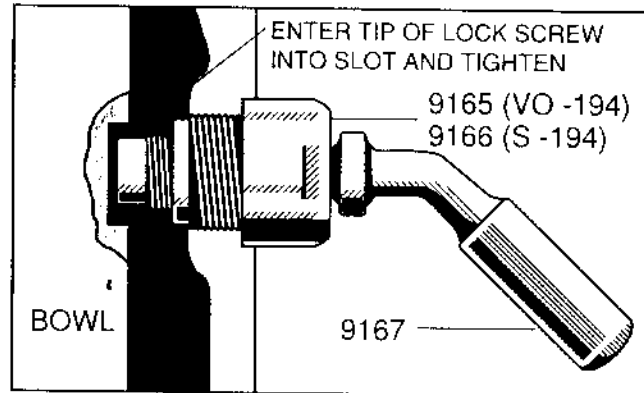
HH PN  
VO-194/S-194

ALFA PN  
VO-194/S-194

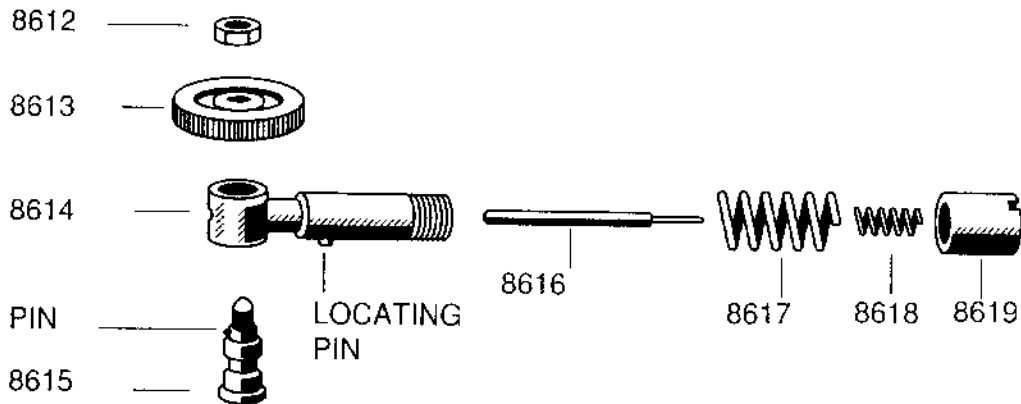
PART NAME

6077	33505	Lever Pin
6078	33502	Lever
6079	29364	Anti-Rattle Spring
6081	35444	Spring
8607	33512	Bushing
8608	33510	Plunger
8609	36337	Plunger Seal Ring
8610	36338	Plunger Seal Ring Spring
8611	33667	Lining

# BOWL LOCKING DEVICE



# SPEED INDICATOR



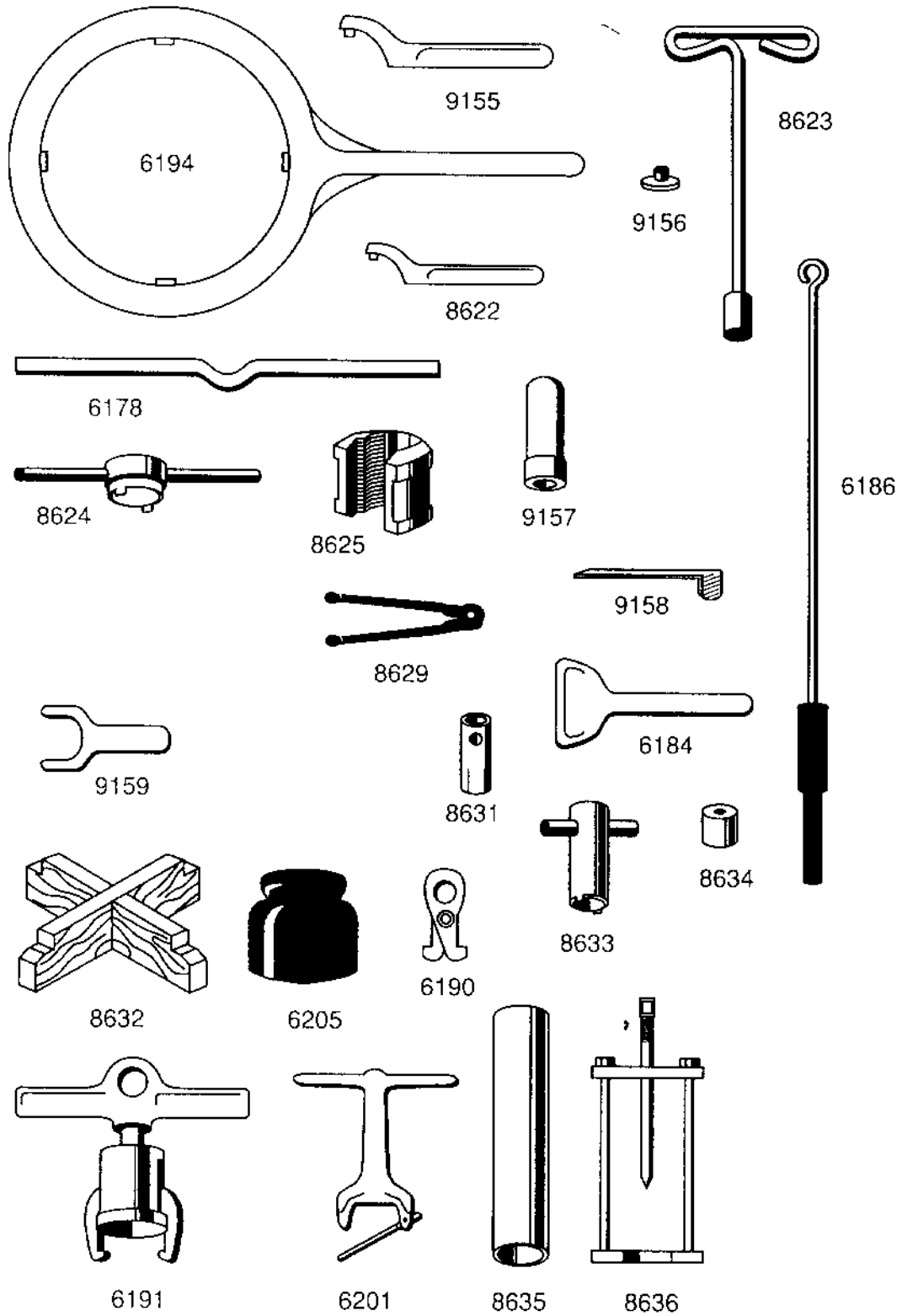
HH PN  
VO-194/S-194

ALFA PN  
VO-194/S-194

PART NAME

8612	21896	Nut
8613	4739	Wheel
8614	14591	Sleeve
8615	14595	Shaft
8616	14953	Plunger
8617	14594	Large Spring
8618	3469	Small Spring
8619	14592	Cap

# TOOLS



# TOOLS

<u>HH PN</u>	<u>ALFA PN</u>	<u>PART NAME</u>
6178	19715	Handle - Lifter - Disc Carrier
6184	15582	Scraper - Bowl
6186	16287	Brush - Spindle
6190	19713	Lifter - Disc Carrier
6191	27557	Lifter - Bowl Shell
6194	16373	Wrench - Bowl Coupling Ring
6201	19301	Wrench - Spindle Cap Nut
6205	30565	Cover - Protecting
8622	34190	Wrench - Inner and Outer Sleeve Nut
8623	6720	Wrench - Socket
8624	34677	Wrench - Top Disc Nut
8625	17239	Block - Driver-Upper Ball Bearing
8629	20433	Wrench - Top Bearing Protecting Cover
8631	31473	Wrench - Jam Nut
8632	9270	Stand - Disc Carrier
8633	36049	Wrench - Inner Sleeve
8634	19853	Plug - Extractor
8635	17238	Tube - Mounting Upper Ball Bearing
8636	35663	Extractor - Lower Ball Bearing
9155	34425	Wrench - Bowl Top Nut
9156	35651	Plug - Protecting Spindle
9157	35662	Tube - Mounting Lower Ball Bearing
9158	35660	Wrench - Spindle Feed Tube
9159	35659	Wrench - Seal Seat - Inlet