

***THE POWER IS IN THE PUMP!***



## SERVICE MANUAL



**WE HAVE REPLACEMENT PARTS FOR:  
AMERICAN TURBINE, DOMINATOR  
LEGEND, BERKELEY  
JACUZZI & PANTHER ENERGIZER  
HAMILTON**



**COMPLETE SHAFT ASSEMBLIES  
INCLUDING HAMILTON 212**



**STAINLESS & ALUMINUM IMPELLERS**



**VARIOUS SNOOTS &  
EXTENSION HOUSINGS**



**PANTHER & JACUZZI ENERGIZER KITS**



**HYDRAULIC TRIM KITS**



**OVERHAUL KITS & BEARING KITS**

**AMERICAN TURBINE**  
3692 RIVERSIDE DR.  
CLARKSTON, WA 99403  
PHONE: (509) 243-5387  
FAX: (509) 243-5391  
INTERNET: [WWW.AMERICANTURBINE.COM](http://WWW.AMERICANTURBINE.COM)

# AMERICAN TURBINE

## TERMS, CONDITIONS, & LIMITED WARRANTY

### PAYMENT TERMS

C.O.D. Cash or Cashiers Check will be required. We do accept Visa or MasterCard, Discover, and American Express. Business checks will be accepted after approval by our business office for payment by check. A check writing application is available by calling (509) 243-5387.

### FREIGHT

Carrier will be selected by AMERICAN TURBINE unless otherwise requested by customer. All shipments will be F.O.B. Clarkston, WA, 99403. Claims for shortages or errors in shipment must be reported within 48 hours of receipt of shipment for any adjustments to be considered. Shipment damage must be made directly with the freight company. Freight companies require inspection of the original container in which the product was shipped. DO NOT return the damaged merchandise to AMERICAN TURBINE as it will not be accepted.

### REFUSED SHIPMENTS

Shipments returned to AMERICAN TURBINE marked refused, or not in when driver called, will cause the customer's buying status to be halted until all freight, C.O.D., and handling charges are paid in full. Refusal of a shipment does not relieve a customer of liability for paying these charges. Repeated returned shipments of this type will cause the customer's buying status to be permanently revoked.

### RETURNS

Products may be returned for credit only by written confirmation. There will be a 15% handling charge on all merchandise returned to us, unless prior arrangements have been made. Merchandise must be returned prepaid freight, accompanied by a photo copy of the original invoice on which it was purchased. Only current saleable parts may be returned. Special orders or custom orders may NOT be returned. You must have a RETURN GOODS NUMBER (RGN) on the package. NO RETURNS AFTER 30 DAYS.

### WARRANTY

AMERICAN TURBINE'S limited warranty statements are available upon request from factory.

### PRICES

All prices are subject to change without written or verbal notice. Our price catalogs are intended for use as a guideline only. Price catalogs and sheets are often partially outdated by the time they are printed. All products will be shipped at the price in effect regardless of what the latest price catalog reflects.

### OEM/DEALER DISCOUNT QUALIFYING

To receive the AMERICAN TURBINE price discount, request the OEM/DEALER qualifying letter and application from our business office.

1. American Turbine, Inc. warrants, to the first original retail purchaser, each new American Turbine jet drive unit manufactured by American Turbine, Inc. to be free from defects in material and workmanship.
2. The warranty extends for 12 months from the date of purchase.
3. Claims under this warranty shall be made by returning the defective part freight prepaid to American Turbine, Inc.
4. Any American Turbine jet drive or part determined to be defective in either workmanship or material during the warranty period will be repaired or replaced at American Turbine, Inc.'s option, without charge for parts or labor. American Turbine, Inc.'s liability shall be limited to repairing or replacing part found to be defective during the warranty period.
5. American Turbine, Inc. reserves the right to change or to improve the design of any American Turbine, Inc. product without assuming any obligations to modify such units previously manufactured.

### EXCLUSIONS AND LIMITATIONS

This warranty does not apply to:

1. Any part, accessory or product not manufactured by American Turbine, Inc., And for which Manufacturer warranty has been supplied to the consumer by the respective manufacturer.
2. Normal Maintenance items such as lubrication and adjustments necessary as a result of normal wear and tear.
3. Any jet drive or part that has been modified, altered, or repaired by other than American Turbine, Inc.
4. Products damaged as a result of misuse, neglect, negligence, accident, freezing, normal wear and tear, corrosion, improper installation, operation with lubricants which are not suitable for use with the jet drive, failure to operate and maintain the product in accordance with the owner's manual supplied with each new American Turbine, Inc.'s product, products used for racing, damage resulting from debris, or other substances entering through the jet drive, operating the jet drive at RPM in excess of the maximum rated RPM as stated in the owners manual, or any case other than a defect in the manufacture, material, or assembly of an American Turbine, Inc.
5. American Turbine, Inc. shall not be liable for any incidental, consequential or other damages whatsoever, including but not limited to: loss of use, loss of time, inconvenience, cost of returning the defective product to American Turbine, Inc., travel, lodging, or damage to personal property.
6. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply to you.
7. This warranty is the only express warranty applicable to American Turbine, Inc. products, and is in lieu of any other express or implied warranties, including warranties of merchantability and fitness for a particular purpose. All implied warranties are limited in duration to minimum period required by State law. American Turbine, Inc. neither assumes or authorizes any other person to assume for it any other liability or warranty in connection with its products,
8. Some states do not allow limitations on the duration of implied warranties, so the above limitations may not apply to you.
9. This warranty gives you specific legal rights, and you may also have other rights which may vary state to state.

# AMERICAN TURBINE

## APPLICATION QUESTIONNAIRE

If you wish to consider drives for any current or future project, we would be pleased to review the hull and intended power and provide recommendations for the appropriate drive model and to provide estimates of anticipated performance. Please print and complete this Applications Questionnaire and fax to (509) 243-

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Name: _____	Telephone: _____
Company: _____	Fax: _____
Address: _____	E-Mail: _____
_____	_____

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### HULL DETAILS:

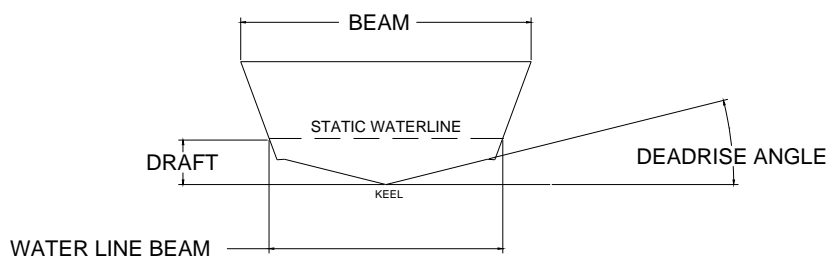
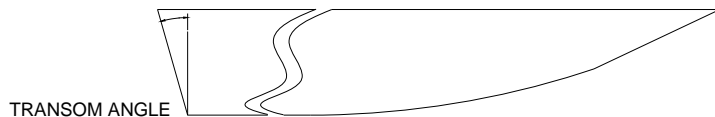
Laden Displacement: _____	ton / kg / lb.	_____	Planing Mono Hull
Lightship Displacement: _____	ton / kg / lb.	_____	Semi-planing Mono
Waterline length (LWL): _____	meters / feet	_____	Planing Catamaran
Waterline beam: _____	meters / feet	_____	Semi planning Cat.
Deadrise at mid-waterline: _____	degrees	_____	Displacement Craft.
Deadrise at transom: _____	degrees	_____	Other (describe below)
Transom Angle: _____	degrees	_____	Composite
Draft at transom: _____	meters / feet	_____	Aluminum
Frontal Area: _____	sq.m / sq. ft	_____	Other
Required Boat Speeds: _____	Knots Laden	_____	Knots Lightship

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### ENGINES:

Single _____	Twin _____
Make: _____	Model: _____
Max. Power: _____	hp / kW @ _____ rpm

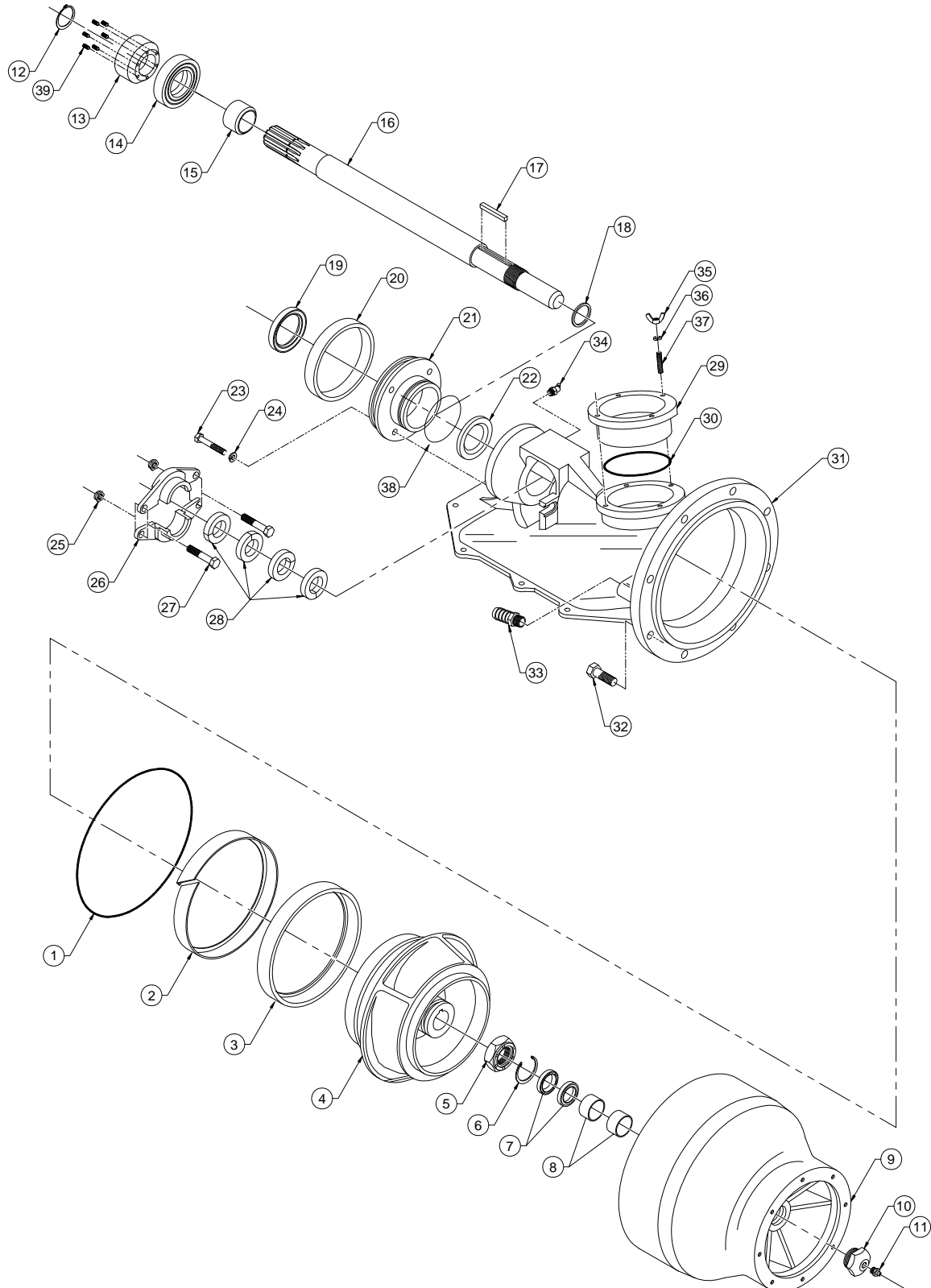
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# AMERICAN TURBINE

## MODEL AT-309 JET (W / HP BEARING)

USED W / SERIAL # 25649 - PRESENT



# AMERICAN TURBINE

## MODEL AT-309 JET (W / HP BEARING)

USED W / SERIAL # 25649 - PRESENT

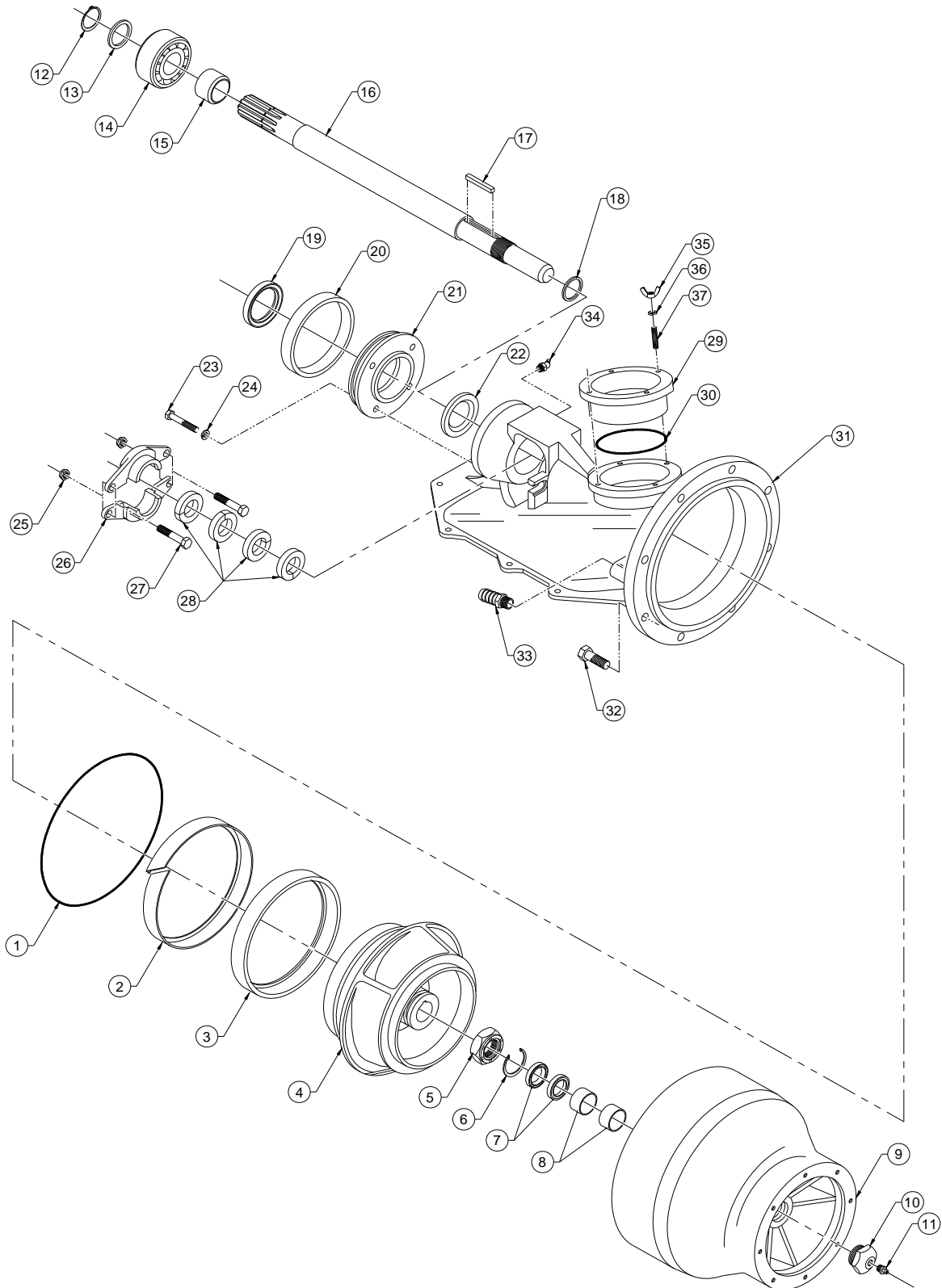


## LEGEND

SYM.	DESCRIPTION	QTY.	PART NO.	SYM.	DESCRIPTION	QTY.	PART NO.
1	O-RING BOWL	1	O3101	21	BEARING CAP	1	SC2107
2	WEAR RING LINER	1	WR6004	22	SUCTION SEAL	1	SL1507
3	WEAR RING	1	WR5000	23	HHCS, 5/16-18 X 2	4	F05 18 16 HH
4	IMPELLER	1	IMA***	24	LOCKWASHER, 5/16	4	F05 LW
5	IMPELLER NUT	1	SH3507	25	LOCKNUT, 3/8-24 (THIN)	2	F06 24 TL
6	BOWL SNAP RING	1	SC9201	26	PACKING FOLLOWER (PAIR)	1	SC2507
7	BOWL SEALS	2	SL2003	27	HHCS, 3/8-24 X 1-3/4	2	F06 24 14 HH
8	BOWL BEARINGS	2	B1502	28	PACKING RINGS	4	SC3007
9	BOWL	1	SC9301	29	HAND HOLE COVER	1	SC1501
10	BOWL PLUG	1	SC9001	30	O-RING HAND HOLE COVER	1	O1001
11	GREASE ZERT	1	SC8901	31	SUCTION PIECE	1	SC1001
12	SNAP RING	1	SH1507	32	HHCS, 1/2-13 X 1-1/2	8	F08 13 12 HH
13	BEARING PRE-LOAD SEAL RING	1	SH5005	33	BARBED CONNECTOR, 3/8	1	SC4507
14	THRUST BEARING	1	B1107	34	GREASE ZERT	1	SC8801
15	SLINGER RING	1	SH2507	35	WING NUT, 5/16-18	4	F05 18 WN
16	SHAFT	1	SH1007	36	LOCKWASHER, 5/16	4	F05 LW
17	IMPELLER KEY	1	SH3007	37	SET SCREW, 5/16-18 X 1-1/2	4	F05 18 12 SS
18	SHIM KIT	1	SHK4007	38	O-RING, BEARING CAP	1	O3601
19	BEARING CAP SEAL	1	SL1001	39	SET SCREW, 10-32 X 3/8	6	F03 32 03 SS
20	ENGINE MOUNT RING	1	SC4007				

# AMERICAN TURBINE

## MODEL AT-309 JET (W / B1007 BEARING)



# AMERICAN TURBINE

## MODEL AT-309 JET (W / B1007 BEARING)



### LEGEND

SYM.	DESCRIPTION	QTY.	PART NO.
1	O-RING BOWL	1	O3101
2	WEAR RING LINER	1	WR6004
3	WEAR RING	1	WR5000
4	IMPELLER	1	IMA***
5	IMPELLER NUT	1	SH3507
6	BOWL SNAP RING	1	SC9201
7	BOWL SEALS	2	SL2003
8	BOWL BEARINGS	2	B1502
9	BOWL	1	SC9301
10	BOWL PLUG	1	SC9001
11	GREASE ZERT	1	SC8901
12	SNAP RING	1	SH1507
13	THRUST WASHER	1	SH2005
14	THRUST BEARING	1	B1007
15	SLINGER RING	1	SH2507
16	SHAFT	1	SH1007
17	IMPELLER KEY	1	SH3007
18	SHIM KIT	1	SHK4007
19	BEARING CAP SEAL	1	SL1007

SYM.	DESCRIPTION	QTY.	PART NO.
20	ENGINE MOUNT RING	1	SC4007
21	BEARING CAP	1	SC2007
22	SUCTION SEAL	1	SL1507
23	HHCS, 5/16-18 X 2	4	F05 18 16 HH
24	LOCKWASHER, 5/16	4	F05 LW
25	LOCKNUT, 3/8-24 (THIN)	2	F06 24 TL
26	PACKING FOLLOWER (PAIR)	1	SC2507
27	HHCS, 3/8-24 X 1-3/4	2	F06 24 14 HH
28	PACKING RINGS	4	SC3007
29	HAND HOLE COVER	1	SC1501
30	O-RING HAND HOLE COVER	1	O1001
31	SUCTION PIECE	1	SC1001
32	HHCS, 1/2-13 X 1-1/2	8	F08 13 12 HH
33	BARBED CONNECTOR, 3/8	1	SC4507
34	GREASE ZERT	1	SC8801
35	WING NUT, 5/16-18	4	F05 18 WN
36	LOCKWASHER, 5/16	4	F05 LW
37	SET SCREW, 5/16-18 X 1-1/2	4	F05 18 12 SS

MODEL TJ-309 JET (W / HP BEARING)  
USED W / SERIAL # 25649 - PRESENT





# AMERICAN TURBINE

## MODEL TJ-309 JET (W / HP BEARING)

USED W / SERIAL # 25649 - PRESENT



## LEGEND

SYM.	DESCRIPTION	QTY.	PART NO.
1	BOWL O-RING	1	O3101
2	WEAR RING LINER	1	WR6004
3	WEAR RING	1	WR5000
4	IMPELLER	1	IMA***
5	IMPELLER NUT	1	SH3507
6	BOWL SNAP RING	1	SC9201
7	BOWL SEAL	2	SL2003
8	BOWL BEARING	2	B1502
9	BOWL	1	SC9301
10	BOWL PLUG	1	SC9001
11	ZERT	1	SC8901
12	SNAP RING	1	SH1507
13	BEARING PRE-LOAD SEAL RING	1	SH5005
14	THRUST BEARING	1	B1107
15	SLINGER RING	1	SH2507
16	PUMP SHAFT	1	SH1007
17	IMPELLER KEY	1	SH3007
18	SHIM KIT	1	SHK4007
19	BEARING CAP SEAL	1	SL1001
20	ENGINE MOUNT RING	1	SC4007
21	BEARING CAP	1	SC2107
22	SUCTION SEAL	1	SL1507
23	HHCS, 5/16-18 X 2	14	F05 18 16 HH
24	LOCKWASHER, 5/16	20	F05 LW
25	LOCK NUT, 3/8-24 (THIN)	2	F06 24 TL
26	PACKING FOLLOWER (PAIR)	1	SC2507
27	HHCS, 3/8-24 X 2	2	F06 24 16 HH

SYM.	DESCRIPTION	QTY.	PART NO.
28	PACKING RINGS	4	SC3007
29	HAND HOLE COVER	1	SC1701
30	O-RING	1	O1002
31	SUCTION PIECE	1	SC1403
32	HHCS, 1/2-13 X 1-1/2	8	F08 13 12 HH
33	BARBED CONNECTOR, 3/8	1	SC4507
34	GREASE ZERT	1	SC8801
35	WINGNUT, 3/8-16	2	F06 16 WN
36	THICK WASHER, 3/8	2	F06 TW
37	COTTER PIN, 1/8 X 1/2	2	F02 04 CP
38	EYE BOLT, 3/8-16	2	F06 16 EB
39	CLEVIS PIN, 5/16	2	F05 CL
40	HHCS, 5/16-18 X 1-1/4	6	F05 18 10 HH
41	FLAT WASHER, 5/16	22	F05 FW
42	HEX NUT, 5/16	16	F05 HN
43	AN WASHER, 5/16	10	F05 AN
44	RIDEPLATE BRACKET	1	I7301
45	RIDEPLATE	1	I6901
46	FHMS, 5/16-18 X 2	2	F05 18 16 FH
47	FHMS, 5/16-18 X 3/4	3	F05 18 06 FH
48	GRATE BACK-UP	1	I4307
49	GRATE	1	I4207
50	SHCS, 5/16-18 X 1-1/4	4	F05 18 10 SH
51	O-RING	1	O3601
52	SET SCREW, 10-32 X 3/8	6	F03 32 03 SS
53	STAR LOCK WASHER, 5/16	6	F05 SW

This exploded view diagram illustrates the assembly of a mechanical component, likely a pump or valve. The parts are numbered 1 through 51. The assembly is shown in a disassembled state to show the relationship between components. Key parts include a large circular flange (31), a central shaft (16), and a housing (45). The diagram shows the assembly of the shaft into the housing, the installation of various seals and gaskets (12, 13, 14, 15, 19, 20, 21, 22, 23, 24), and the attachment of a cover (1) and a base (45). The diagram also shows the assembly of a bracket (48) and a plate (49) onto the main assembly. The exploded view is used to show the sequence of assembly and the relative positions of the parts.

# AMERICAN TURBINE

## MODEL TJ-309 JET (W / B1007 BEARING)



### LEGEND

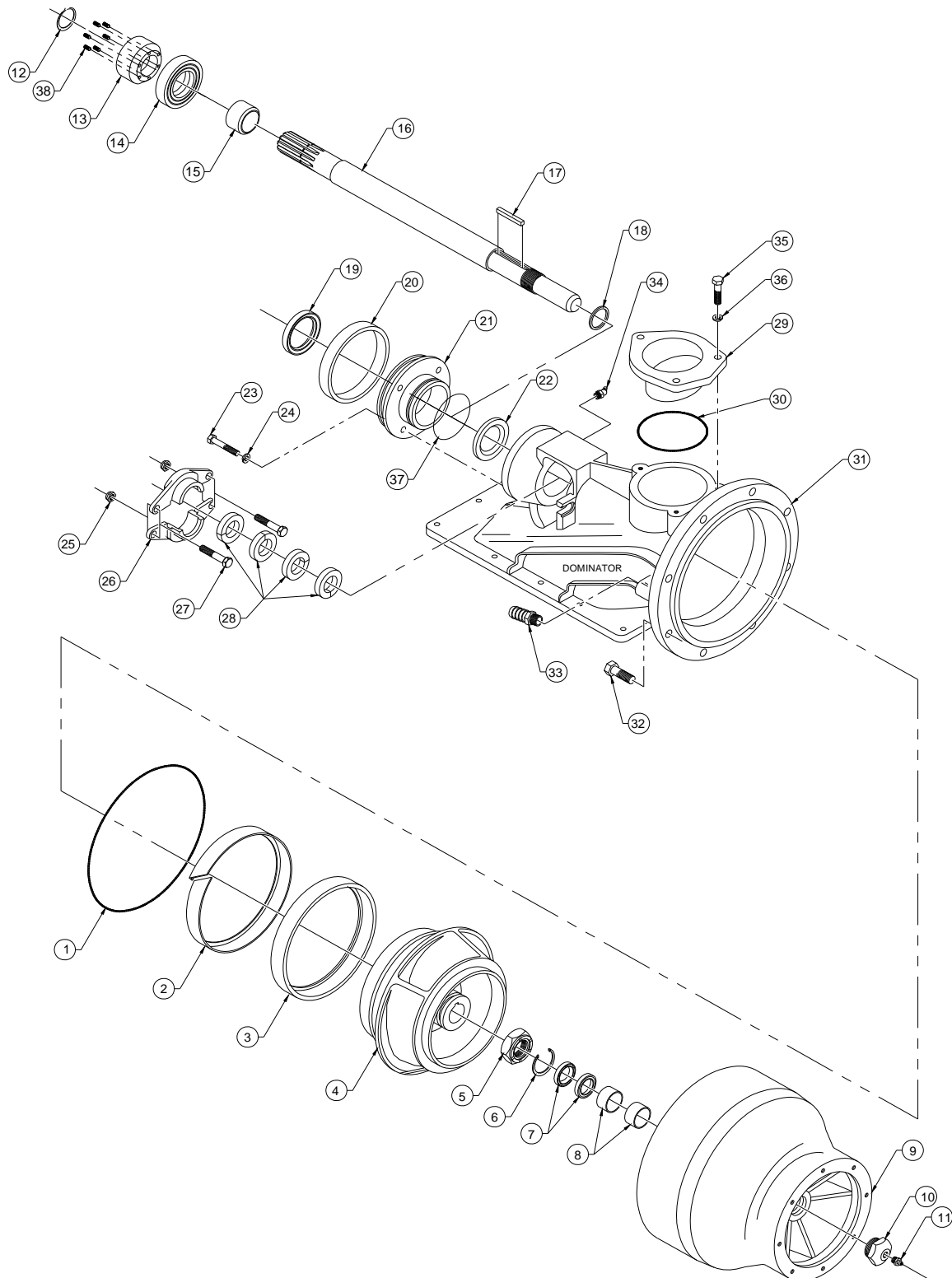
SYM.	DESCRIPTION	QTY.	PART NO.
1	BOWL O-RING	1	O3101
2	WEAR RING LINER	1	WR6004
3	WEAR RING	1	WR5000
4	IMPELLER	1	IMA***
5	IMPELLER NUT	1	SH3507
6	BOWL SNAP RING	1	SC9201
7	BOWL SEAL	2	SL2003
8	BOWL BEARING	2	B1502
9	BOWL	1	SC9301
10	BOWL PLUG	1	SC9001
11	ZERT	1	SC8901
12	SNAP RING	1	SH1507
13	THRUST WASHER	1	SH2005
14	THRUST BEARING	1	B1007
15	SLINGER RING	1	SH2507
16	PUMP SHAFT	1	SH1007
17	IMPELLER KEY	1	SH3007
18	SHIM KIT	1	SHK4007
19	BEARING CAP SEAL	1	SL1007
20	ENGINE MOUNT RING	1	SC4007
21	BEARING CAP	1	SC2007
22	SUCTION SEAL	1	SL1507
23	HHCS, 5/16-18 X 2	14	F05 18 16 HH
24	LOCKWASHER, 5/16	20	F05 LW
25	LOCK NUT, 3/8-24 (THIN)	2	F06 24 TL
26	PACKING FOLLOWER (PAIR)	1	SC2507

SYM.	DESCRIPTION	QTY.	PART NO.
27	HHCS, 3/8-24 X 2	2	F06 24 16 HH
28	PACKING RINGS	4	SC3007
29	HAND HOLE COVER	1	SC1701
30	ORING	1	O1002
31	SUCTION PIECE	1	SC1403
32	HHCS, 1/2-13 X 1-1/2	8	F08 13 12 HH
33	BARBED CONNECTOR, 3/8	1	SC4507
34	GREASE ZERT	1	SC8801
35	WINGNUT, 3/8-16	2	F06 16 WN
36	THICK WASHER, 3/8	2	F06 TW
37	COTTER PIN, 1/8 X 1/2	2	F02 04 CP
38	EYE BOLT, 3/8-16	2	F06 16 EB
39	CLEVIS PIN, 5/16	2	F05 CL
40	HHCS, 5/16-18 X 1-1/4	6	F05 18 10 HH
41	FLAT WASHER, 5/16	22	F05 FW
42	HEX NUT, 5/16-18	16	F05 18 HN
43	AN WASHER, 5/16	10	F05 AN
44	RIDEPLATE BRACKET	1	I7301
45	RIDEPLATE	1	I6901
46	FHMS, 5/16-18 X 2	2	F05 18 16 FH
47	FHMS, 5/16-18 X 3/4	3	F05 18 06 FH
48	GRATE BACK-UP	1	I4307
49	GRATE	1	I4207
50	SHCS, 5/16-18 X 1-1/4	4	F05 18 10 SH
51	STAR LOCK WASHER, 5/16	6	F05 SW

# AMERICAN TURBINE

## MODEL 12-S JET (W / HP BEARING)

USED W / SERIAL # 25649 - PRESENT



# AMERICAN TURBINE

## MODEL 12-S JET (W / HP BEARING)

USED W / SERIAL # 25649 - PRESENT

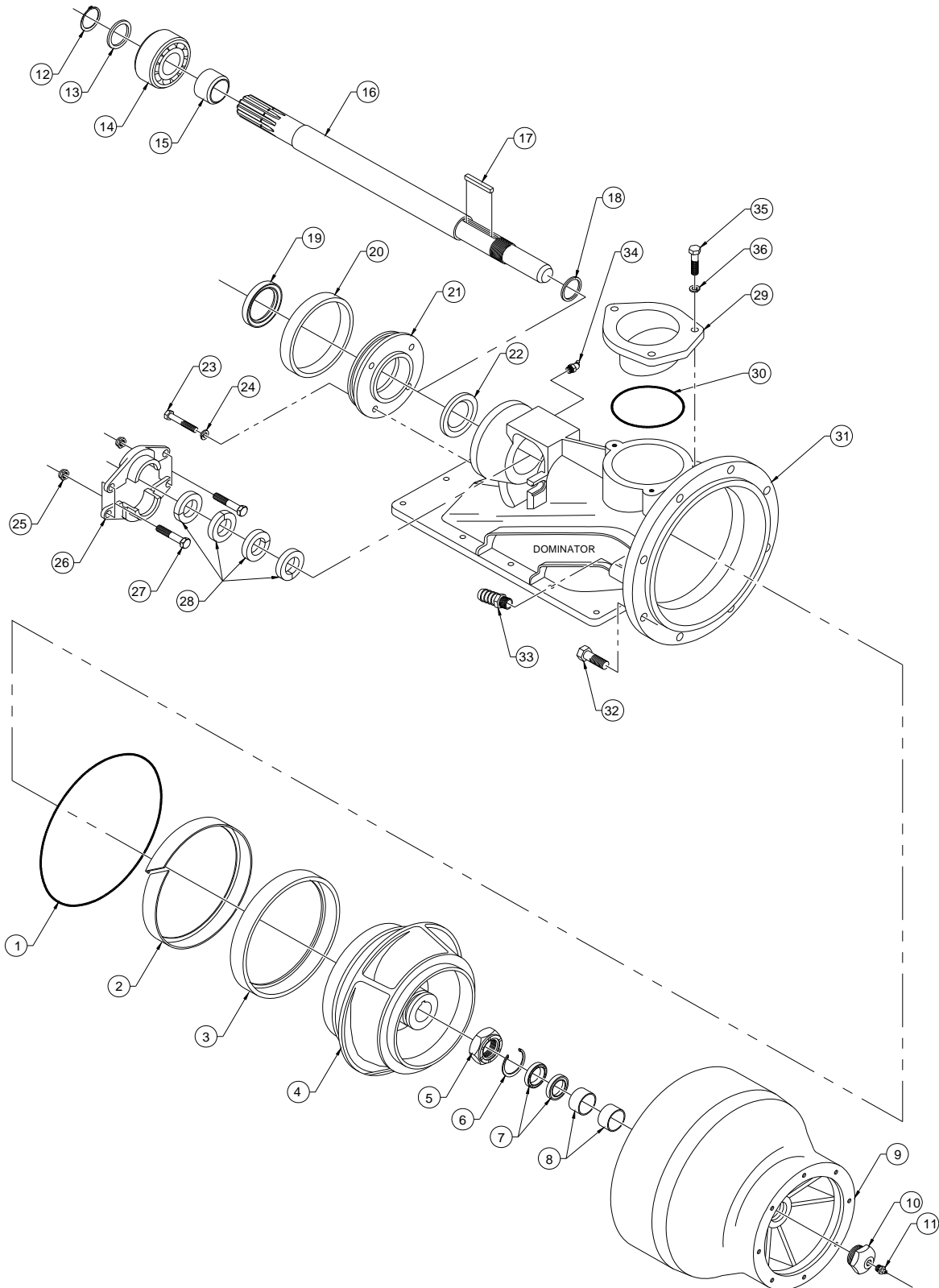


## LEGEND

SYM.	DESCRIPTION	QTY.	PART NO.	SYM.	DESCRIPTION	QTY.	PART NO.
1	BOWL O-RING	1	O3101	20	ENGINE MOUNT RING	1	SC4007
2	WEAR RING LINER	1	WR6004	21	BEARING CAP	1	SC2107
3	WEAR RING	1	WR5000	22	SUCTION SEAL	1	SL1507
4	IMPELLER	1	IMA***	23	HHCS, 5/16-18 X 2	4	F05 18 16 HH
5	IMPELLER NUT	1	SH3507	24	LOCKWASHER, 5/16	4	F05 LW
6	BOWL SNAP RING	1	SC9201	25	LOCK NUT, 3/8-24 (THIN)	2	F06 24 TL
7	BOWL SEALS	2	SL2003	26	PACKING FOLLOWER (PAIR)	1	SC2507
8	BOWL BEARINGS	2	B1502	27	HHCS, 3/8-24 X 1 3/4	2	F06 24 14 HH
9	BOWL	1	SC9301	28	PACKING RINGS	4	SC3007
10	BOWL PLUG	1	SC9001	29	HAND HOLE COVER	1	SC1703
11	GREASE ZERT	1	SC8901	30	O-RING HAND HOLE COVER	1	O1003
12	SHAFT SNAP RING	1	SH1507	31	SUCTION PIECE	1	SC1003
13	BEARING PRE-LOAD SEAL RING	1	SH5005	32	HHCS, 1/2-13 X 1-1/2	8	F08 13 12 HH
14	THRUST BEARING	1	B1107	33	BARBED CONNECTOR	1	SC4507
15	SLINGER RING	1	SH2507	34	GREASE ZERT	1	SC8801
16	SHAFT	1	SH1007	35	HHCS, 5/16-18 X 1-1/4	3	F05 18 10 HH
17	IMPELLER KEY	1	SH3007	36	LOCKWASHER, 5/16	3	F05 LW
18	SHIM KIT	1	SHK4007	37	O-RING, BEARING CAP	1	O3601
19	BEARING CAP SEAL	1	SL1001	38	SET SCREW, 10-32 X 3/8	6	F03 32 03 SS

# AMERICAN TURBINE

## MODEL 12-S JET (W / B1007 BEARING)



# AMERICAN TURBINE

## MODEL 12-S JET (W / B1007 BEARING)



### LEGEND

SYM.	DESCRIPTION	QTY.	PART NO.
1	BOWL O-RING	1	O3101
2	WEAR RING LINER	1	WR6004
3	WEAR RING	1	WR5000
4	IMPELLER	1	IMA***
5	IMPELLER NUT	1	SH3507
6	BOWL SNAP RING	1	SC9201
7	BOWL SEALS	2	SL2003
8	BOWL BEARINGS	2	B1502
9	BOWL	1	SC9301
10	BOWL PLUG	1	SC9001
11	GREASE ZERT	1	SC8901
12	SHAFT SNAP RING	1	SH1507
13	THRUST WASHER	1	SH2005
14	THRUST BEARING	1	B1007
15	SLINGER RING	1	SH2507
16	SHAFT	1	SH1007
17	IMPELLER KEY	1	SH3007
18	SHIM KIT	1	SHK4007

SYM.	DESCRIPTION	QTY.	PART NO.
19	BEARING CAP SEAL	1	SL1007
20	ENGINE MOUNT RING	1	SC4007
21	BEARING CAP	1	SC2007
22	SUCTION SEAL	1	SL1507
23	HHCS, 5/16-18 X 2	4	F05 18 16 HH
24	LOCKWASHER, 5/16	4	F05 LW
25	LOCK NUT, 3/8-24 (THIN)	2	F06 24 LN
26	PACKING FOLLOWER (PAIR)	1	SC2507
27	HHCS, 3/8-24 X 1-3/4	2	F06 24 14 HH
28	PACKING RINGS	4	SC3007
29	HAND HOLE COVER	1	SC1703
30	O-RING HAND HOLE COVER	1	O1003
31	SUCTION PIECE	1	SC1003
32	HHCS, 1/2-13 X 1-1/2	8	F08 13 12 HH
33	BARBED CONNECTOR, 3/8	1	SC4507
34	GREASE ZERT	1	SC8801
35	HHCS, 5/16-18 X 1-1/4	3	F05 18 10 HH
36	LOCKWASHER, 5/16	3	F05 LW

**MODEL 12-TD JET (W / HP BEARING)**  
**USED W / SERIAL # 25649 - PRESENT**





# AMERICAN TURBINE

## MODEL 12-TD JET (W / HP BEARING)

USED W / SERIAL # 25649 - PRESENT



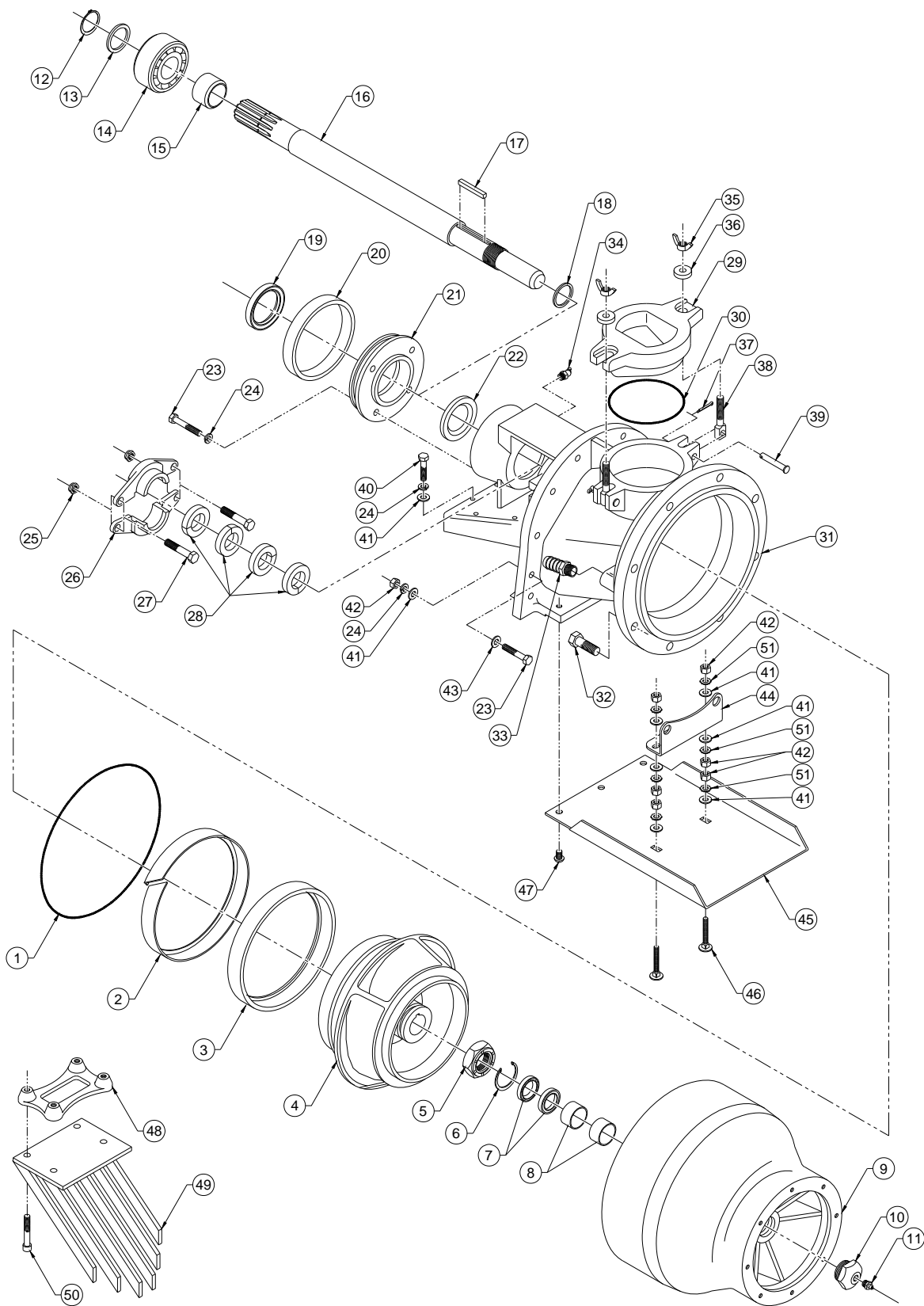
## LEGEND

SYM.	DESCRIPTION	QTY.	PART NO.
1	BOWL O-RING	1	O3101
2	WEAR RING LINER	1	WR6004
3	WEAR RING	1	WR5000
4	IMPELLER	1	IMA***
5	IMPELLER NUT	1	SH3507
6	BOWL SNAP RING	1	SC9201
7	BOWL SEAL	2	SL2003
8	BOWL BEARING	2	B1502
9	BOWL	1	SC9301
10	BOWL PLUG	1	SC9001
11	ZERT	1	SC8901
12	SNAP RING	1	SH1507
13	BEARING PRE-LOAD SEAL RING	1	SH5005
14	THRUST BEARING	1	B1107
15	SLINGER RING	1	SH2507
16	PUMP SHAFT	1	SH1007
17	IMPELLER KEY	1	SH3007
18	SHIM KIT	1	SHK4007
19	BEARING CAP SEAL	1	SL1001
20	ENGINE MOUNT RING	1	SC4007
21	BEARING CAP	1	SC2107
22	SUCTION SEAL	1	SL1507
23	HHCS, 5/16-18 X 2	14	F05 18 16 HH
24	LOCKWASHER, 5/16	20	F05 LW
25	LOCK NUT, 3/8-24 (THIN)	2	F06 24 TL
26	PACKING FOLLOWER (PAIR)	1	SC2507
27	HHCS, 3/8-24 X 2	2	F06 24 16 HH

SYM.	DESCRIPTION	QTY.	PART NO.
28	PACKING RINGS	4	SC3007
29	HAND HOLE COVER	1	SC1701
30	O-RING	1	O1002
31	SUCTION PIECE	1	SC1403
32	HHCS, 1/2-13 X 1-1/2	8	F08 13 12 HH
33	BARBED CONNECTOR, 3/8	1	SC4507
34	GREASE ZERT	1	SC8801
35	WINGNUT, 3/8-16	2	F06 16 WN
36	THICK WASHER, 3/8	2	F06 TW
37	COTTER PIN, 1/8 X 1/2	2	F02 04 CP
38	EYE BOLT, 3/8-16	2	F06 16 EB
39	CLEVIS PIN, 5/16	2	F05 CL
40	HHCS, 5/16-18 X 1-1/4	6	F05 18 10 HH
41	FLAT WASHER, 5/16	22	F05 FW
42	HEX NUT, 5/16-18	16	F05 18 HN
43	AN WASHER, 5/16	10	F05 AN
44	RIDEPLATE BRACKET	1	I7301
45	RIDEPLATE	1	I6901
46	FHMS, 5/16-18 X 2	2	F05 18 16 FH
47	FHMS, 5/16-18 X 3/4	3	F05 18 06 FH
48	GRATE BACK-UP	1	I4307
49	GRATE	1	I4207
50	SHCS, 5/16-18 X 1-1/4	4	F05 18 10 SH
51	O-RING	1	O3601
52	SET SCREW, 10-32 X 3/8	6	F03 32 03 SS
53	STAR LOCK WASHER, 5/16	6	F05 SW

# AMERICAN TURBINE

## MODEL 12-TD JET (W / B1007 BEARING)



# AMERICAN TURBINE

## MODEL 12-TD JET (W / B1007 BEARING)



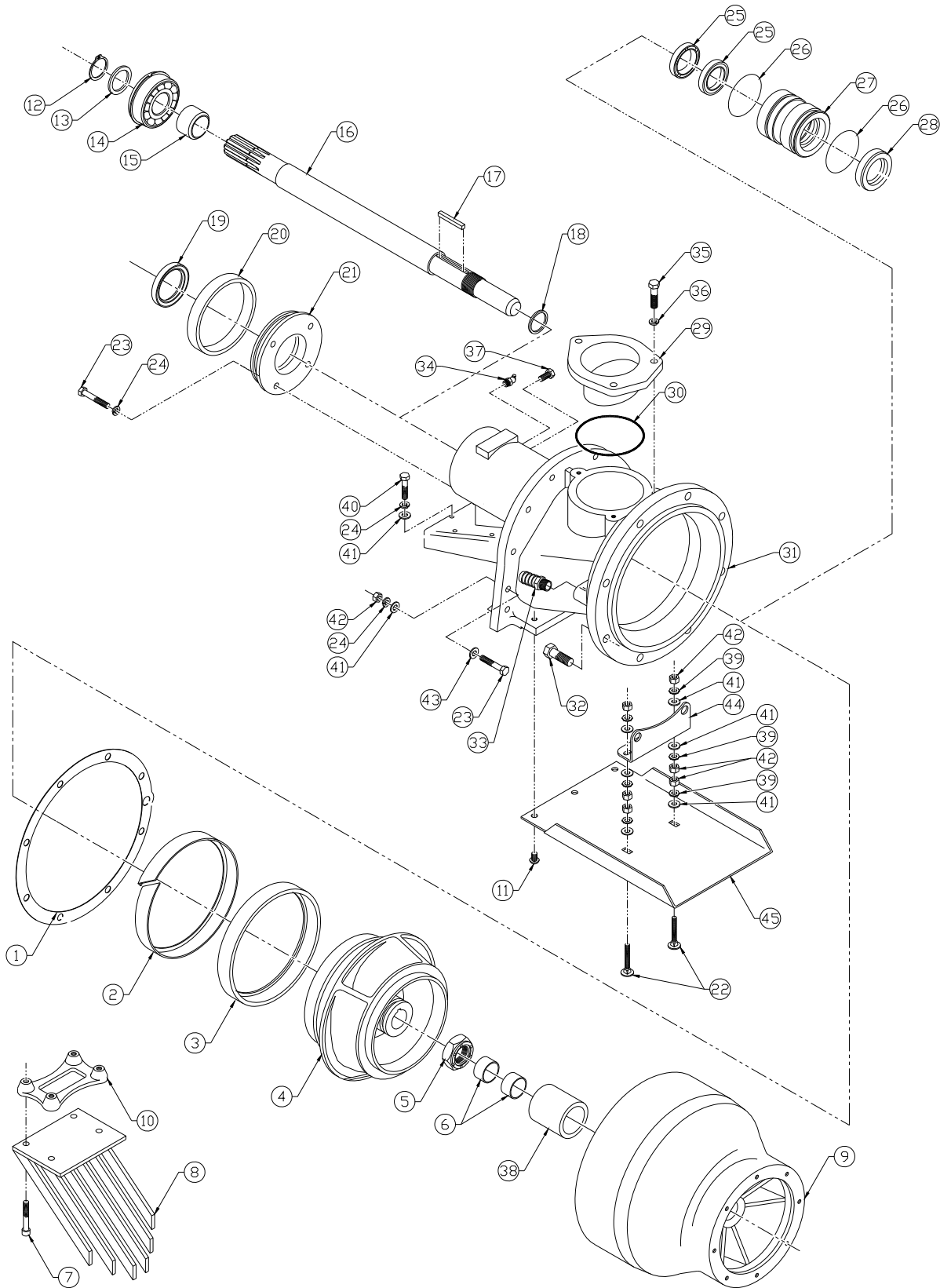
### LEGEND

SYM.	DESCRIPTION	QTY.	PART NO.
1	BOWL O-RING	1	O3101
2	WEAR RING LINER	1	WR6004
3	WEAR RING	1	WR5000
4	IMPELLER	1	IMA***
5	IMPELLER NUT	1	SH3507
6	BOWL SNAP RING	1	SC9201
7	BOWL SEAL	2	SL2003
8	BOWL BEARING	2	B1502
9	BOWL	1	SC9301
10	BOWL PLUG	1	SC9001
11	ZERT	1	SC8901
12	SNAP RING	1	SH1507
13	THRUST WASHER	1	SH2005
14	THRUST BEARING	1	B1007
15	SLINGER RING	1	SH2507
16	PUMP SHAFT	1	SH1007
17	IMPELLER KEY	1	SH3007
18	SHIM KIT	1	SHK4007
19	BEARING CAP SEAL	1	SL1007
20	ENGINE MOUNT RING	1	SC4007
21	BEARING CAP	1	SC2007
22	SUCTION SEAL	1	SL1507
23	HHCS, 5/16-18 X 2	14	F05 18 16 HH
24	LOCKWASHER, 5/16	20	F05 LW
25	LOCK NUT, 3/8-24 (THIN)	2	F06 24 TL
26	PACKING FOLLOWER (PAIR)	1	SC2507

SYM.	DESCRIPTION	QTY.	PART NO.
27	HHCS, 3/8-24 X 2	2	F06 24 16 HH
28	PACKING RINGS	4	SC3007
29	HAND HOLE COVER	1	SC1701
30	O-RING	1	O1002
31	SUCTION PIECE	1	SC1403
32	HHCS, 1/2-13 X 1-1/2	8	F08 13 12 HH
33	BARBED CONNECTOR, 3/8	1	SC4507
34	GREASE ZERT	1	SC8801
35	WINGNUT, 3/8-16	2	F06 16 WN
36	THICK WASHER, 3/8	2	F06 TW
37	COTTER PIN, 1/8 X 1/2	2	F02 04 CP
38	EYE BOLT, 3/8-16	2	F06 16 EB
39	CLEVIS PIN, 5/16	2	F05 CL
40	HHCS, 5/16-18 X 1-1/4	6	F05 18 10 HH
41	FLAT WASHER, 5/16	22	F05 FW
42	HEX NUT, 5/16-18	16	F05 18 HN
43	AN WASHER, 5/16	10	F05 AN
44	RIDEPLATE BRACKET	1	I7301
45	RIDEPLATE	1	I6901
46	FHMS, 5/16-18 X 2	2	F05 18 16 FH
47	FHMS, 5/16-18 X 3/4	3	F05 18 06 FH
48	GRATE BACK-UP	1	I4307
49	GRATE	1	I4207
50	SHCS, 5/16-18 X 1-1/4	4	F05 18 10 SH
51	STAR LOCK WASHER, 5/16	6	F05 SW

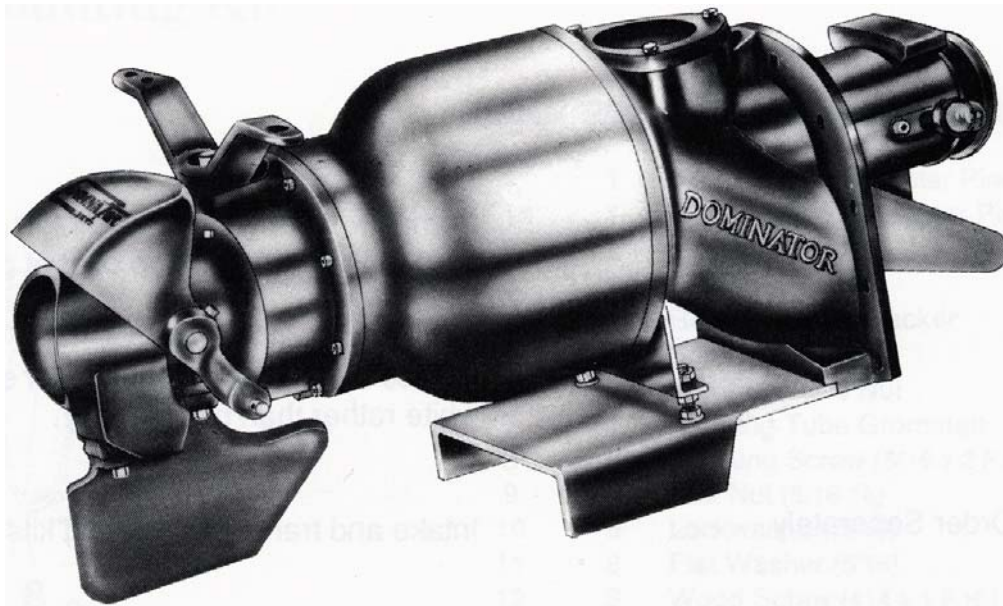
# AMERICAN TURBINE

## MODEL 12-TD JET (W / SEAL PAK)



# AMERICAN TURBINE

## MODEL 12-TD JET (W / SEAL PAK)



### LEGEND

SYM.	DESCRIPTION	QTY.	PART NO.
1	BOWL GASKET	1	G2006
2	WEAR RING LINER	1	WR6004
3	WEAR RING (SEE BELOW)	1	WR5***
4	IMPELLER	1	IMA***
5	IMPELLER NUT	1	SH3507
6	BOWL BEARING	2	B1505
7	SHCS, 5/16-18 X 1-1/4	4	F05 18 10 SH
8	GRATE	1	I4207
9	BOWL	1	SC9103
10	GRATE BACK-UP	1	I4307
11	FHMS, 5/16-18 X 3/4	3	F05 18 06 FH
12	SNAP RING	1	SH1507
13	THRUST WASHER	1	SH2005
14	THRUST BEARING	1	B1103
15	SLINGER RING	1	SH2403
16	PUMP SHAFT	1	SH1107
17	IMPELLER KEY	1	SH3007
18	SHIM KIT	1	SHK4007
19	BEARING CAP SEAL	1	SL1007
20	ENGINE MOUNT RING	1	SC4007
21	BEARING CAP	1	SC2003
22	FHMS, 5/16-18 X 2	2	F05 18 16 FH
23	HHCS, 5/16-18 X 2	14	F05 18 16 HH

SYM.	DESCRIPTION	QTY.	PART NO.
24	LOCKWASHER, 5/16	20	F05 LW
25	SUCTION SEAL	2	SL1603
26	SEAL PAK O-RING	2	O2103
27	SEAL PAK HOUSING	1	SH2303
28	SEAL PAK SEAL	1	SL3508
29	HAND HOLE COVER	1	SC1703
30	HAND HOLE COVER O-RING	1	O1003
31	SUCTION PIECE	1	****
32	HHCS, 1/2-13 X 1-1/2	8	F08 13 12 HH
33	BARBED CONNECTOR, 3/8	1	SC4507
34	GREASE ZERT	1	SC8801
35	HHCS, 5/16-18 X 1-1/4	3	F05 18 10 HH
36	LOCKWASHER, 5/16	3	F05 LW
37	HHCS, 3/8-16 X 3/4	1	F06 16 06 HH
38	BOWL BEARING, WATER LUBE	1	B1603
39	STAR WASHER, 5/16	6	F05 SW
40	HHCS, 5/16-18 X 1-1/4	6	F05 18 10 HH
41	FLAT WASHER, 5/16	22	F05 FW
42	HEX NUT, 5/16-18	16	F05 18 HN
43	AN WASHER, 5/16	10	F05 AN
44	RIDEPLATE BRACKET	1	I7301
45	RIDEPLATE	1	I6901

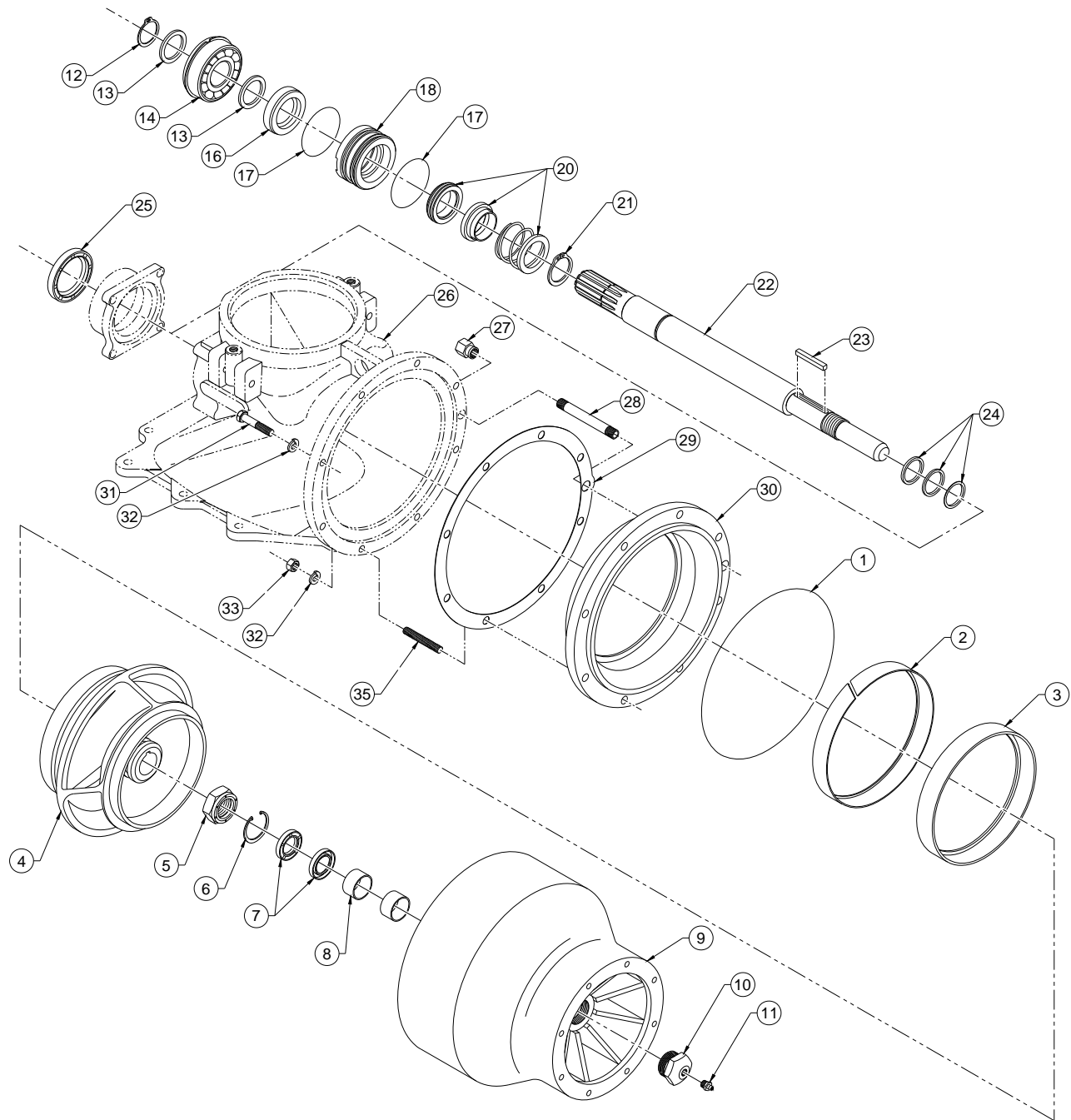
WEAR RING PART # WR5800 FOR SERIAL # UP TO 14400

WEAR RING PART # WR5000 AFTER SERIAL # 14400

# AMERICAN TURBINE

## JACUZZI YJ ENERGIZER KIT

PART # JK2208





# AMERICAN TURBINE

## JACUZZI YJ ENERGIZER KIT

PART # JK2208



## LEGEND

SYM.	DESCRIPTION	QTY.	PART NO.	SYM.	DESCRIPTION	QTY.	PART NO.
1	BOWL O-RING	1	O3101	18	SEAL PAC	1	SH2208
2	WEAR RING LINER	1	WR6004	20	MECHANICAL SEAL	1	SL4008
3	WEAR RING	1	WR5800	21	SNAP RING MECH SEAL	1	SH1608
4	IMPELLER	1	IMA***	22	PUMP SHAFT	1	SH1008
5	IMPELLER NUT	1	SH3507	23	IMPELLER KEY	1	SH3007
6	BOWL SNAP RING	1	SC9201	24	SHIM KIT	1	SHK4007
7	BOWL SEAL	2	SL2003	25	BEARING CAP SEAL	1	SL1007
8	BOWL BEARINGS	2	B1502	26	12YJ SUCTION	1	****
9	BOWL	1	SC9108	27	BRASS NIPPLE ADAPTOR	1	SC6208
10	BOWL PLUG	1	SC9001	28	BRASS NIPPLE	1	SC6108
11	BOWL PLUG ZERT	1	SC8901	29	GASKET	1	G4508
12	SHAFT SNAP RING	1	SH1507	30	SUCTION PIECE ADAPTOR	1	SC6008
13	THRUST WASHER	2	SH2005	31	HHCS, 3/8-16 X 2	6	F06 16 16 HH
14	THRUST BEARING	1	B1103	32	LOCKWASHER, 3/8	8	F06 LW
16	SEAL PAC SEAL	1	SL3508	33	HEX NUT, 3/8-16	2	F06 16 HN
17	SEAL PAC O-RING	2	O3108	35	SET SCREW, 3/8-16 2-1/2	2	F06 16 20 SS

PART # JK2108





**PART # JK2108**



## LEGEND

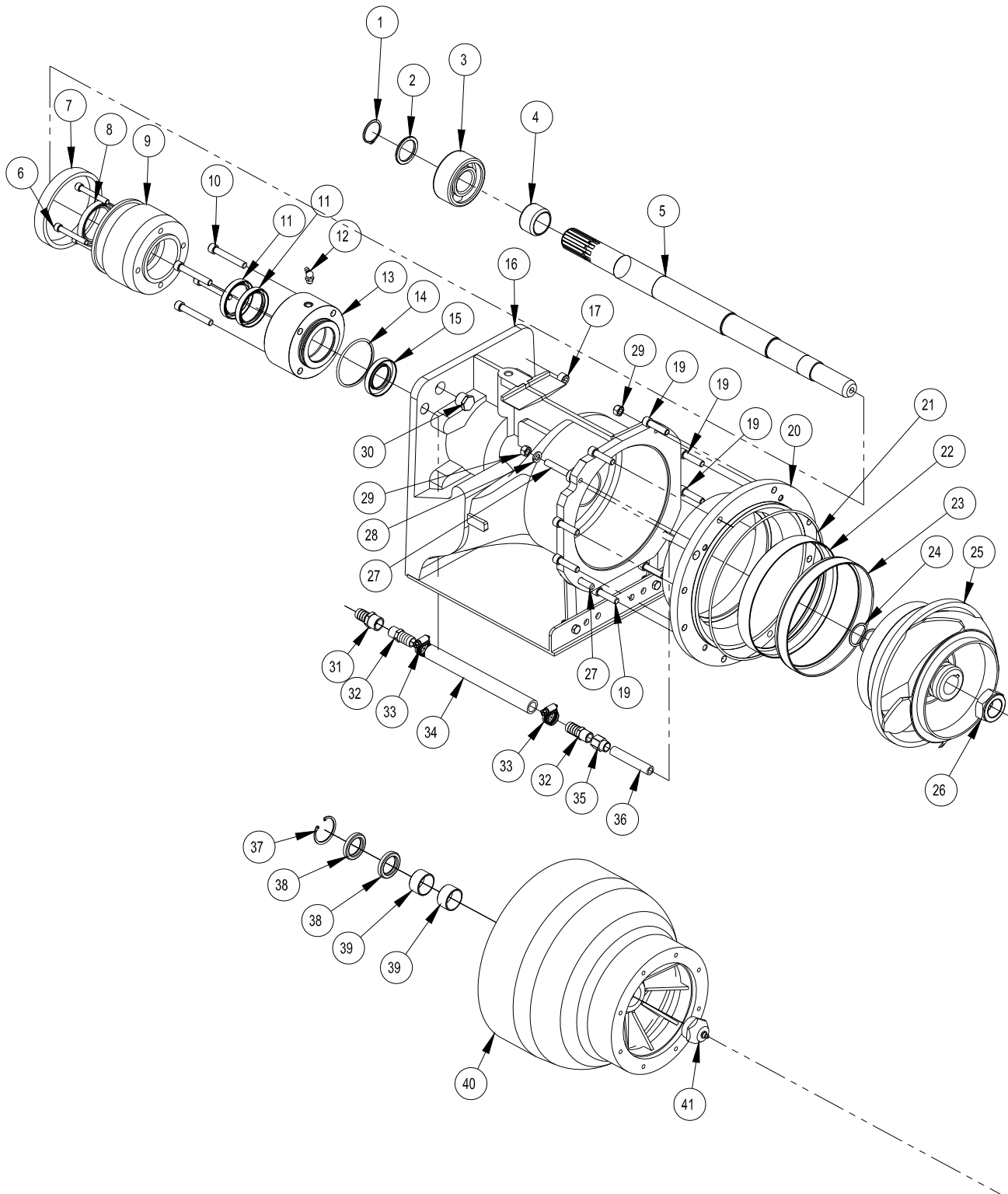
SYM.	DESCRIPTION	QTY.	PART NO.
1	BOWL O-RING	1	O3101
2	WEAR RING LINER	1	WR6004
3	WEAR RING	1	WR5900
4	IMPELLER	1	IMA***
5	IMPELLER NUT	1	SH3507
6	BOWL SNAP RING	1	SC9201
7	BOWL SEAL	2	SL2003
8	BOWL BEARINGS	2	B1502
9	BOWL	1	SC9301
10	BOWL PLUG	1	SC9001
11	BOWL PLUG ZERT	1	SC8901

SYM.	DESCRIPTION	QTY.	PART NO.
12	SHAFT SNAP RING	1	SH1507
13	THRUST WASHER	2	SH2005
14	THRUST BEARING	1	B1007
15	SPACER, LIP SEAL	1	SH2108
16	PUMP SHAFT	1	SH1108
17	IMPELLER KEY	1	SH3007
18	SHIMKIT	1	SHK4007
19	BEARING CAP SEAL	1	SL1107
20	SEAL, LIP SEAL	2	SL3708
21	O-RING, BEARING HOUSING	1	O3108
22	12WJ SUCTION	1	****

# AMERICAN TURBINE

## PANTHER ENERGIZER KIT

PART # PK1001



# AMERICAN TURBINE

## PANTHER ENERGIZER KIT

PART # PK1001

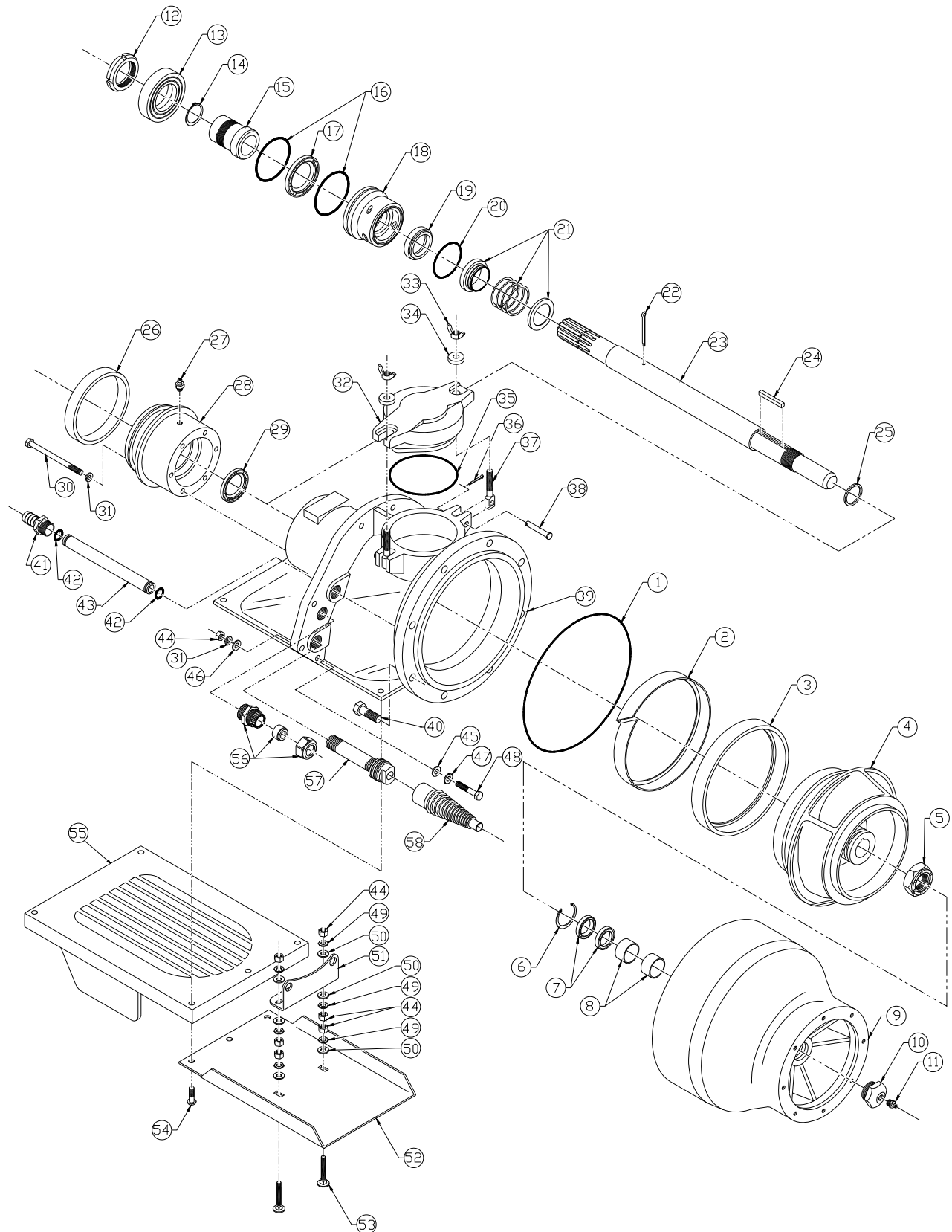


## LEGEND

SYM.	DESCRIPTION	QTY.	PART NO.	SYM.	DESCRIPTION	QTY.	PART NO.
1	SNAP RING	1	SH1507	22	WEAR RING LINER	1	WR6004
2	THRUST WASHER	1	SH2005	23	WEAR RING	1	WR5800
3	THRUST BEARING	1	B1007	24	IMPELLER SHIMS	1	SHK4007
4	SLINGER RING	1	SH2403	25	IMPELLER	1	IMA***
5	SHAFT	1	SH1107	26	IMPELLER NUT	1	SH3507
6	5/16-18 X 2-1/4 SHCS	4	F05 18 18 SH	27	3/8-16 X 2 SET SCREW	4	F06 16 16 SS
7	ENGINE MOUNT RING	1	SC4007	28	3/8 LOCKWASHER	4	F06 LW
8	BEARING CAP SEAL	1	SL1007	29	3/8-16 LOCK NUT	4	F06 16 HN
9	BEARING CAP	1	SC2209	30	BRASS HEX PLUG	1	SC6309
10	3/8-16 X 2-1/2 SHCS	4	F06 16 20 SH	31	HOSE BARB	1	SC6109
11	BEARING HOUSING SEAL	2	SL1603	32	BARBED CONNECTOR (3/8)	2	SC4507
12	45 DEG. GREASE FITTING	1	SC8801	33	HOSE CLAMP	2	M4501
13	BEARING HOUSING	1	SC2109	34	COOLING HOSE	1	SC6209
14	BEARING HOUSING O-RING	1	O3108	35	WATER ADPT FITTING	1	SC6208
15	SUCTION SEAL	1	SL1609	36	BRASS NIPPLE (1/4 X 3)	1	SC6108
16	SUCTION	1	N / A	37	BOWL SNAP RING	1	SC9201
17	5/8-18 X 3/4 SLOTTED SS	1	F10 18 06 SS	38	BOWL SEAL	2	SL2003
19	3/8-16 X 1-1/2 SHCS	8	F06 16 12 SH	39	BOWL BEARING	2	B1502
20	SUCTION PIECE ADAPTER	1	SC6009	40	BOWL	1	SC9501
21	BOWL O-RING	1	O3101	41	BOWL PLUG	1	SCA9001

# AMERICAN TURBINE

## MODEL FW-309 JET



# AMERICAN TURBINE

## MODEL FW-309 JET

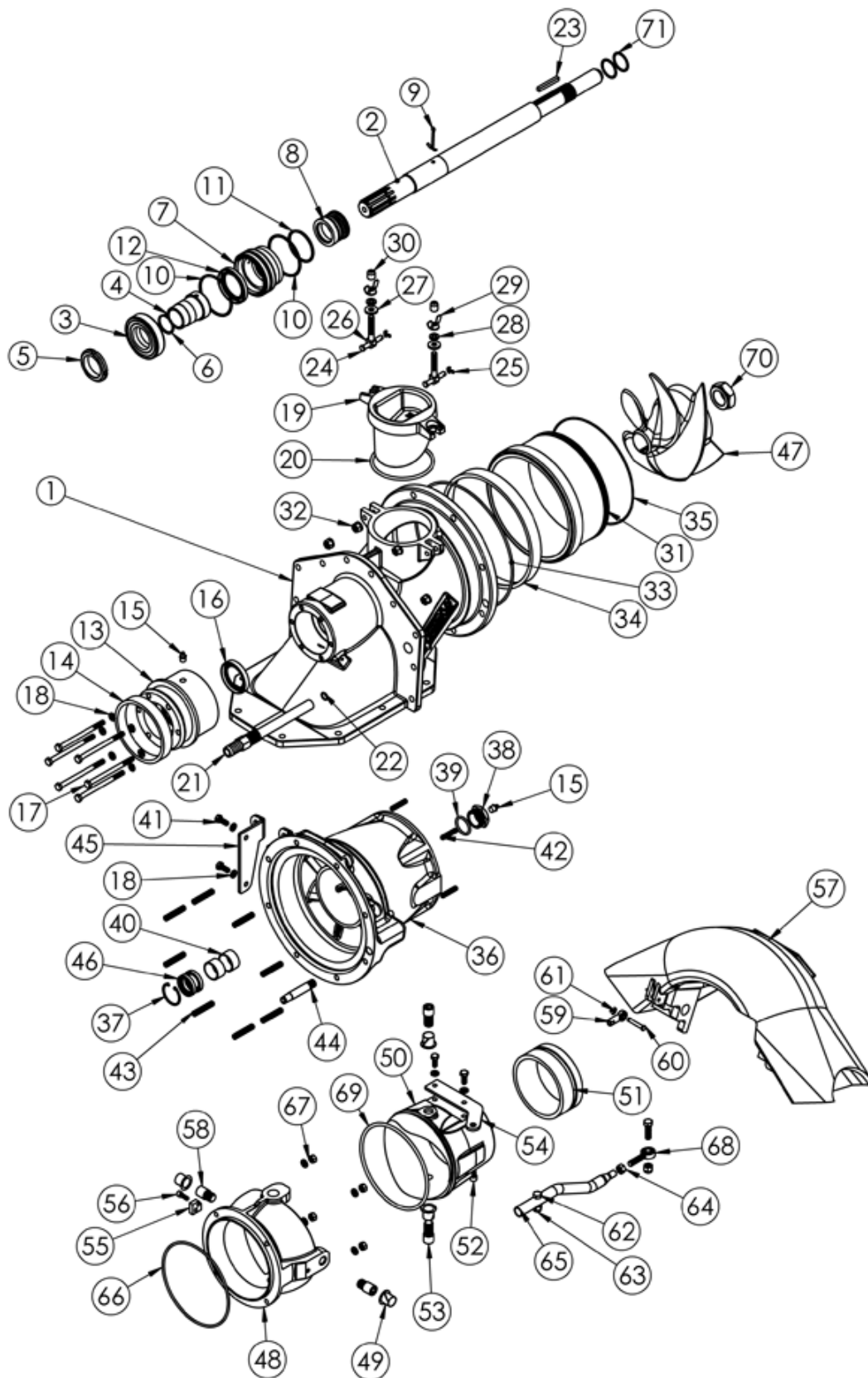


## LEGEND

SYM.	DESCRIPTION	QTY.	PART NO.	SYM.	DESCRIPTION	QTY.	PART NO.
1	BOWL O-RING	1	O3101	30	HHCS, 5/16-18 X 4-1/2	6	F05 18 36 HH
2	WEAR RING LINER	1	WR6004	31	LOCKWASHER, 5/16	16	F05 LW
3	WEAR RING	1	WR5000	32	HAND HOLE COVER	1	SC1701
4	IMPELLER	1	IMA***	33	WING NUT, 3/8-16	2	F06 16 WN
5	IMPELLER NUT	1	SH3507	34	THICK WASHER, 3/8	2	F06 TW
6	BOWL SNAP RING	1	SC9201	35	HAND HOLE COVER O-RING	1	O1002
7	BOWL SEALS	2	SL2003	36	COTTER PIN, 1/8 X 1/2	2	F02 04 CP
8	BOWL BEARINGS	2	B1502	37	EYE BOLT, 3/8-16	2	F06 16 EB
9	BOWL	1	SC9301	38	CLEVIS PIN, 5/16	2	F05 CL
10	BOWL PLUG	1	SC9001	39	SUCTION PIECE	1	SC1201
11	GREASE ZERT	1	SC8901	40	HHCS, 1/2-13 1-1/2	8	F08 13 12 HH
12	BEARING SLEEVE NUT	1	SH5101	41	BARBED CONNECTOR, 3/4	1	SC4601
13	BEARING	1	B1101	42	COOLING TUBE ORING	2	O3201
14	SNAP RING	1	SH1507	43	WATER TUBE	1	SC4501
15	BEARING SLEEVE	1	SH5001	44	HEX NUT, 5/16-18	16	F05 18 HN
16	O-RING BEARING HOUSING	2	O3301	45	BOLT INSULATOR, 5/16	10	F05 BI
17	SEAL FACE HOUSING SEAL	1	SL1201	46	NEOBOND WASHER, 5/16	10	F05 NW
18	SEAL FACE HOUSING	1	SH5201	47	AN WASHER, 5/16	10	F05 AN
19	CERAMIC SEAL	1	SL4008	48	HHCS, 5/16-18 X 1-1/2	10	F05 18 12 HH
20	O-RING SEAL FACE HOUSING	1	O3401	49	STAR WASHER, 5/16	6	F05 SW
21	MECHANICAL SEAL	1	SL4008	50	FLAT WASHER, 5/16	6	F05 FW
22	COTTER PIN, 5/32 X 2	1	F03 16 CP	51	RIDEPLATE BRACKET	1	I7201
23	SD SHAFT	1	SH1207	52	RIDEPLATE	1	I6701
24	IMPELLER KEY	1	SH3007	53	CARRIAGE BOLT, 5/16-18 X 2	2	F05 18 16 CB
25	SHIM KIT	1	SHK4007	54	BUTTON SOCKET HEAD, 5/16-18 X 1-3/4	3	F05 18 14 BH
26	ENGINE MOUNT RING	1	SC4007	55	INTAKE GRATE	1	I8001
27	GREASE ZERT	1	SC8901	56	REVERSE CABLE PACKER, 1/2 NPT	1	T2201
28	BEARING HOUSING	1	SC2101	57	STEERING CABLE ADAPTER	1	R5401
29	BEARING HOUSING SEAL	1	SL1101	58	RUBBER BELLOWS	1	M4007

# AMERICAN TURBINE

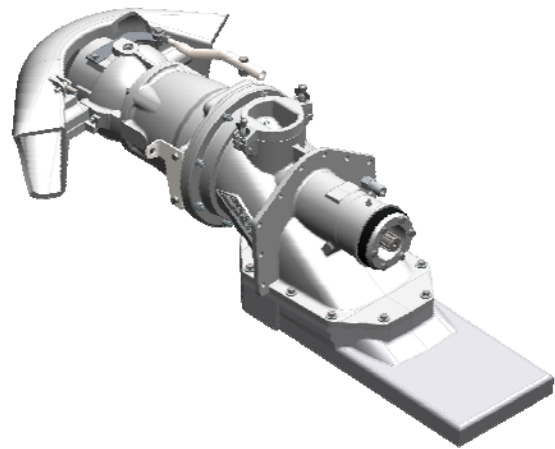
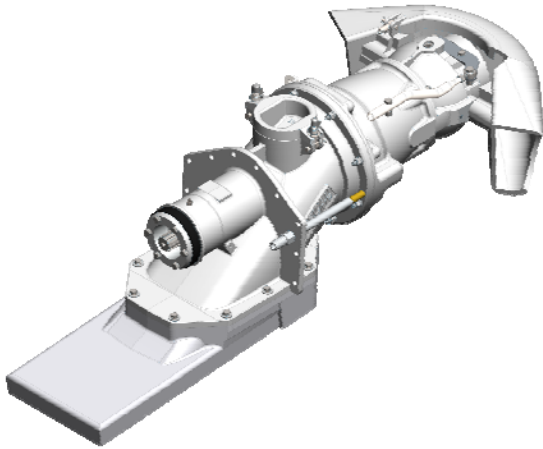
## MODEL SD-203 JET





# AMERICAN TURBINE

## MODEL SD-203 JET

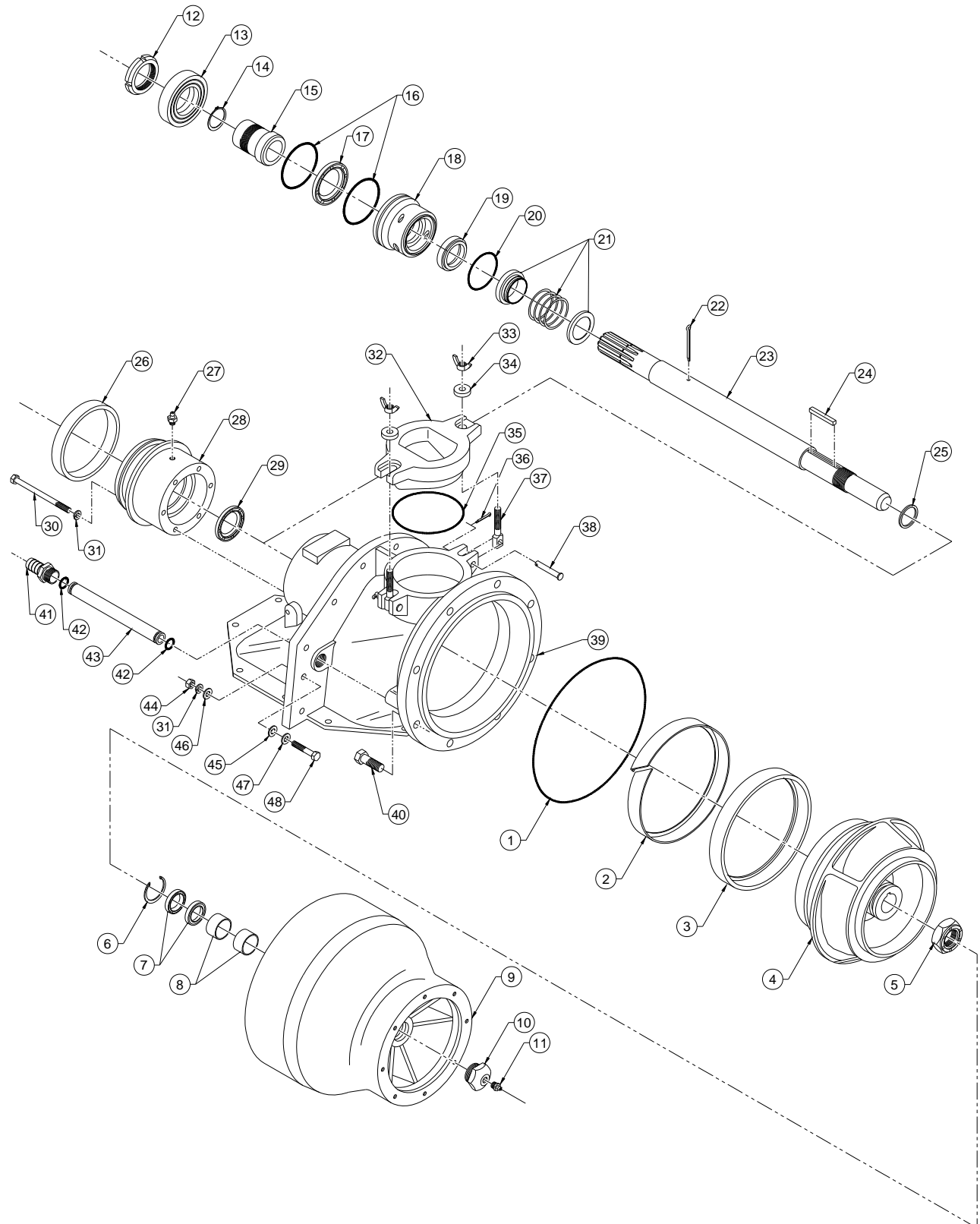


SYM	PART #	DESCRIPTION	QTY.
1	SC1401	SUCTION PIECE	1
2	SH1207	PUMP SHAFT	1
3	B1101	THRUST BEARING	1
4	SH5001	BEARING SLEEVE	1
5	SH501	NUT, BEARING SLEEVE	1
6	SH1507	SNAP RING, SHAFT	1
7	SH5201	SEAL FACE HOUSING	1
8	SL4008	SEAL, MECHANICAL	1
9	F03 16 CP	5/32 X 2 COTTER PIN	1
10	O3301	O-RING, BEARING HOUSING	2
11	O3401	O-RING, SEAL FACE HOUSING	1
12	SL1201	SEAL FACE HOUSING SEAL	1
13	SC2101	BEARING HOUSING	1
14	SC4007	ENGINE MOUNT RING	1
15	SC8901	GREASE ZERT	2
16	SL1101	SEAL, BEARING HOUSING	1
17	F05 18 36 HH	5/16-18 X 4-1/2 HHCS	6
18	F05 LW	5/16 LOCK WASHER	14
19	SC1801	HAND HOLE COVER	1
20	O1002	O-RING, HANDHOLE COVER	1
21	SC4201	WATER TUBE	1
22	O3801	O-RING, WATER TUBE	1
23	SH3007	IMPELLER KEY	1
24	F05 CL	5/16 CLEVIS PIN	2
25	F02 04 CP	7/64 X 3/4 COTTER PIN	4
26	F06 16 EB	3/8 EYE BOLT	2
27	F06 TW	3/8 THICK WASHER	2
28	F06 LW	3/8 LOCK WASHER	10
29	F06 WN	3/8 WING NUT	2
30	M5001	VINYL CAP, 3/8	2
31	WR203SS	WEAR RING	1
32	F06 16 HN	3/8-16 HEX NUT	8
33	O4001	O-RING, BOWL	1
34	WR6005	WEAR RING INSULATOR	1
35	O5172	O-RING, WEAR PLATE	1
36	SC9312	STATOR	1

SYM	PART #	DESCRIPTION	QTY.
37	SC9201	BOWL, SNAP RING	1
38	SC9001	BOWL PLUG	1
39	O2203	O-RING, BOWL PLUG	1
40	B1502	BOWL BEARING, GREASE LUBE 3/4	2
41	F05 18 06 HH	5/16-18 X 3/4 HEX HEAD CAP SCREW	4
42	F05 18 12 SS	5/16-18 X 1-1/2 SET SCREW	4
43	F06 16 16 SS	3/8-16 X 2 SOCKET HEAD SET SCREW	8
44	SC4101	NIPPLE, WATER COOLING TUBE	1
45	SR2009	SDR REVERSE CABLE BRACKET	2
46	SL2003	SEAL, BOWL	2
47	IMX203-XXX	IMPELLER, STAINLESS	1
48	SR1007	NOZZLE HOUSING, SDR	1
49	B2007	NYLINER BUSHING, SPLIT (3/4)	4
50	SR1009	SDR, NOZZLE, (AXIAL FLOW)	1
51	SR74XX	NOZZLE INSERT, AXIAL, SIZE	1
52	F05 18 04 SH	5/16-18 X 1/2 SOCKET HEAD CAP SCREW	1
53	R3702	5/8-11 X 1 SOCKET HEAD CAP SCREW	2
54	SR3009	SDR, TILLER ARM, (AXIAL)	1
55	SR5101	BUCKET STOP, SDR REVERSE BUCKET	1
56	F04 20 06 SH	1/4-20 X 3/4 SOCKET HEAD CAP SCREW	1
57	SR2101	SDR, REVERSE BUCKET	1
58	R3703	5/8-11 X 5/8 SOCKET HEAD CAP SCREW	2
59	F04 28 FRE	1/4-28 STAINLESS FEMALE ROD END	1
60	F04 CL	1/4 CLEVIS PIN	1
61	F01 06 CP	5/64 X 3/4 COTTER PIN	1
62	F06 24 10 HH	3/8-24 X 1-1/4 HEX HEAD CAP SCREW	2
63	F06 24 LN	3/8-24 LOCK NUT	2
64	F06 24 HN	3/8-24 HEX NUT	1
65	SR6101	SDR OFF-SET STEERING EXTENSION	1
66	O5001	O-RING, NOZZLE HOUSING	1
67	F05 18 HN	5/16-18 HEX NUT	4
68	F06 24 MRE	3/8-24 MALE ROD END	1
69	O5363	O-RING, TEFLON, NOZZLE	1
70	SH3507	IMPELLER NUT	1
71	SHK4007	SHIM KIT	2

# AMERICAN TURBINE

## MODEL SD-309 JET





# AMERICAN TURBINE

## MODEL SD-309 JET

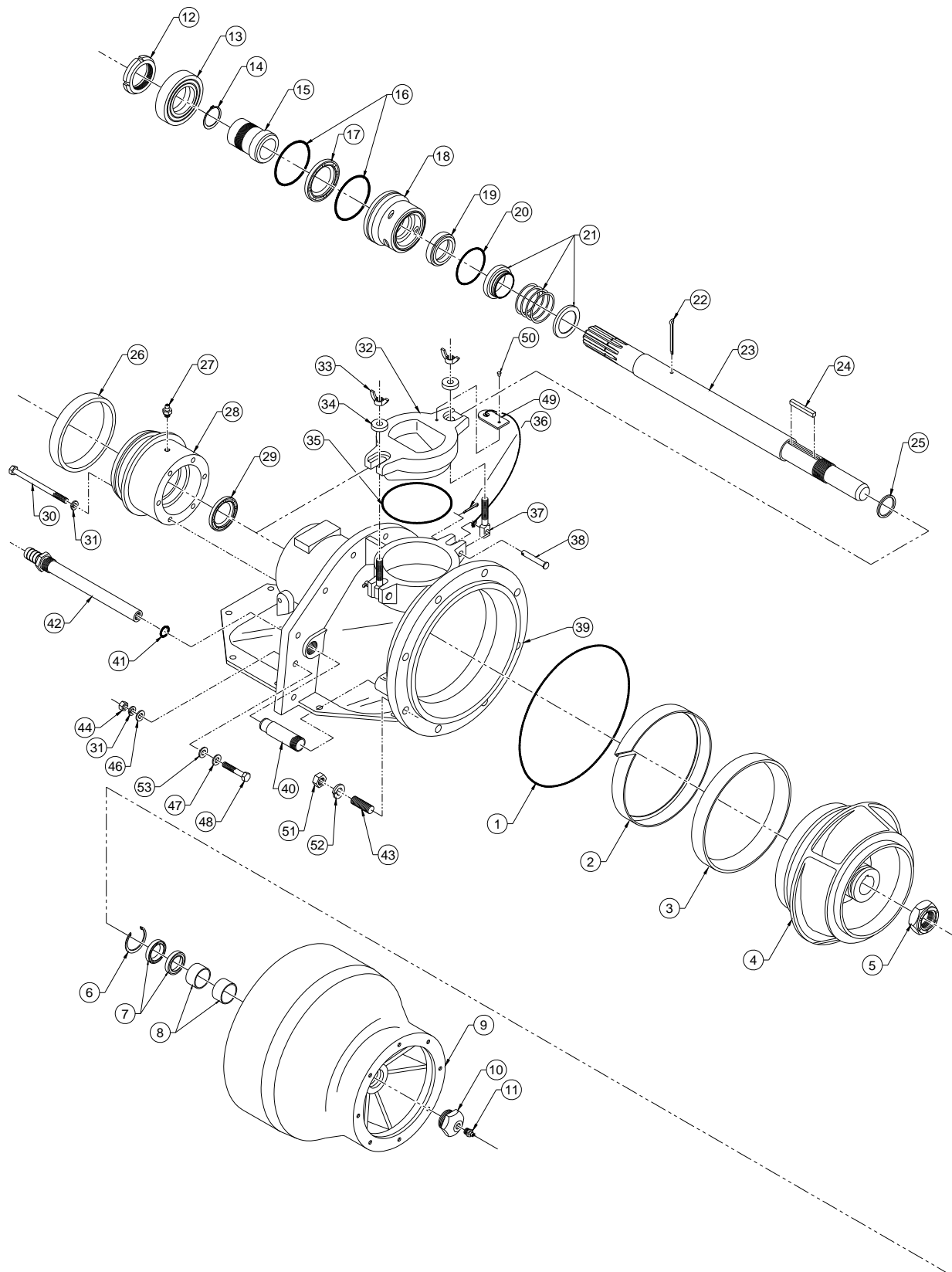


### LEGEND

SYM.	DESCRIPTION	QTY.	PART NO.	SYM.	DESCRIPTION	QTY.	PART NO.
1	BOWL O-RING	1	O3101	25	SHIM KIT	1	SHK4007
2	WEAR RING LINER	1	WR6004	26	ENGINE MOUNT RING	1	SC4007
3	WEAR RING	1	WR5000	27	GREASE ZERT	1	SC8901
4	IMPELLER	1	IMA***	28	BEARING HOUSING	1	SC2101
5	IMPELLER NUT	1	SH3507	29	BEARING HOUSING SEAL	1	SL1101
6	BOWL SNAP RING	1	SC9201	30	HHCS, 5/16-18 X 4-1/2	6	F05 18 36 HH
7	BOWL SEALS	2	SL2003	31	LOCKWASHER, 5/16	16	F05 LW
8	BOWL BEARINGS	2	B1502	32	HAND HOLE COVER	1	SC1701
9	BOWL	1	SC9301	33	WING NUT, 3/8-16	2	F06 16 WN
10	BOWL PLUG	1	SC9001	34	THICK WASHER, 3/8	2	F06 TW
11	GREASE ZERT	1	SC8901	35	HAND HOLE COVER O-RING	1	O1002
12	BEARING SLEEVE NUT	1	SH5101	36	COTTER PIN, 1/8 X 1/2	2	F02 04 CP
13	BEARING	1	B1101	37	EYE BOLT, 3/8-16	2	F06 16 EB
14	SNAP RING	1	SH1507	38	CLEVIS PIN, 5/16	2	F05 CL
15	BEARING SLEEVE	1	SH5001	39	SUCTION PIECE	1	SC1301
16	O-RING BEARING HOUSING	2	O3301	40	HHCS, 1/2-13 1-1/2	8	F08 13 12 HH
17	SEAL FACE HOUSING SEAL	1	SL1201	41	BARBED CONNECTOR, 3/4	1	SC4607
18	SEAL FACE HOUSING	1	SH5201	42	COOLING TUBE ORING	2	O3201
19	CERAMIC SEAL	1	SL4008	43	WATER TUBE	1	SC4401
20	O-RING SEAL FACE HOUSING	1	O3401	44	HEX NUT, 5/16-18	10	F05 18 HN
21	MECHANICAL SEAL	1	SL4008	45	BOLT INSULATOR, 5/16	10	F05 BI
22	COTTER PIN, 5/32 X 2	1	F03 16 CP	46	NEOBOND WASHER, 5/16	10	F05 NW
23	SD SHAFT	1	SH1207	47	AN WASHER, 5/16	10	F05 AN
24	IMPELLER KEY	1	SH3007	48	HHCS, 5/16-18 X 1-1/2	10	F05 18 12 HH

# AMERICAN TURBINE

## MODEL SD-312 JET



# AMERICAN TURBINE

## MODEL SD-312 JET

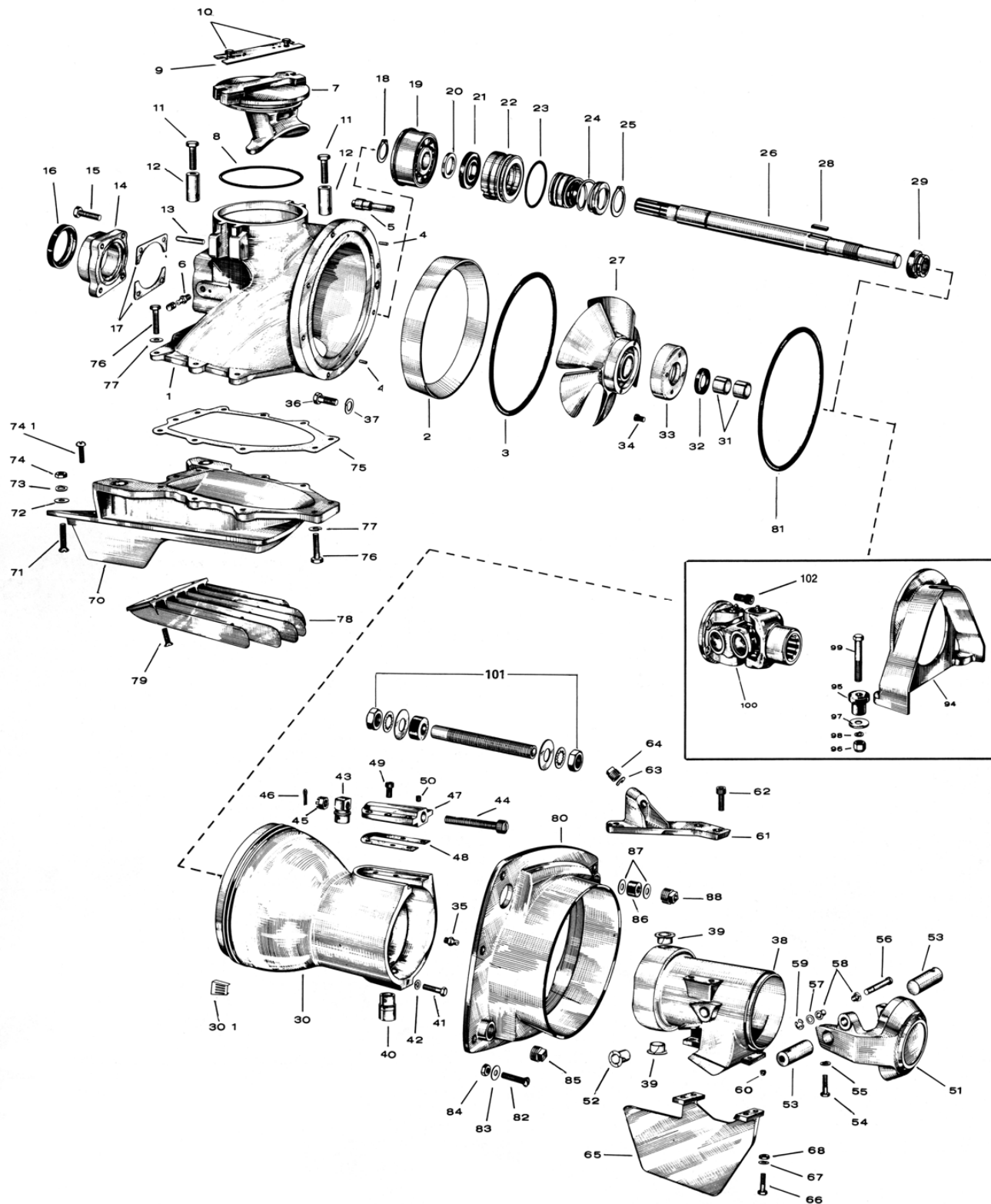


### LEGEND

SYM.	DESCRIPTION	QTY.	PART NO.	SYM.	DESCRIPTION	QTY.	PART NO.
1	BOWL O-RING	1	O4001	27	GREASE ZERT	1	SC8901
2	WEAR RING LINER	1	WR6005	28	BEARING HOUSING	1	SC2101
3	WEAR RING	1	WR5100	29	BEARING HOUSING SEAL	1	SL1101
4	IMPELLER	1	IMA***	30	HHCS, 5/16-18 X 4-1/2	6	F05 18 36 HH
5	IMPELLER NUT	1	SH3507	31	LOCKWASHER, 5/16	16	F05 LW
6	BOWL SNAP RING	1	SC9201	32	HAND HOLE COVER	1	SC1801
7	BOWL SEALS	2	SL2003	33	WING NUT, 3/8-16	2	F06 16 WN
8	BOWL BEARINGS	2	B1502	34	THICK WASHER, 3/8	2	F06 TW
9	BOWL	1	SC9401	35	HAND HOLE COVER O-RING	1	O1002
10	BOWL PLUG	1	SC9001	36	COTTER PIN, 1/8 X 1/2	2	F02 04 CP
11	GREASE ZERT	1	SC8901	37	EYE BOLT, 3/8-16	2	F06 16 EB
12	BEARING SLEEVE NUT	1	SH5101	38	CLEVIS PIN, 5/16	2	F05 CL
13	BEARING	1	B1101	39	SUCTION PIECE	1	SC1401
14	SNAP RING	1	SH1507	40	WATER NIPPLE	1	SC4101
15	BEARING SLEEVE	1	SH5001	41	COOLING TUBE O-RING	1	O3801
16	O-RING BEARING HOUSING	2	O3301	42	H2O COOLING NIPPLE	1	SC4201
17	SEAL FACE HOUSING SEAL	1	SL1201	43	SET SCREW, 3/8-16 X 2	8	F06 16 16 SS
18	SEAL FACE HOUSING	1	SH5201	44	HEX NUT, 5/16-18	10	F05 18 HN
19	CERAMIC SEAL	1	SL4008	46	NEOBOND WASHER, 5/16	10	F05 NW
20	O-RING SEAL FACE HOUSING	1	O3401	47	AN WASHER, 5/16	10	F05 AN
21	MECHANICAL SEAL	1	SL4008	48	HHCS, 5/16-18 X 1-1/2	10	F05 18 12 HH
22	COTTER PIN, 5/32 X 2	1	F03 16 CP	49	LANYARD	1	SC5201
23	SD SHAFT	1	SH1207	50	DRIVE SCREW	1	SC5301
24	IMPELLER KEY	1	SH3007	51	HEX NUT, 3/8-16	8	F06 16 HN
25	SHIM KIT	1	SHK4007	52	LOCKWASHER, 3/8	8	F06 LW
26	ENGINE MOUNT RING	1	SC4007	53	BOLT INSULATOR, 5/16	10	F05 BI

# AMERICAN TURBINE

OEM JACUZZI 12YJ



# AMERICAN TURBINE

OEM JACUZZI 12YJ

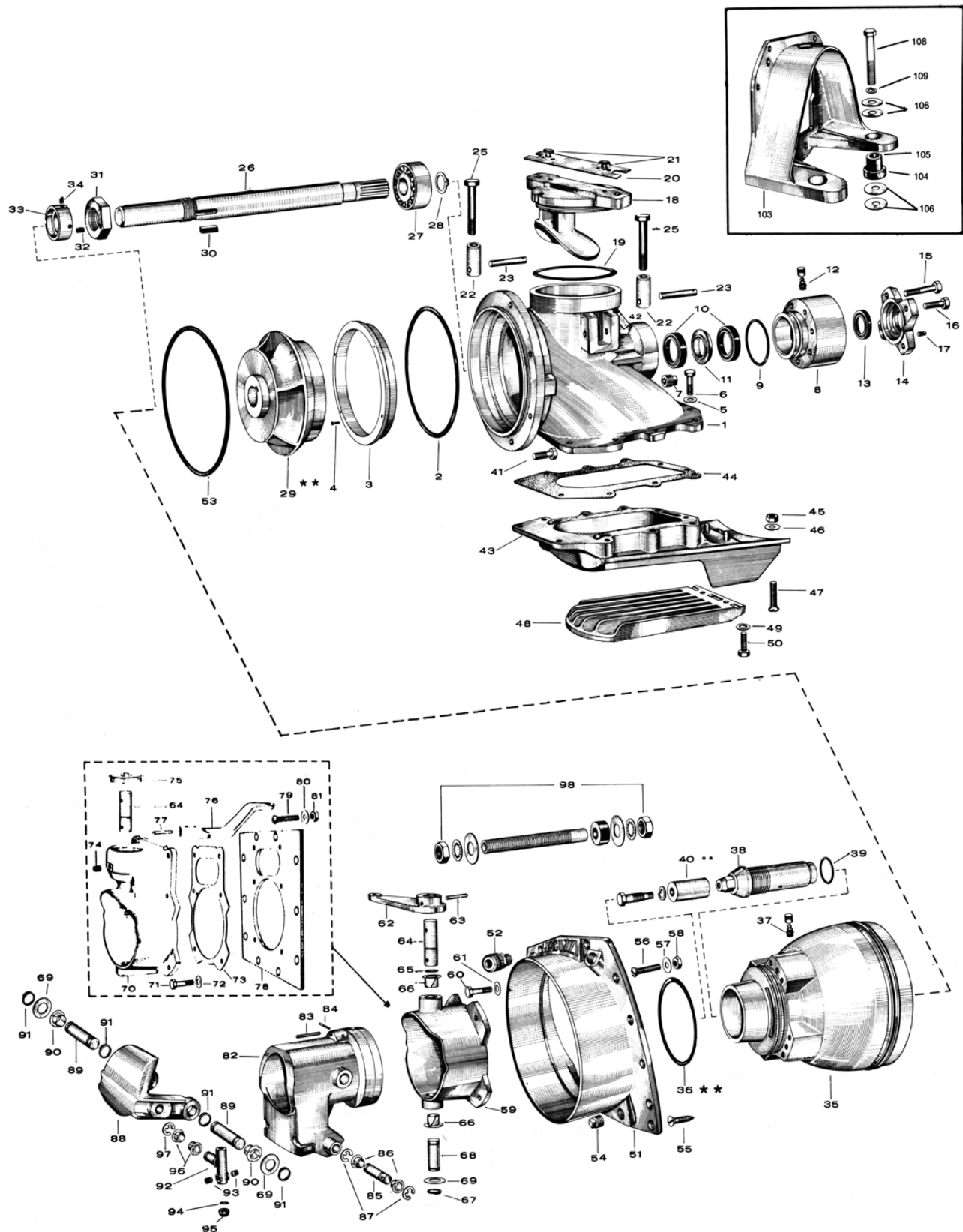
## LEGEND

ITEM	DESCRIPTION	QTY.	PART #
1	Suction Piece No. 4990	1	04-1857-08
2	Wear Plate No. 5533	1	08-2243-13
3	Wear Plate O-Ring	1	47-0178-01
4	Wear Plate Dowell Pin	2	14-1773-07
5	Auxiliary Water Outlet Plug Assy.	1	23-1558-07
6	Thruit Bearing Grease Fitting	1	23-0562-03
7	Inspection Cap No. 4993	1	51-0184-06
8	Inspection Cap O'Ring	1	47-0258-04
9	Inspection Cap Lock Wrench	1	22-1810-02
10	Lock Wrench Nylatch Assy.	2	23-1418-07
11	Hold Down Bolt	2	14-0734-07
12	Inspection Cap Swivel Block	2	51-0201-05
13	Swivel Block Spring Pin	2	14-0802-04
14	Bearing Cap No. 4910	1	08-2399-07
15	Bearing Cap Bolts	4	14-1295-14
16	Bearing Cap Lip Seal	1	SL1007
17	Impeller Adj Shims	AR	14-0829-70
17.1	Effective .010 Movement Impeller Adj Shims Effective .005 Movement	AR	14-1903-70
18	Thrust Bearing Retaining Ring	1	14-0767-07
19	Thrust Bearing	1	B1103
20	Thrust Bearing Washer	1	SH2005
21	Seal Housing Lip	1	SL3508
22	Seal Seal Housing	1	SH2208
23	Seal Housing O-Ring	2	O3108
24	Mechanical Seal	1	SL4008
25	Mechanical Seal Retaining Ring	1	SH1608
26	Impeller Shaft	1	07-5756-08
27.1	Impeller B Cut No. 4906	1	05-3224-09
27.2	Impeller C Cut No. 4906	1	05-3225-08
27.3	Impeller D Cut No. 4906	1	05-3226-07
27.4	Impeller E Cut No. 4906	1	05-3227-06
27.5	Impeller F Cut No. 4906	1	05-3228-05
27.6	Impeller G Cut No. 4906	1	05-3229-04
27.7	Impeller H Cut No. 4906	1	05-3230-01
27.8	Impeller I Cut No. 5617	1	05-3231-00
27.9	ImpellerJ Cut No. 5617	1	05-3232-09
27.1	Impeller K Cut No. 5617	1	05-3346-02
28	Impeller Key	1	23-1403-04
29	Impeller Nut	1	23-1491-07
30	Bowl No. 4905	1	04-1856-09
30.1	Water Strainer	2	22-1884-03
31	Bowl Bearing	2	B1505
32	Bowl Bearing Lip Seal	1	SL2003
33	Bowl Wear Ring	1	08-2244-04
33.1	Cooling Outlet Plug	1	31-0557-00
34	Bowl Wear Ring Bolts	4	14-1490-17
35	Bowl Grease Pitting	1	23-0560-13
36	Bowl Bolts	8	14-0731-00
37	Lock Washer	8	14-0722-01
38	Deflector No. 4997	1	52-0279-01
39	Deflector Nyliner Bearings	2	08-2245-03
40	Deflector Bottom Pivot Pin	1	51-0203-03
41	Bottom Pivot Pin Retaining Bolt	1	14-1269-16
42	Lock Tab	1	14-1895-00
43	Deflector Trim Pivot Assy.	1	51-0205-01
44	Trim Screw	1	14-0809-07
45	Trim Screw Nut	1	14-0803-03
46	Trim Screw Nut Cotter Pin	1	14-0712-03

ITEM	DESCRIPTION	QTY.	PART #
47	Trim Cap No. 5426	1	51-0208-08
48	Trim Cap Gasket	1	13-0370-07
49	Trim Cap Bolts	6	14-1772-08
50	Trim Set Screw	1	14-0717-08
51	Reverse Gate (Pull to open) 5509	1	52-0313-09
52	Reverse Gate Nyliner Bearings	2	08-2196-02
53	Reverse Gate Pivot Pin	2	52-0280-08
54	Pivot Pin Retaining Bolts	2	14-1268-09
55	Lock Tab	2	14-1895-00
56	Reverse Gate Cable Pin	1	52-0293-03
57	Cable Pin Flat Washer	1	23-1503-03
58	Cable Pin Nyliner Bearing	2	08-2298-09
59	Cable Pin Retaining Ring	1	14-1504-11
60	Cable Lock Nut	1	14-0797-01
61	Tiller Arm. (Pull to open) No. 5573	1	52-0310-02
62	Tiller Arm Bolts	2	14-0737-12
63	Cable Retainer C-Washer	1	23-1502-04
64	Cable Retainer Plug	1	22-1995-09
65	Rudder No. 4975	1	52-0290-06
66	Rudder Bolts	4	14-1268-09
67	Lock Washer	4	14-0721-02
68	Nut	4	14-0725-08
69	Bottom Pivot Washer	AR	14-1856-07
70	Grill Housing Contour No. 4992	1	51-0182-08
70.1	Grill Housing Flat No. 4991	1	51-0185-05
70.2	Grill Housing Deep Vee No. 5525	1	51-0289-00
71	Grill Housing Machine Screws	8	14-1713-00
72	Flat Washers	8	14-0756-00
73	Lock Washers	8	14-1416-18
74	Nut	8	14-0726-07
74.1	Grill Housing Leveling Screws	4	14-1399-50
75	Suction Piece Gasket	1	G1008
76	Suction Piece Bolts	10	14-0731-00
77	Lock Washer	10	14-0722-01
78	Grill Insert Std. No. 5452	1	51-0250-05
78.1	Grill Insert Deep Vee No. 5638	1	51-0290-07
79	Grill Insert Machine Screw	4	14-1404-04
80	Transom Adapter 12° No. 4995	1	52-0275-05
80.1	Transom Adapter 2° No. 4995	1	52-0287-01
81	Transom Adapter O-Ring	1	O2002
82	Transom Adapter Machine Screws F	6	14-1844-02
83	lat Washer	6	14-0756-00
84	Nut	6	14-0726-07
85	Drain Plug 1/2 NPT	1	31-0061-82
86	Cable Sealing Gland	1	23-1504-02
87	Flat Washer	2	23-1503-03
88	Cable Lock Plug	1	22-1995-09
94	Engine Bracket (For Chevrolet, Ford 460 or Oldsmobile)	1	51-0261-02
94.1	Engine Bracket (For Ford or Chrysler)	1	51-0262-01
95	Engine Bracket Rubber Mount	2	23-0557-00
96	Engine Bracket Nut	2	14-1843-03
97	Engine Bracket Washer	2	14-0187-09
98	Engine Bracket Lockwasher	2	14-0723-00
99	Engine Bracket Capscrew	2	14-1539-02
100	Short Coupling Chevy	1	23-1489-01
100.1	Short Coupling Olds	1	23-1490-08
100.2	Short Coupling Ford 460	1	23-1519-05
101 102	Steering Tube	1	51-0431-07
	Sock Cap Olds & Chevy	4	14-1731-08
102.1	Sock Cap Ford 460	6	14-0805-01

# AMERICAN TURBINE

## OEM JACUZZI 12WJ



# AMERICAN TURBINE

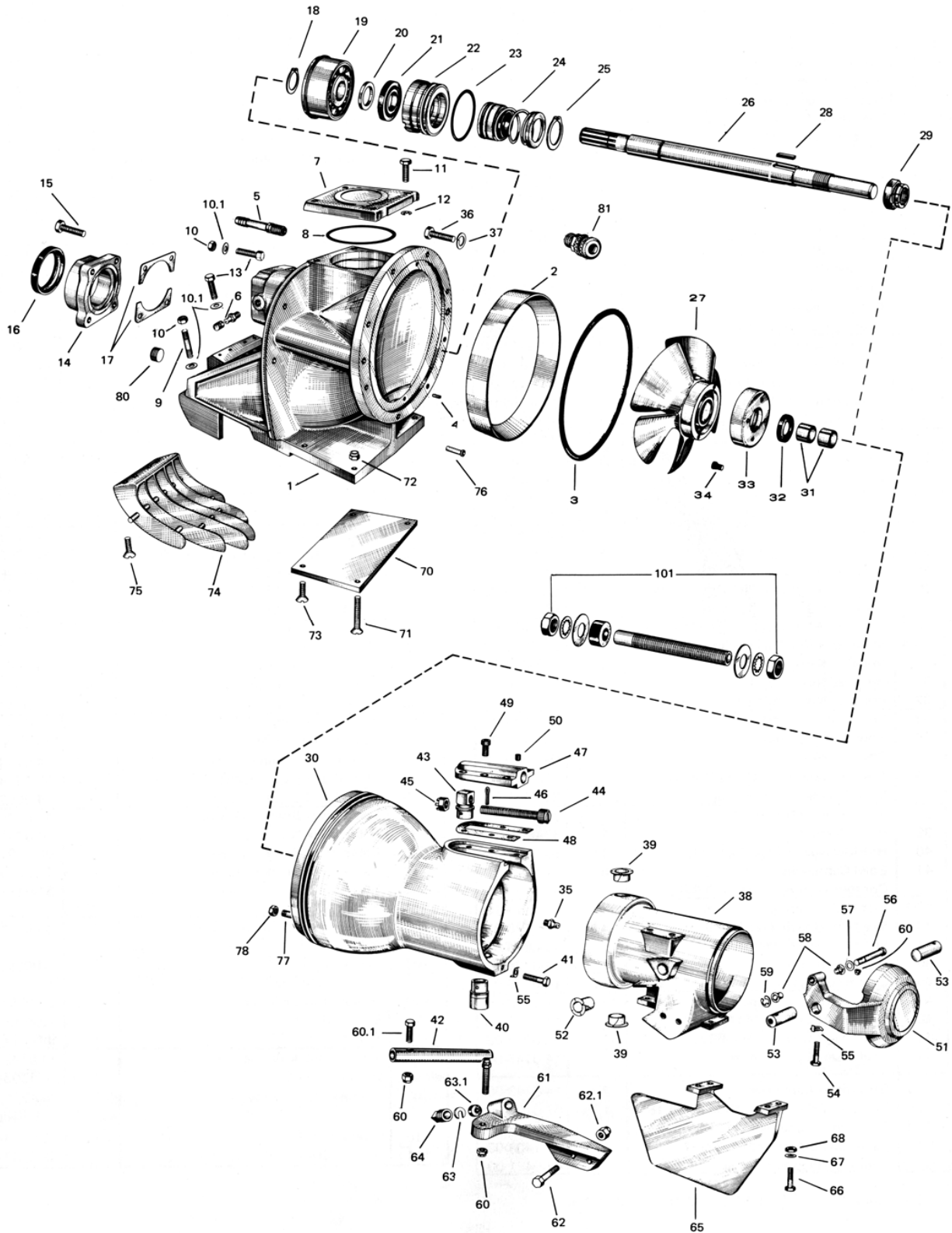
## OEM JACUZZI 12WJ

### LEGEND

ITEM	DESCRIPTION	QTY	PART #	ITEM	DESCRIPTION	QTY	PART #
1	Suction Piece No. 4779	1	04-2012-08	52	Cable Gland Assembly 1/2 NPT	1	23-1408-09
2	Suction Piece O-Ring	1	O3101	53	Transom Adapter O-Ring	1	O2002
3	Suction Piece Wear Ring	1	08-2383-13	54	Transom Adapter Drain Plug	1	31-0061-66
4	Wear Ring Self-Tapping Screws	4	14-1447-60	55	Transom Adapter Wood Screws	2	23-0572-01
5	Suction Piece Washers	10	14-0740-41	56	Transom Adapter Capscrew	10	14-1713-00
6	Suction Piece Capscrews	10	14-0731-00	57	Transom Adapter Washer	10	14-0756-00
7	Suction Piece Pipe Plug	1	31-0061-66	58	Transom Adapter Nuts	10	14-0726-07
8	Bearing Housing No. 3982	1	08-2047-11	59	Steering Housing No. 4766	1	52-0248-09
9	Bearing Housing O-Ring	1	O3108	60	Steering Housing Capscrews	4	14-0731-00
10	Bearing Housin;) Lip Seals	2	SL3608	61	Steering Housing Washers	4	14-0740-41
11	Lip Seal Back Up Plate	1	SH2108	62	Tiller Arm No. 4764	1	52-0249-24
12	Bearing Grease Fitting	1	23-0562-03	63	Tiller Arm Groove Pin	1	14-1573-09
13	Bearing Cap Lip Seal	1	SL1107	64	Deflector Top Pivot Pin	1	52-0238-01
14	Bearing Cap No. 4365	1	08-2205-27	65	Top Pivot Pin O-Ring	1	47-0114-08
15	Bearing Housing Capscrews	4	14-1303-30	66	Deflector Pivot Bearing	2	08-2196-02
16	Bearing Capscrews	4	14-0731-00	67	Pivot Pin Retaining Rings	1	14-1918-03
17	Bearing Cap Pipe Plug	1	31-0058-46	68	Deflector Bottom Pivot Pin	1	52-0359-04
18	Inspection Cap No. 4761	1	51-0104-03	69	Spacer Washers for Pivot Pins	12	52-0078-04
19	Inspection Cap O-Ring	1	O3208	70	Steering Housing No. 4413-0	1	52-0240-07
20	Inspection Cap Lock Wrench	1	22-1810-02	71	Steering Housing Cap Screws	6	14-0731-00
21	Wrench Nylatch Assembly	2	23-1418-07	72	Steering Housing Washers	6	14-0740-41
22	Swivel Block	2	51-0201-05	73	Steering Housing Gasket	1	13-0848-01
23	Swivel Block Pin	2	14-0802-04	74	Steering Housing Pipe Plug	1	31-0059-94
25	Hold Down Capscrew	2	14-0734-07	75	Steering Housing Cap	1	31-0379-96
26	Splined Impeller Shaft		07-5271-04	76	Tiller Arm No. 4416	1	52-0236-03
27	Thrust Bearing	1	B1007	77	Tiller Arm Groove Pin	1	14-1573-09
28	Bearing Retaining Ring	1	SH1507	78	Steering Housing Adapter	1	52-0128-12
29	Impeller 9.9/16 Dia. "A" Cut (Alum.)	1	05-2528-04	79	Steering Housing Adapter Cap Screws	10	14-1713-00
29.1	Impeller 9-3/8 Oia. "B" Cut (Alum.)	1	05-2529-03	80	Steering Housing Adapter Washer	10	14-0756-00
29.2	Impeller 9-1/4 Dia. "C" Cut (Alum.)	1	05-2530-00	81	Steering Housing Adapter Nuts	10	14-0726-07
29.3	Impeller 9-1/8 Dia. "D" Cut (Alum.)	1	05-2531-09	82	Deflector No. 4414	1	52-0241-06
29.4	Impeller 9 Dia. "E" Cut (Alum.)	1	05-2532-08	83	Top Pivot Pin Groove Pin	1	14-0804-02
30	Impeller Key	1	14-0614-02	84	Groove Pin Spring Pin	1	14.1521-02
31	Impeller Nut	1	14-0606-02	85	Cable Pivot Pin	1	52-0239-00
32	Impeller Nut Setscrews	2	14-0717-08	86	Cable Pivot Pin Bearings	2	08-2195-11
33	Bowl Bearing Sand Cap	1	08-2044-06	87	Cable Pivot Pin Retainer	2	14-0775-07
34	Bowl Bearing Sand Cap Setscrew	2	14-0724-09	88	Reverse Gate No. 4415	1	52-0242-05
35	Bowl No. 4417	1	04-1548-03	89	Reverse Gate Pivot Pin	2	52-0237-02
36	Bowl to Steering Housing O-Ring	1	O3208	90	Reverse Gate Pivot Bearings	2	08-2196-02
37	Bowl Grease Fitting W/Cap	1	23-0562-03	91	Pivot Pin Retaining Rings	4	14-0774-08
38	Bowl Bearing No. 3980	1	08-2043-15	92	Shift Cable Pivot Bracket No. 4751	1	52-0244-03
39	Bowl Bearing O-Ring	1	47-0032-07	93	Cable Pivot Bracket Setscrews	2	14-0052-19
40	Hi Flow Nozzle Plug Assembly	1	50-0056-02	94	Cable Pivot Bracket O-Ring	1	47-0008-07
41	Bowl Capscrews	8	14-0731-00	95	Cable Lock Nut	1	14-0797-01
43	Contour Grill Housing No. 4920	1	51-0175-07	96	Cable Pivot Bracket Bearings	2	08-2195-11
43.1	Flat Grill Housing No. 4418	1	51-0171-19	97	Cable Pivot Bracket Retainer	1	14-0775-07
43.2	Vee Grill Housing No. 4418	1	51-0138-03	98	Steering Tube for Ridguide, Morse & Teleflex	1	51-0431-07
44	Suction Piece Bottom Gasket	1	13-0854-02	103	Engine Bracket (Chevy. Olds & 460 Ford)	1	51-0236-04
45	Grill Housing Nut	14	14-0726-07	103.1	Eng Bracket (Ford & Chrysler).	1	51-0251-04
46	Grill Housing Washer	14	14-0756-00	104	Rubber Engine Mount	2	23-0557-00
47	Grill Housing Machine Screws	14	14-1713-00	105	Spacer Sleeve	2	22-1105-06
48	Grill Insert Std. No. 4419	1	51-0102-05	106	Washer	8	9911-2716
48.1	Grill Insert Contour No. 5523	1	51-0273-08	107	Stainless Lock Washer	2	14-0722-01
49	Grill Insert Lock Washers	2	14-0745-04	108	Stainless Hex Cap	2	14-1303-30
50	Grill Insert Capscrews	2	14-0743-06	109	Rockwell Shaft Assy.	1	See 12Y Section
51	Transom Adapter No. 4889 9"to 18"	1	52-0262-00	110	Safety Tilt Rudder	opt	52-0233-06
51.1	Transom Adapter No. 4431 2"to 9"	1	52-0256-08	111	Rudder Sheer Pin (Pkg. of 5)	opt	52-0259-05

# AMERICAN TURBINE

## OEM JACUZZI 12YJ GOLDEN EAGLE





# AMERICAN TURBINE

## OEM JACUZZI 12YJ GOLDEN EAGLE

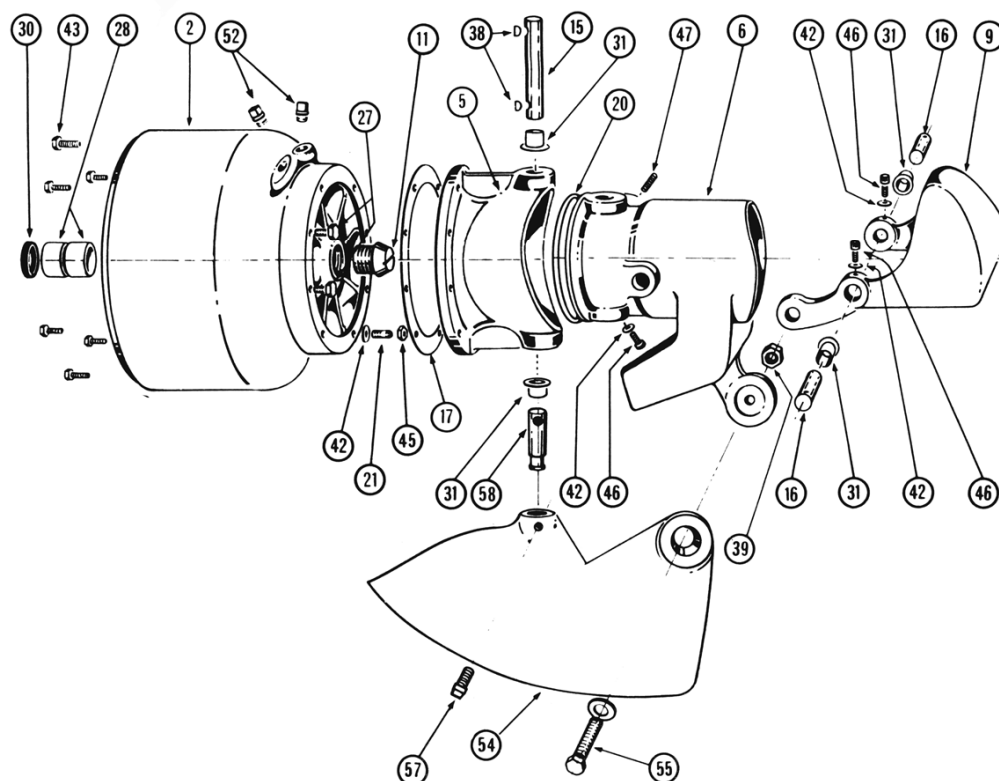
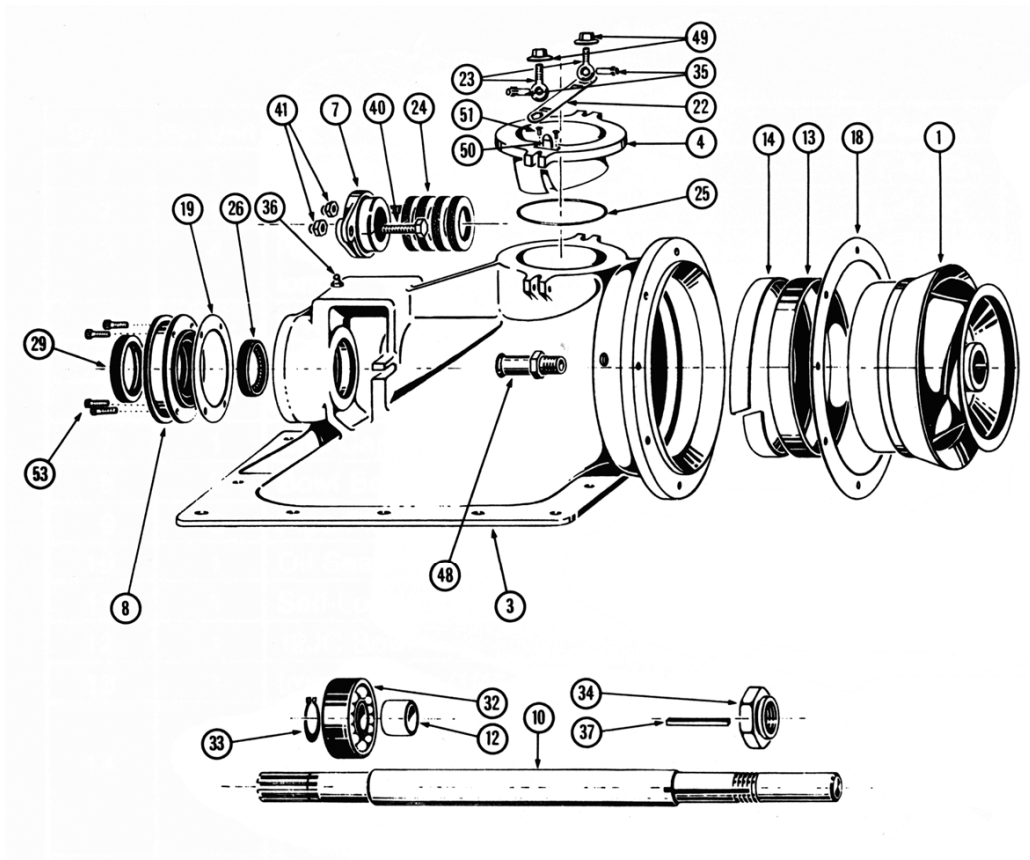
### LEGEND

ITEM	DESCRIPTION	QTY.	PART #
1	Suction Piece No. 5737	1	04-2282-01
2	Wear Plate No. 5533. Ni-resist	1	08-2243-13
3	Wear Plate. O-Ring	1	47-0178-01
4	Dowel Pin	2	14-1773-07
5	Cooling Water Tube	1	31-0804-01
6	Grease Fitting	1	23-0562-03
7	Inspection cap No. 5764	1	51-0494-01
8	Inspection Cap O-ring	1	47-0248-07
9	Suction Piece Stud	3	14-0576-08
10	Nut	7	14-0727-06
10.1	Washer	11	14-0740-41
11	Inspection Cap Bolt	4	14-0743-06
12	Snap Ring	4	14-1594-04
13	Mounting Bolt	8	14-1296-21
14	Bearing Cap No. 4910	1	08-2399-07
15	Bearing Cap Bolt	4	14-1295-14
16	Bearing Cap Lip Seal	1	SL1007
17	Impeller Adj. Shim. 031	AR	14-0829-03
17.1	Impeller Adj. Shim. 015	AR	14-1903-00
18	Retaining Ring	1	SH1507
19	Thrust Bearing	1	B1103
20	Thrust Brg. Washer	1	SH2005
21	Lip Seal	1	SL3508
22	Seal Housing No. 5765	1	SH2308
23	Seal Housing O-Ring	2	O3108
24	Mechanical Seal	1	SL4008
25	Retaining Ring	1	SH1608
26	Impeller Shaft	1	07-5756-08
27.1	Impeller B Cut No. 4906	1	05-3224-09
27.2	Impeller C Cut No. 4906	1	05-3225-08
27.3	Impeller D Cut No. 4906	1	05-3226-07
27.4	Impeller E Cut No. 4906	1	05-3227-06
27.5	Impeller F Cut No. 4906	1	05-3228-05
27.6	Impeller G Cut No. 4906	1	05-3229-04
27.7	Impeller H Cut No. 4906	1	05-3230-01
27.8	Impeller K Cut No. 5657	1	05-3346-02
28	Impeller Key	1	23-1403-04
29	Impeller Nut	1	23-1491-07
30	Bowl No. 4905	1	04-2202-08
31	Bowl Bearing	2	B1505
32	Bowl Bearing Lipseal	1	SL2003
35	Grease Fitting	1	23-0560-13
36	Bowl Bolt	6	14-0731-00
37	Lockwasher	8	14-0722-01
38	Deflector No. 4997	1	52-0374-05

ITEM	DESCRIPTION	QTY.	PART #
39	Nyliner Bearing	2	08-2245-03
40	Deflector Btm. Pivot Pin	1	51-0203-03
41	Retaining Bolt	1	14-1269-16
42	Tiller Arm Extension	1	51-0500-03
43	Trim Pivot Assy.	1	61-020S-01
44	Trim Screw	1	14-0809-07
45	Castle Nut	1	14-0803-03
46	Cotter Pin	1	14-0712-03
47	Trim Cap	1	51-0208-08
48	Trim Cap Gasket	1	13-0370-07
49	Trim Cap Bolt	6	14-1772-08
50	Trim Set Screw	1	14-0717-08
51	Reverse Gate No. 5766	1	52-0372-07
52	Nyliner Bearing	2	08-2196-02
53	Rev. Gate Pivot Pin	2	52-0280-08
54	Retaining Bolt	2	14-1268-09
55	Lockwasher	3	14-1895-00
56	Cable Pin	1	52-0293-03
57	Cable Pin Fit. Washer	1	23-1503-03
58	Nyliner Bearing	2	08-2298-09
59	Cable Pin Retain. Ring	1	14-1504-11
60	Locknut	2	14-0392-00
60.1	Tiller Arm Ext. Bolt	1	14-0580-02
61	Tiller Arm No. 5767	1	52-0371-08
62	Tiller Arm Bolt	2	14-1297-12
62.1	Locknut	2	14-1922-07
63	S. S. C-Wsh Cablelock 33	1	23-1502-04
63.1	33C Packing	1	23-2223-00
64	Cable Lock Plug	1	22-1995-09
65	Rudder No. 4998	1	52-0290-46
66	Rudder Bolt	4	14-1268-09
67	Lock Washer	4	14-0721-02
68	Nut	4	14-4725-08
69	Bottom Pivot Washer	AR	14-1856-07
70	Trim Plate	1	51-0497-08
71	Machine Screw	2	14-1556-00
72	Locknut	2	14-0263-06
73	Machine Screw	2	14-1404-44
74	Grill Insert	1	51-0496-09
75	Grill Insert Machine Screw	4	14-1404-04
76	NyttiteSeal	2	14-1893-42
77	Bowl Stud	2	14-4341-42
78	Nut	2	14-4727-06
80	Aluminum Plug	1	31-4672-40
81	Cable Gland Assy. 1/2 NPT	1	23-1406-09
101	Steering Tube	1	51-0431-47

# AMERICAN TURBINE

## OEM BERKELEY 12JG



# AMERICAN TURBINE

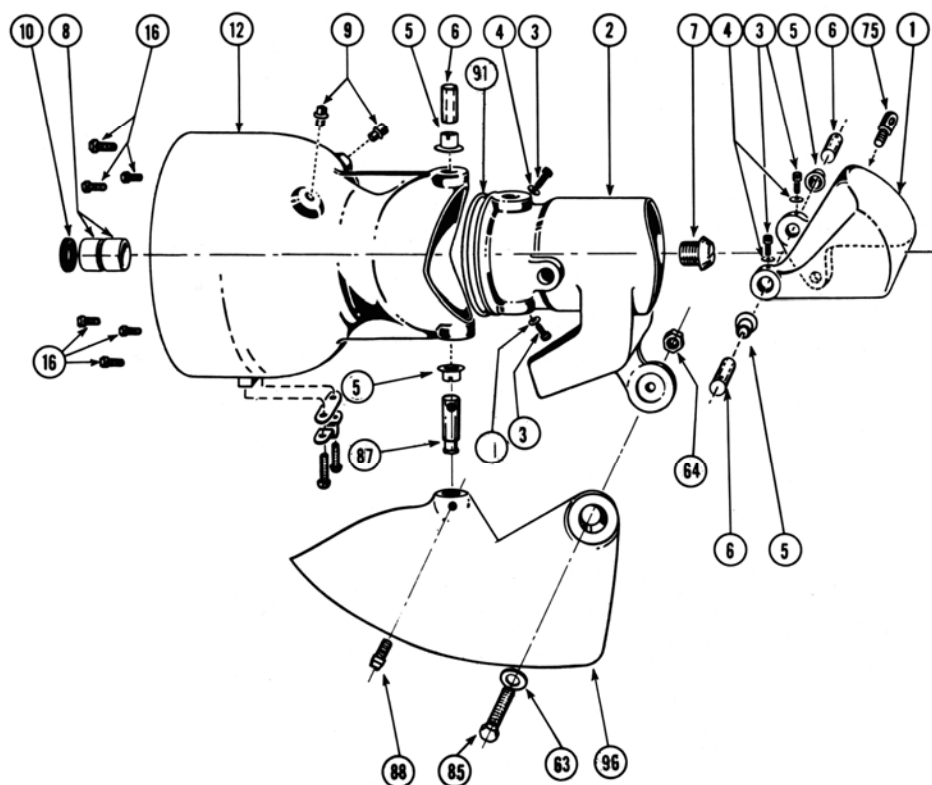
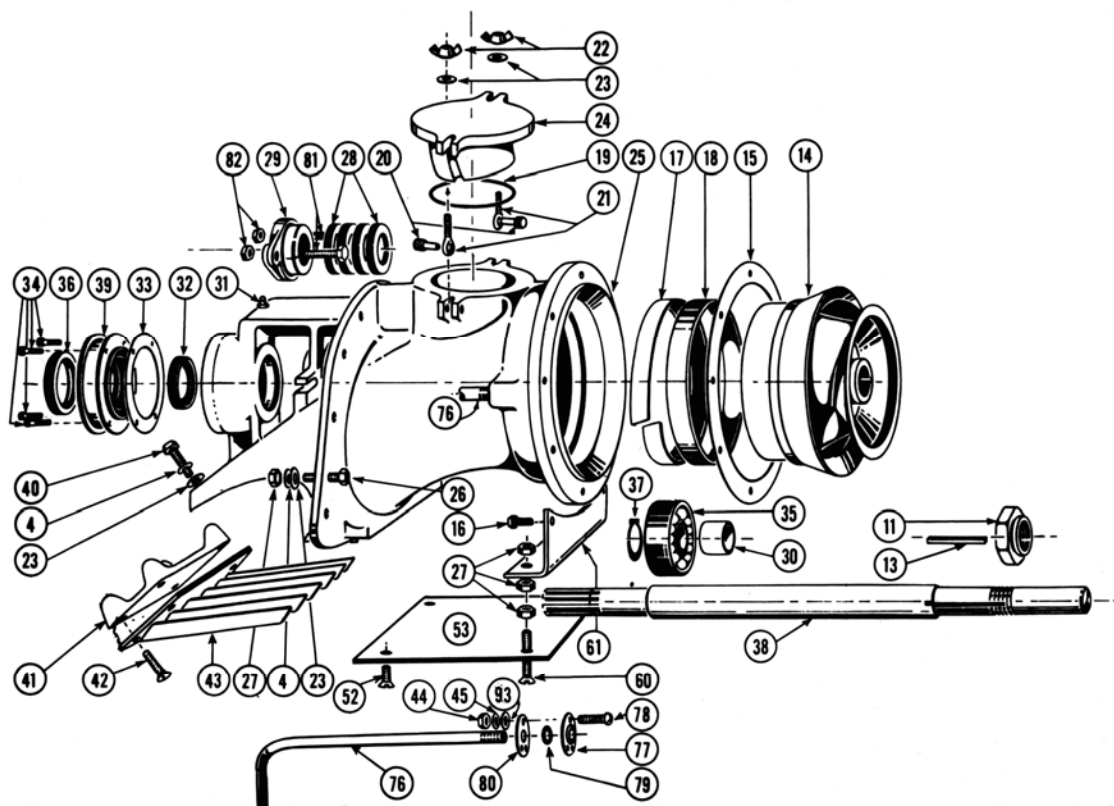
## OEM BERKELEY 12JG

### LEGEND

SYM.	DESCRIPTION	QTY.	PART NO.	SYM.	DESCRIPTION	QTY.	PART NO.
1	Aluminum Impeller	1	IMB***	29	Bearing Cap Clipper Seal	1	SL1007
2	Bowl	1	SC9102	30	Bowl Clipper Seal	1	SL2003
3	Suction Piece	1	H-1727	31	Nyliner Bearing	4	B2007
4	Hand Hole Cover	1	M-4128	32	Ball (Thrust) Bearing	1	B1007
5	Nozzle Housing	1	R1007	33	Retaining Ring, Bearing	1	SH1507
6	Steerable Nozzle	1	L-4501	34	Impeller Nut	1	SH2507
7	Split Gland, Packing	1	SC2507	35	Groove Pin, Hand Hole Cover	2	S-14479
8	Bearing Cap	1	SC2007	36	Grease Fitting, Bearing	1	S-14480
9	Reverse Bucket	1	L-4251	37	Impeller Key	1	SH3007
10	Pump Shaft	1	SH1007	38	Woodruff Key, Tiller Shaft	2	R5507
11	Bowl Bearing End Cap	1	SCA9001	39	Locknut (3/8" - 24)	1	F06 24 LN
12	Sleeve, Shaft Seal	1	SH2507	40	Packing Gland Bolt (3/8 x 2 HHCS)	2	F06 24 16 HH
13	Impeller Wear Ring	1	WR5000	41	Packing Gland Nut (3/8)	2	F06 24 TL
14	Wear Ring Insulator	1	WR6004	42	5/16 LockWasher	11	F05 LW
15	Tiller Shaft	1	S-15396	43	Bowl To Suction (1/2 x 1-1/4 HHCS)	8	F08 13 10 HH
16	Reverse Bucket Shaft	2	R3701	46	Nozzle & Bucket (5/16 x 1 SHCS)	3	F05 18 08 SH
17	Bowl to Nozzle Gasket	1	G2507	47	Set Screw, Tiller Shaft (5/16 x 3/4)	1	F05 18 06 SQ
18	Bowl to Suction Gasket	1	G2006	48	Barbed Connector	1	S-14821
19	Bearing Cap Gasket	1	G1502	49	Flange Nut, Hand Hole Cover (5/16)	2	S-23680
20	O-Ring Nozzle	1	O1502	50	Fastener, Lock Wrench	1	S-14493
22	Wrench, Hand Hole Cover	1	S-11543	51	Fastener Screw	2	S-25599
23	Rod End, Hand Hole Cover	2	S-10907	52	Pipe Plug, Oil Reservoir	2	SC9902
24	Set (5) Packing Rings	5	SC3007	53	Bearing Cap (5/16 x 1-1/4 SHCS)	4	F05 18 10 SH
25	O-Ring, Hand Hole Cover	1	O1002	54	Plastic Rudder Kit		B-07486
26	Suction Piece Clipper Seal	1	SL1507	55	5/16 - 18 x 1 HHCS	7	F05 18 08 HH
27	Bowl To Nozzle (5/16 x 3/4)	1	S-23538	56	5/16 - 18 x 7/8 HHCS	1	F05 18 07 HH
28	Bowl Bearing (Glacier)	2	B1502				

# AMERICAN TURBINE

## OEM BERKELEY 12JE



# AMERICAN TURBINE

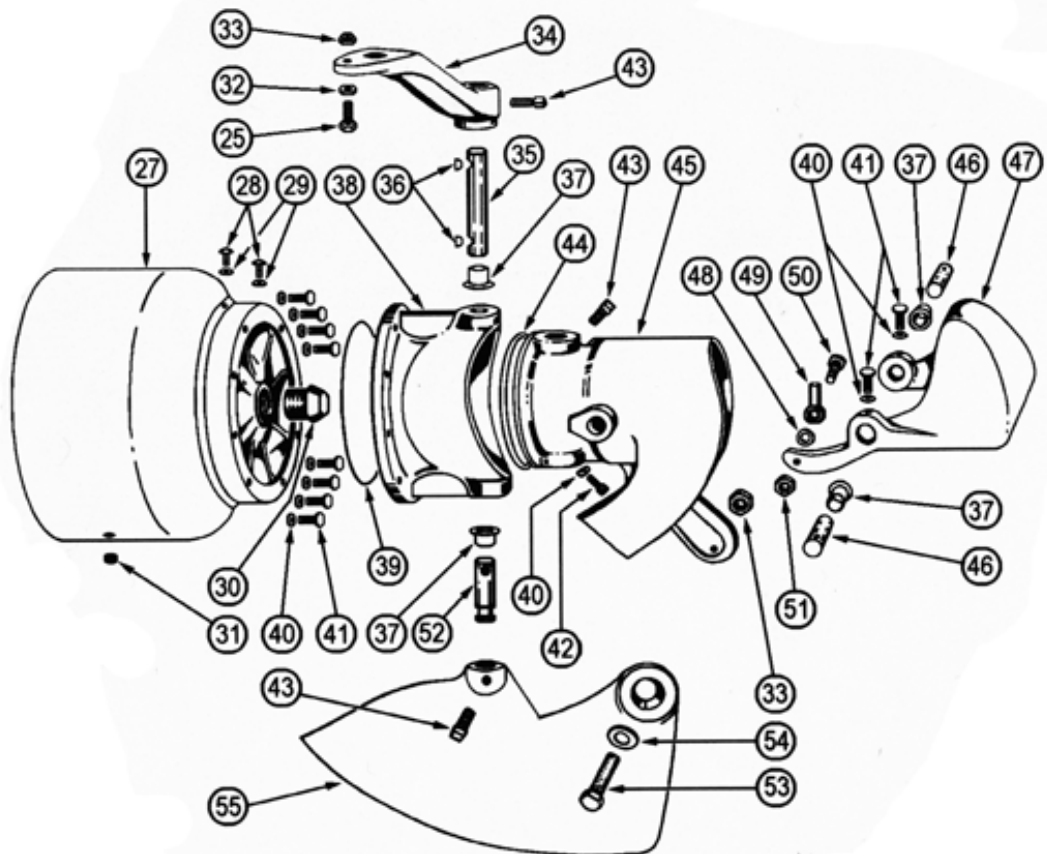
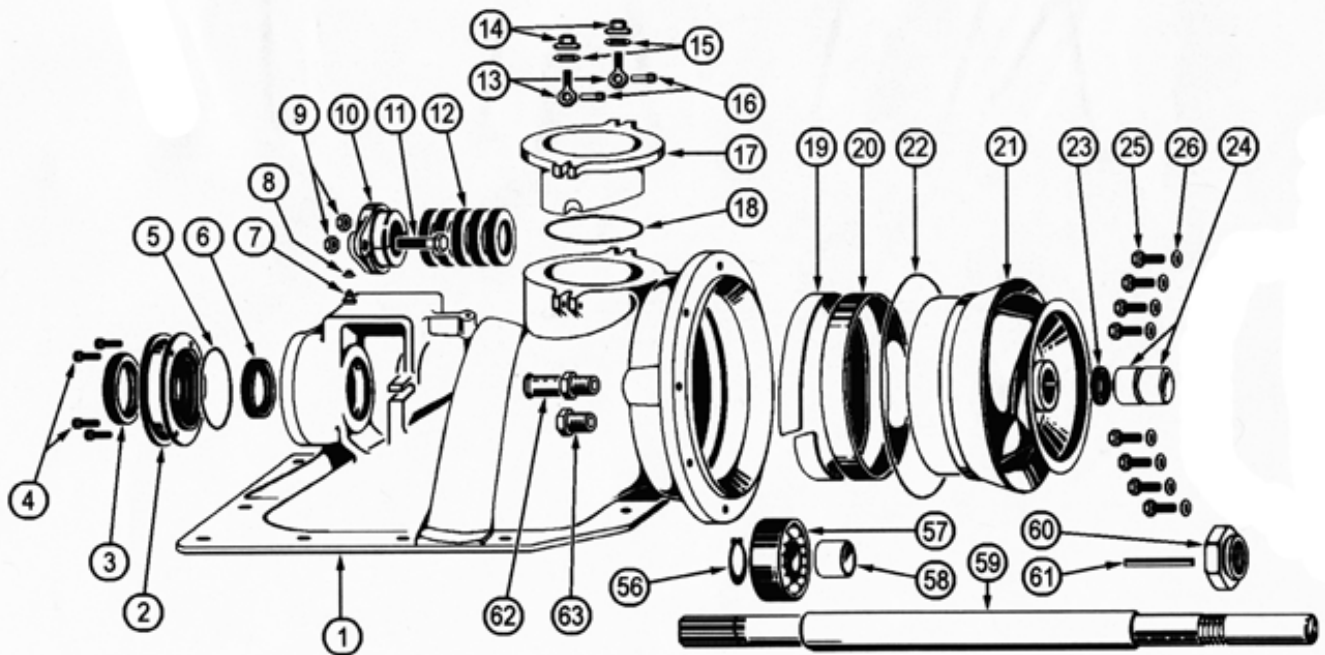
## OEM BERKELEY 12JE

### LEGEND

SYM	DESCRIPTION	QTY	PART NO.	SYM	DESCRIPTION	QTY	PART NO.
1	Reverse Bucket	1	L-4433	48	Reverse Cable Seal Bearing	2	S-16254
2	Nozzle	1	L-4405	49	Hex Nut, Jam (7/8 - 14)	1	F14 14 JN
3	5/16-18 x 1 HHCS	4	F05 18 08 HH	50	Flat Washer (7/8)	2	S-27129
4	5/16 Spring Lock Washer	22	F05 LW	51	Hose Clamp	2	S-16416
5	Nyliner Bearing	4	B2007	52	5/16 - 18 x 3/4 Machine Screw	2	S-23538
6	Shaft (3/4 O.D. x 1-9/16 long)	3	S-10825	53	Cavitation Plate	1	S-16567
7	End Cap	1	SCA9001	54	Steering Adapter	1	S-16273
8	Bowl Bearing, Glacier	2	B1502	55	Reverse Cable Seal Housing	1	S-16274
9	Pipe Plug	2	SC9902	56	Reverse Cable Seal Retainer	1	S-16255
10	Oil Seal	1	SL2003	57	O-Ring (7/16 I.D. x 5/8 O.D.)	1	S-14929
11	Self Locking Nut	1	S-12005	58	Hose Clamp	2	S-16415
12	Bowl	1	SC9102	59	Rubber Bellows	2	M4007
13	Impeller Key	1	SH3007	60	5/16 - 18 x 2 Machine Screw	2	S-25685
14	Aluminum Impeller	1	IMB***	61	Cavitation Plate Bracket	1	M-5840
15	Gasket	1	G2006	62	Steering Extension	1	M-5881
16	1/2 - 13 x 1-1/4 HHCS	8	F08 13 10 HH	63	Flat Washer (3/8)	3	F06 FW
17	Wear Ring Insulator	1	WR6004	64	Hex Self-Locking Nut	2	F06 24 LN
18	Wear Ring	1	WR5000	65	3/8 - 24 x 1-1/2 HHCS	1	F06 24 12 HH
19	O-Ring	1	O1002	66	Hex Nut (3/8 - 24)	1	F06 24 HN
20	Pin, Groove, Type 24	2	S-14479	67	Shoulder Screw	1	S-17824
21	Rod End	2	S-10907	68	Cotter Pin (3/32 x 1/2)	1	S-26611
22	Wing Nut	2	S-16117	69	Clevis Pin (5/16)	1	S-16350
23	Flat Washer (5/16)	22	F05 FW	70	Reverse Cable, Clevis	1	S-17843
24	Hand Hole Cover	1	M-6098	71	Steering Tiller	1	M-5875
25	Suction Piece	1	H-2715	72	5/16 - 18 x 3/4 HHCS	2	F05 18 06 HH
26	5/16 - 18 x 1-3/4	10	F05 18 14 HH	73	Jam Nut (5/16 - 18)	1	S-27157
27	Hex Nut (5/16)	17	F05 HN	74	Reverse Swivel Pin Bearing, Nyliner	2	S-13865
28	Packing Ring Set	5	SC3007	75	Reverse Swivel Pin	1	S-16344
29	Split Gland	1	SC2507	76	Engine Cooling Water Pipe	1	M-5773
30	Sleeve, Seal	1	SH2507	77	Engine Cooling Water Pipe Retainer	1	S-15904
31	Grease Fitting	1	S-14480	78	1/4 - 20 x 1-1/4 Machine Screw	3	S-24504
32	Grease Seal	1	SL1507	79	O-Ring	1	S-16022
33	Bearing Cap Gasket	1	G1502	80	Back-up Plate	1	S-15905
34	5/16 - 18 x 1-1/4 HHCS	4	F05 18 10 HH	81	3/8 - 16 x 2 HHCS	2	F06 16 16 HH
35	Ball Bearing	1	B1007	82	Hex Self-Locking Nut (3/8 - 16)	2	F06 16 LN
36	Oil Seal	1	SL1007	83	Hex Nut #10-32	2	S-23479
37	Retaining Ring	1	SH1507	84	Cable Clamp	1	S-18429
38	Pump Shaft	1	SH1007	85	Machine Screw Round Head	2	S-24472
39	Bearing Cap	1	SC2007	86	Spring Lock Washer #10	2	S-23085
40	5/16 - 18 x 1 HHCS	6	F05 18 08 HH	88	5/16 - 18 x 5/8 Set Screw	1	S-23664
41	Grate Retainer	1	I4307	89	3/8 - 24 x 1-3/4 HHCS	1	S-32394
42	1/4 - 20 x 1-1/4 Machine Screw	4	S-25669	91	O-Ring, Nozzle	1	O1502
43	Intake Grate	1	I4207	92	Slotted Nut, Lock (5/16 - 18)	1	S-32399
44	Hex Nut (1/4)	6	F04 HN	93	Washer, Plain (1/4)	3	S-23061
45	Spring Lock Washer	6	F04 LW	94	Cotter Pin	1	S-26612
46	Flat Washer (1/4 x 1/2 O.D.)	3	S-16401	95	Cotter Pin	2	S-26619
47	1/4 - 20 x 2 Machine Screw	3	S-24507	96	Plastic Rudder Kit	2	B-07486

# AMERICAN TURBINE

## OEM LEGEND J120-G



# AMERICAN TURBINE

## OEM LEGEND J120-G

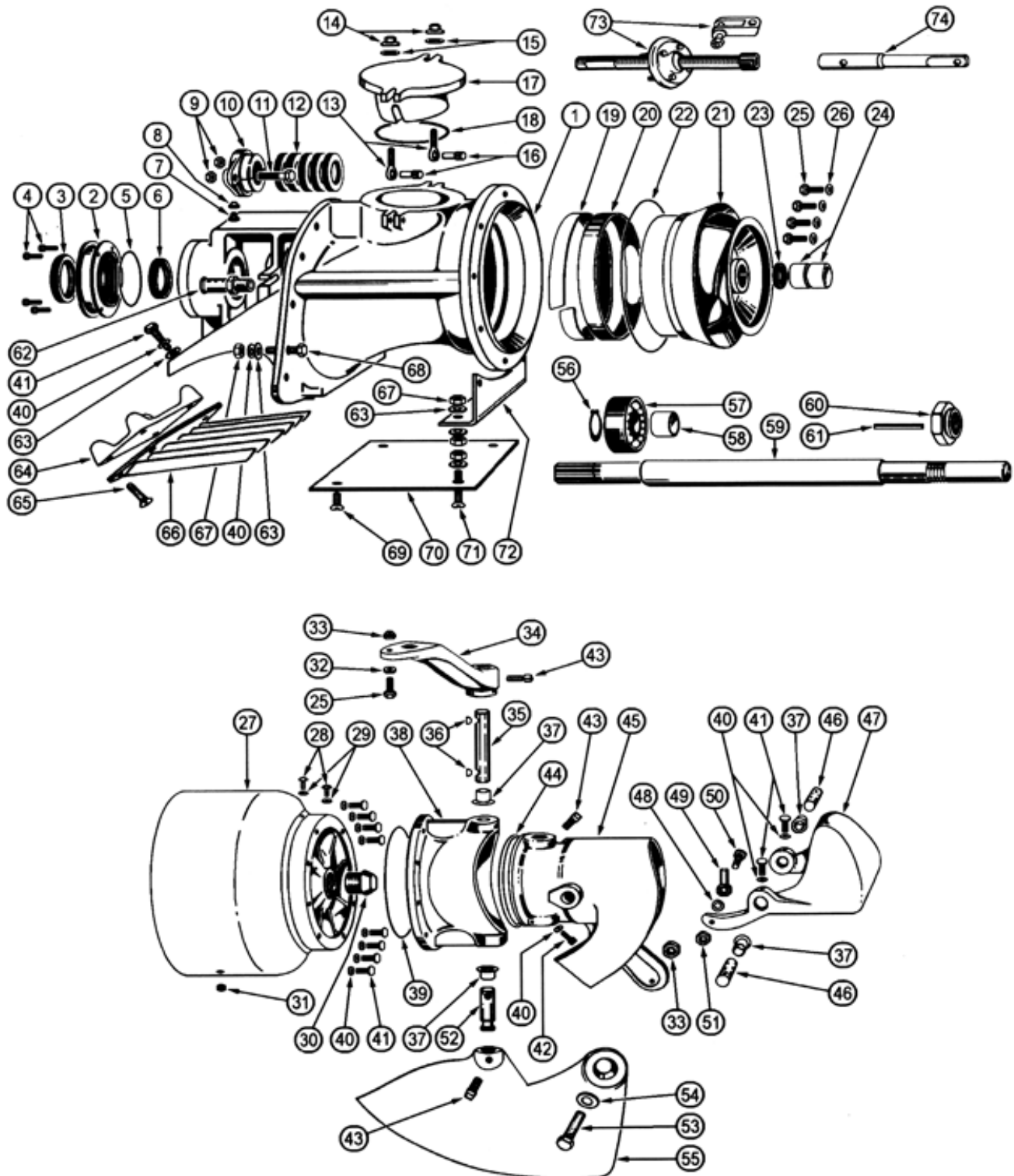
### LEGEND

SYM	DESCRIPTION	QTY	PART NO.
1	Suction Piece	1	J0726
2	Bearing Cap	1	J0338
3	Bearing Cap Seal	1	SL1007
4	Bearing Cap Screw	4	J0908
5	Bearing Cap O-Ring	1	J0102
6	Suction Piece Seal	1	SL1507
7	Grease Fitting	1	J0480
8	Grease Fitting Cap	1	J1005
9	Pack Gland Nut	2	J0916
10	Packing Gland (Pair)	1	SC2507
11	Pack Gland Bolt	2	J0917
12	Packing Ring	5	SC3007
13	Rod End	2	J0907
14	Flange Nut	2	J0680
15	Hand Hole Washer	2	J0902
16	Groove Pin	2	J0479
17	Hand Hole Cover	1	J0129
18	Hand Hole Cover O-Ring	1	O1002
19	Insulator	1	WR6004
20	Wear Ring	1	WR5000
21	Impeller	1	IMB***
22	Bowl / Suction Piece O-Ring	1	J0100
23	Bowl Seal	1	SL2003
24	Bowl Bearing	2	B1502
25	3/8" Hex Head Cap Screw	9	J0918
26	Bowl Washer	8	J0909
27	Bowl	1	J0496
28	Oil Plug 1/4-28	2	J0938
29	1/4" Nylon Washer	2	J0104
30	Bowl End Cap	1	J0850
31	1/8" Pipe Plug	1	J0883
32	3/8" Jam Nut	1	J0913

SYM	DESCRIPTION	QTY	PART NO.
33	3/8" Lock Nut	2	J0912
34	Steering Tiller	1	J0645
35	Tiller Shaft	1	J0397
36	Woodruff Key	2	R5507
37	Nyliner Bearing	4	B2007
38	Nozzle Housing	1	J0027
39	Nozzle Housing O-Ring	1	J0101
40	5/16" Lock Washer	11	F05 LW
41	5/16" HHCS	10	J0915
42	5/16" SHCS	1	J0927
43	5/16" Square Head Cap Screw	3	J0920
44	Nozzle O-Ring, Teflon	1	O1505
45	Nozzle	1	J0405
46	Reverse Bucket Pin	2	J0826
47	Reverse Bucket	1	J0250
48	1/4" Flat Washer	1	F04 FW
49	Ball Joint Rod End	1	J0107
50	1/4" HHCS	1	J0904
51	1/4" Lock Nut	1	J0905
52	Rudder Pin	1	J0753
53	3/8" Rudder Bolt	1	J0945
54	3/8" Rudder Washer	1	J0901
55	Rudder	1	J0596
56	Retainer Ring (.094)	1	J0484
57	Thrust Bearing	1	B1007
58	Shaft Sleeve	1	SH2507
59	Pump Shaft	1	SH1107
60	Impeller Nut	1	SH3507
61	Impeller Key	1	SH3007
62	Barb 3/4 Hose x 1/2 MPT	1	J0818
63	1/2" Pipe Plug	1	J0820

# AMERICAN TURBINE

## OEM LEGEND J120-E





# AMERICAN TURBINE

## OEM LEGEND J120-E

### LEGEND

SYM	DESCRIPTION	QTY	PART NO.
1	Suction Piece	1	J0715
2	Bearing Cap	1	J0338
3	Bearing Cap Seal	1	SL1007
4	Bearing Cap Screw	4	J0908
5	Bearing Cap O-Ring	1	J0102
6	Suction Piece Seal	1	SL1507
7	Grease Fitting	1	J0480
8	Grease Fitting Cap	1	J1005
9	Pack Gland Nut	2	J0916
10	Packing Gland (Pair)	1	SC2507
11	Pack Gland Bolt	2	J0917
12	Packing Ring	5	SC3007
13	Rod End	2	J0907
14	Flange Nut	2	J0680
15	Hand Hole Washer	2	J0902
16	Groove Pin	2	J0479
17	Hand Hole Cover	1	J0098
18	Hand Hole Cover O-Ring	1	O1002
19	Insulator	1	WR6004
20	Wear Ring	1	WR5000
21	Impeller	1	IMB***
22	Bowl / Suction Piece O-Ring	1	J0100
23	Bowl Seal	1	SL2003
24	Bowl Bearing	2	B1502
25	3/8" Hex Head Cap Screw	9	J0918
26	Bowl Washer	8	J0909
27	Bowl	1	J0496
28	Oil Plug 1/4-28	2	J0938
29	1/4" Nylon Washer	2	J0104
30	Bowl End Cap	1	J0850
31	1/8" Pipe Plug	1	J0883
32	3/8" Jam Nut	1	J0913
33	3/8" Lock Nut	2	J0912
34	Steering Tiller	1	J0645
35	Tiller Shaft	1	J0397
36	Woodruff Key	2	R5507
37	Nyliner Bearing	4	B2007

SYM	DESCRIPTION	QTY	PART NO.
38	Nozzle Housing	1	J0027
39	Nozzle Housing O-Ring	1	J0101
40	5/16" Lock Washer	27	F05 LW
41	5/16" HHCS	17	J0915
42	5/16" SHCS	1	J0927
43	5/16" Square Head Set Screw	3	J0920
44	Nozzle O-Ring, Teflon	1	O1505
45	Nozzle	1	J0405
46	Reverse Bucket Pin	2	J0826
47	Reverse Bucket	1	J0250
48	1/4" Flat Washer	1	F04 FW
49	Ball Joint Rod End	1	J0107
50	1/4" HHCS	1	J0904
51	1/4" Lock Nut	1	F04 20 LN
52	Rudder Pin	1	J0753
53	3/8" Rudder Bolt	1	J0945
54	3/8" Rudder Washer	1	J0901
55	Rudder	1	J0596
56	Retainer Ring (.094)	1	J0484
57	Thrust Bearing	1	B1007
58	Shaft Sleeve	1	SH2507
59	Pump Shaft	1	SH1107
60	Impeller Nut	1	SH3507
61	Impeller Key	1	SH3007
62	Barb 3/8 Hose x 1/2 MPT	1	J0818
63	5/16" Flat Washer	22	F05 FW
64	Grate Retainer	1	J0410
65	5/16 x 1-1/4 FHMS	4	J0944
66	Intake Grate	1	J0411
67	5/16-18 Hex Nut	16	F05 18 HN
68	5/16 x 1-3/4 HHCS	10	F05 18 14 HH
69	5/16 x 3/4 FHMS	2	F05 18 06 FH
70	Cavitation Plate	1	J0567
71	5/16 x 2 FHMS	2	F05 18 16 FH
72	Cavitation Plate Bracket	1	J0840
73	Splashwell / Clevis Kit	1	J0887
74	Steering Extension	1	J0892

# AMERICAN TURBINE

HTR II



Highest Reverse Thrust. Unequaled low speed control of any type steering nozzle.

DOMINATOR



Standard steering on Dominator Jets.

TURBINE TRIM



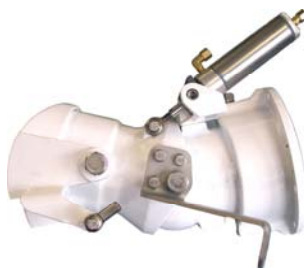
Adjustable Trim for various water conditions.

AT DROOP SNOOT



For high performance boats. Can add up to 5 mph.

JET TRIM



Adjustable Trim. Will fit all jet drives.

SDR



Increased reverse thrust. Uses a single lever shifter.

BEST



Excellent reverse. Will not sand lock reverse bucket.

BERKELEY STYLE



Standard steering on AT-309 & SD-309 Jets.

HTR



Optional insertable steering on AT-309 & SD-309 Jets.

# AMERICAN TURBINE

## ATTENTION!!

There are two styles of nozzle housings for the HTR II. Verify which one you have by the pictures below.

R1007



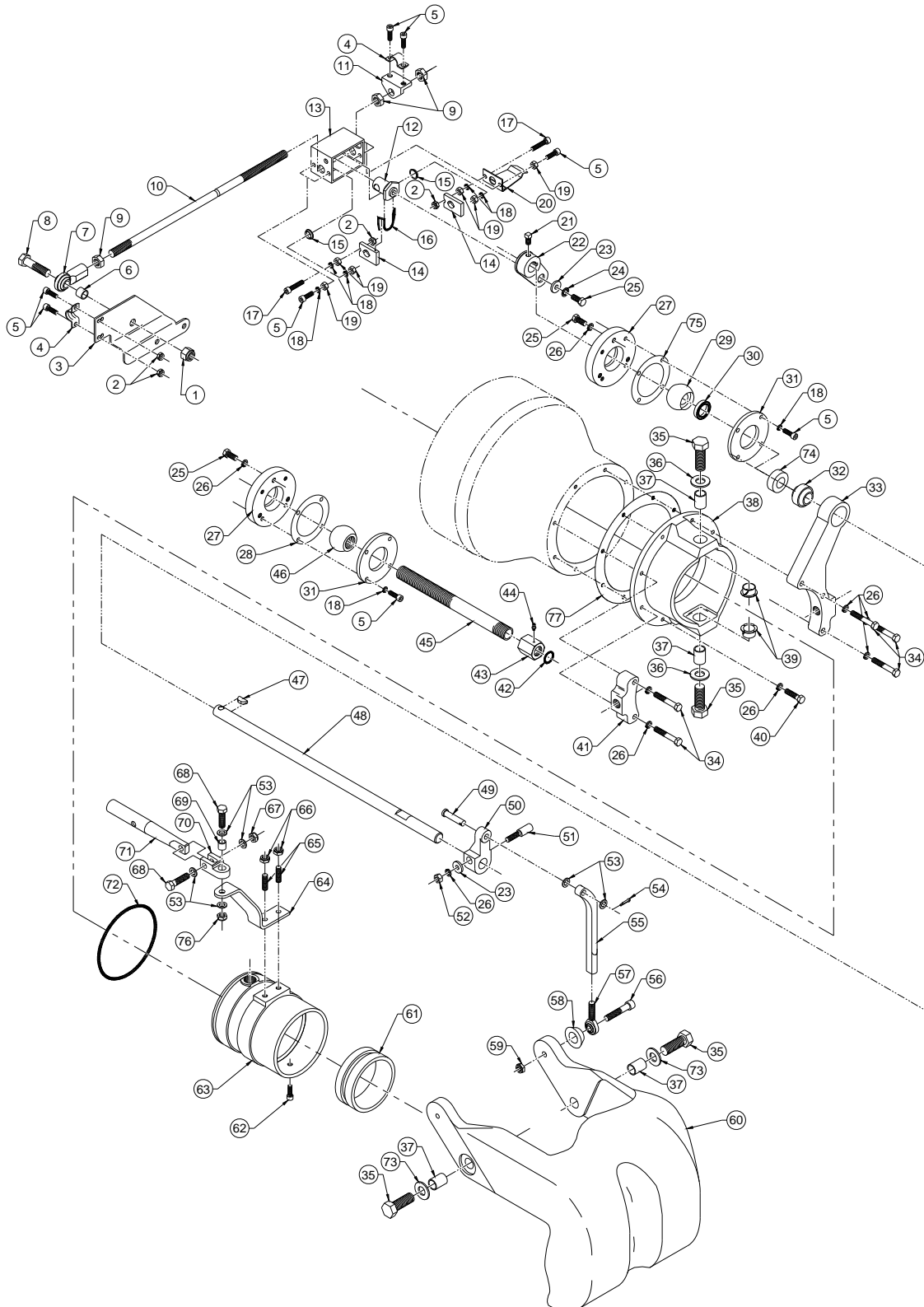
R6101



# AMERICAN TURBINE

## HTR II STEERING (W / R1007)

PART # RSK2101



# AMERICAN TURBINE

## HTR II STEERING (W / R1007)

PART # RSK2101

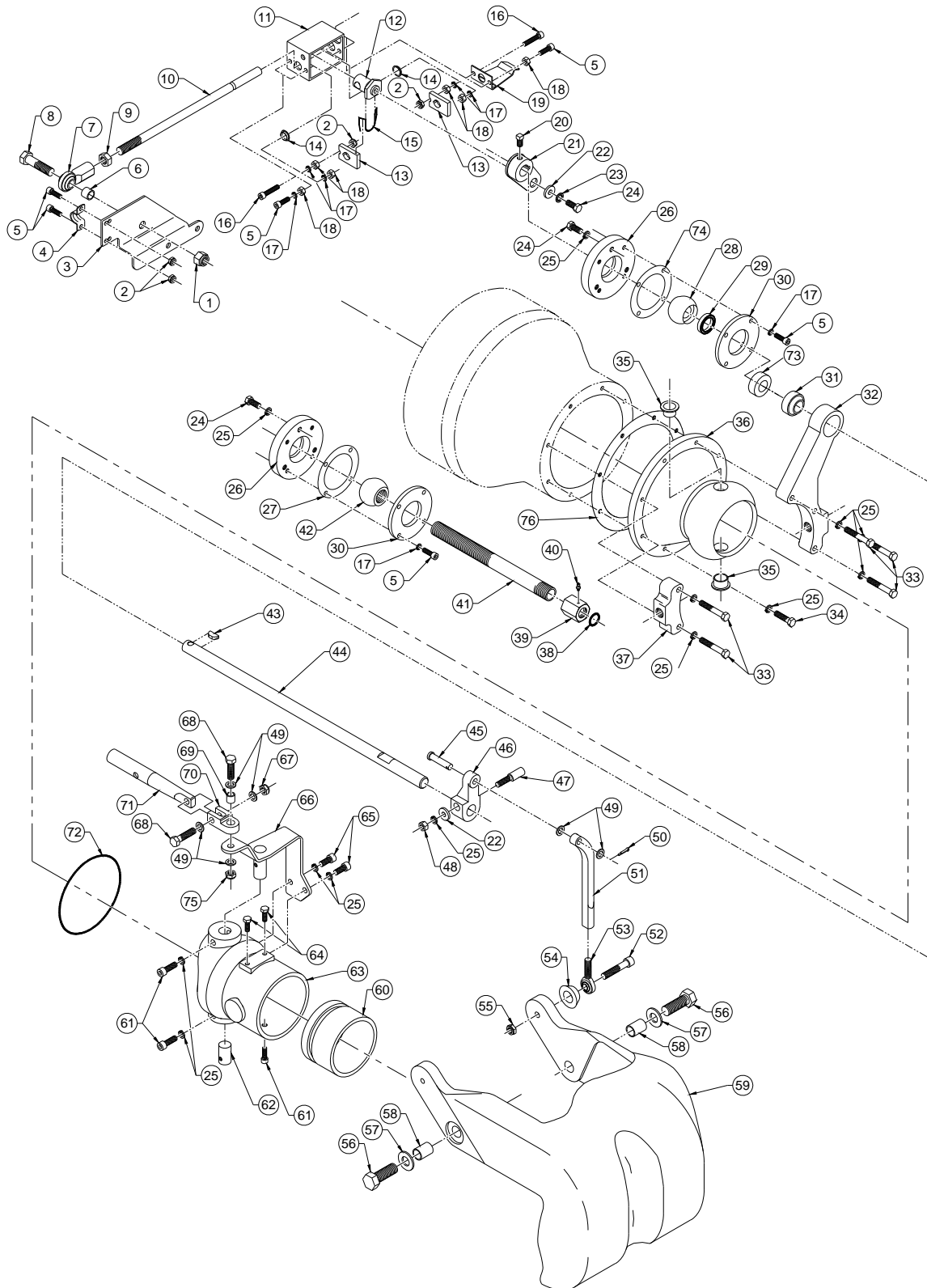
### LEGEND

SYM.	DESCRIPTION	QTY.	PART NO.	SYM.	DESCRIPTION	QTY.	PART NO.
1	LOCK NUT, 1/2-13	1	F08 13 LN	40	HHCS, 5/16-18 X 1-1/4	3	F05 18 10 HH
2	LOCK NUT, 1/4-20	4	F04 20 LN	41	PIVOT BRACKET (PORT)	1	RS2501
3	CONTROL ROD BRACKET	1	RS1001	42	O-RING, STEERING CABLE SEAL	1	O3501
4	64 SERIES CABLE CLAMP	1	RS5801	43	STEERING TUBE SEAL	1	T3107
5	SHCS, 1/4-20 X 7/8	12	F04 20 07 SH	44	GREASE ZERK	1	M4801
6	PLASTIC BUSHING	1	BN2010	45	STEERING TUBE	1	T3007
7	FEMALE ROD END, 1/2-20	1	F08 20 FRE	46	STEERING TUBE BALL	1	T2601
8	HHCS, 1/2-13 X 1-3/4	1	F08 13 14 HH	47	WOODRUFF KEY	1	R5507
9	JAMB NUT, 1/2-20	3	F08 20 JN	48	SHIFT SHAFT	1	RS5221
10	BRAKE ROD	1	RS5101	49	CLEVIS PIN, 3/8	1	F06 CL
11	CABLE BRACKET	1	RS6101	50	REVERSE LEVER ARM	1	RS2401
12	LOCK HUB	1	RS3101	51	TAPER PIN	1	RS3501
13	LOCK HOUSING	1	RS2901	52	HEX NUT, 5/16-18	1	F05 18 HN
14	LOCK PLATE	2	RS3001	53	AN FLAT WASHER, 3/8	6	F06 AN
15	NYLINER BEARING	2	RS3201	54	COTTER PIN, 1/8 X 1/2	1	F02 04 CP
16	LOCK BLOCK SPRING	1	RS2802	55	PUSH PULL ROD	1	RS2301
17	SHCS, 1/4-20 X 1-3/8	2	F04 20 11 SH	56	SHCS, 3/8-24 X 2	1	F06 24 16 SH
18	LOCK WASHER, 1/4	13	F04 LW	57	MALE ROD END, 3/8-24	1	F06 24 MRE
19	HEX NUT, 1/4-20	6	F04 20 HN	58	TAPERED SLEEVE	1	RS2621
20	DETENT SPRING	1	RS2701	59	THIN LOCK NUT, 3/8-24	1	F06 24 TL
21	SHCS, 5/16-18 X 1/2	1	F05 18 04 SH	60	REVERSE BUCKET	1	RS2101
22	LEVER ARM (SHIFT SHAFT)	1	RS5201	61	NOZZLE INSERT	1	R7370
23	THICK WASHER, 5/16	2	F05 TW	62	SHCS, 5/16-18 X 1	1	F05 18 08 SH
24	STAR LOCK WASHER, 5/16	1	F05 SW	63	NOZZLE, STEERING	1	R2001
25	HHCS, 5/16-18 X 3/4	7	F05 18 06 HH	64	TILLER ARM	1	RS2911
26	LOCK WASHER, 5/16	15	F05 LW	65	SET SCREW, 5/16-18 X 1-1/2	2	F05 18 12 SS
27	BEZEL (SHIFT ROD / STEERING)	2	RS5001	66	LOCK NUT, 5/16-18	2	F05 18 LN
28	GASKET	1	G4001	67	THIN LOCK NUT, 3/8-24	1	F06 24 TL
29	SHIFT ROD BALL	1	RS5621	68	HHCS, 3/8-24 X 1-1/2	2	F06 24 12 HH
30	SHIFT ROD SEAL	1	RS5601	69	BRONZE BUSHING 3/8 X 1/2	1	RS2623
31	BALL FLANGE	2	T2701	70	CLEVIS	1	R8007
32	SPERICAL BEARING	1	RS5351	71	STEERING EXTENSION	1	R9601
33	PIVOT BRACKET (STARBOARD)	1	RS2201	72	O-RING, STEERING NOZZLE	1	O1505
34	HHCS, 5/16-18 X 2-1/4	5	F05 18 18 HH	73	THICK WASHER, 5/8	2	F10 TW
35	HHCS, 5/8-11 X 1-3/4	4	F10 11 14 HH	74	PLASTIC COLLAR	1	RS6201
36	THICK WASHER, 5/8	2	F10 TW	75	GASKET, SHIFT SHAFT	1	G4001
37	BUSHING (BUCKET PIVOT)	4	RS2131	76	LOCK NUT, 3/8-24	1	F06 24 LN
38	NOZZLE HOUSING	1	R1007	77	NOZZLE HOUSING GASKET	1	G2507
39	NYLINER BEARING	2	B2007				

# AMERICAN TURBINE

## HTR II STEERING (W / R6101)

PART # RSK2101



# AMERICAN TURBINE

## HTR II STEERING (W / R6101)

PART # RSK2101

### LEGEND

SYM.	DESCRIPTION	QTY.	PART NO.	SYM.	DESCRIPTION	QTY.	PART NO.
1	LOCK NUT, 1/2-13	1	F08 13 LN	39	STEERING TUBE SEAL	1	T3107
2	HEX NUT, 1/4-20	4	F04 20 HN	40	GREASE ZERK	1	M4801
3	CONTROL ROD BRACKET	1	RS1001	41	STEERING TUBE	1	T3007
4	64 SERIES CABLE CLAMP	1	RS5801	42	STEERING TUBE BALL	1	T2601
5	SHCS, 1/4-20 X 7/8	12	F04 20 07 SH	43	WOODRUFF KEY	1	R5507
6	PLASTIC BUSHING	1	BN2010	44	SHIFT SHAFT	1	RS5221
7	1/2 FEMALE ROD END	1	F08 20 FRE	45	CLEVIS PIN, 3/8	1	F06 CL
8	HHCS, 1/2-13 X 1-3/4	1	F08 13 14 HH	46	REVERSE LEVER ARM	1	RS2401
9	JAMB NUT, 1/2-20	1	F08 20 JN	47	TAPER PIN	1	RS3501
10	BRAKE ROD	1	RS5101	48	HEX NUT, 5/16-18	1	F05 18 HN
11	LOCK HOUSING	1	RS2901	49	FLAT WASHER, 3/8 AN	6	F06 AN
12	LOCK HUB	1	RS3101	50	COTTER PIN, 1/8 X 1/2	1	F02 04 CP
13	LOCK PLATE	2	RS3001	51	PUSH PULL ROD	1	RS2301
14	NYLINER BEARING	2	RS3201	52	SHCS, 3/8-24 X 2	1	F06 24 16 SH
15	LOCK BLOCK SPRING	1	RS2802	53	MALE ROD END, 3/8-24	1	F06 24 MRE
16	SHCS, 1/4-20 X 1-3/8	2	F04 20 11 SH	54	TAPERED SLEEVE	1	RS2621
17	LOCK WASHER, 1/4	14	F04 LW	55	LOCK NUT, 3/8-24 (THIN)	1	F06 24 TL
18	HEX NUT, 1/4-20	4	F04 20 HN	56	HHCS, 5/8-11 X 1-3/4	4	F10 11 14 HH
19	DETENT SPRING	1	RS2701	57	THICK WASHER, 5/8	2	F10 TW
20	SHCS, 5/16-18 X 1/2	1	F05 18 04 SH	58	BUSHING (BUCKET PIVOT)	2	RS2131
21	LEVER ARM (SHIFT SHAFT)	1	RS5201	59	REVERSE BUCKET	1	RS2101
22	THICK WASHER, 5/16	2	F05 TW	60	NOZZLE INSERT	1	R70014
23	STAR LOCK WASHER, 5/16	1	F05 SW	61	SHCS, 5/16-18X1	1	F05 18 08 SH
24	HHCS, 5/16-18 X 3/4	7	F05 18 06 HH	62	PIN, LOWER NOZZLE	1	R3701
25	LOCK WASHER, 5/16	6	F05 LW	63	NOZZLE, STEERING	1	R1101
26	BEZEL (SHIFT ROD / STEERING)	2	RS5001	64	HHCS, 1/4-20 X 3/4	2	F04 20 06 HH
27	GASKET	2	G4001	65	SHCS, 5/16-18 X 3/4	2	F05 18 06 SH
28	SHIFT ROD BALL	1	RS5621	66	TILLER ARM	1	RS2801
29	SHIFT ROD SEAL	1	RS5601	67	LOCK NUT, 3/8-24 (THIN)	1	F06 24 TL
30	BALL FLANGE	2	T2701	68	HHCS, 3/8-24 X 1-1/2	2	F06 24 12 HH
31	SPERICAL BEARING	1	RS5351	69	BRONZE BUSHING 3/8 X 1/2	1	RS2623
32	PIVOT BRACKET (STARBOARD)	1	RS2201	70	CLEVIS	1	R8007
33	HHCS, 5/16-18 X 2-1/4	5	F05 18 18 HH	71	STEERING EXTENSION	1	R9601
34	HHCS, 5/16-18 X 1-1/4	3	F05 18 10 HH	72	O-RING, STEERING NOZZLE	1	O1401
35	NYLON BEARING	2	B2201	73	PLASTIC COLLAR	1	RS6201
36	SHORT SNOOT	1	R6101	74	GASKET, SHIFT SHAFT	1	G4001
37	PIVOT BRACKET (PORT)	1	RS2501	75	LOCK NUT, 3/8-24	1	F06 24 LN
38	O-RING, STEERING CABLE SEAL	1	O3501	76	NOZZLE HOUSING GASKET	1	G2507

PART # SRK2101





# AMERICAN TURBINE

## SDR STEERING (SPLIT DUCT REVERSE)

PART # SRK2101



## LEGEND

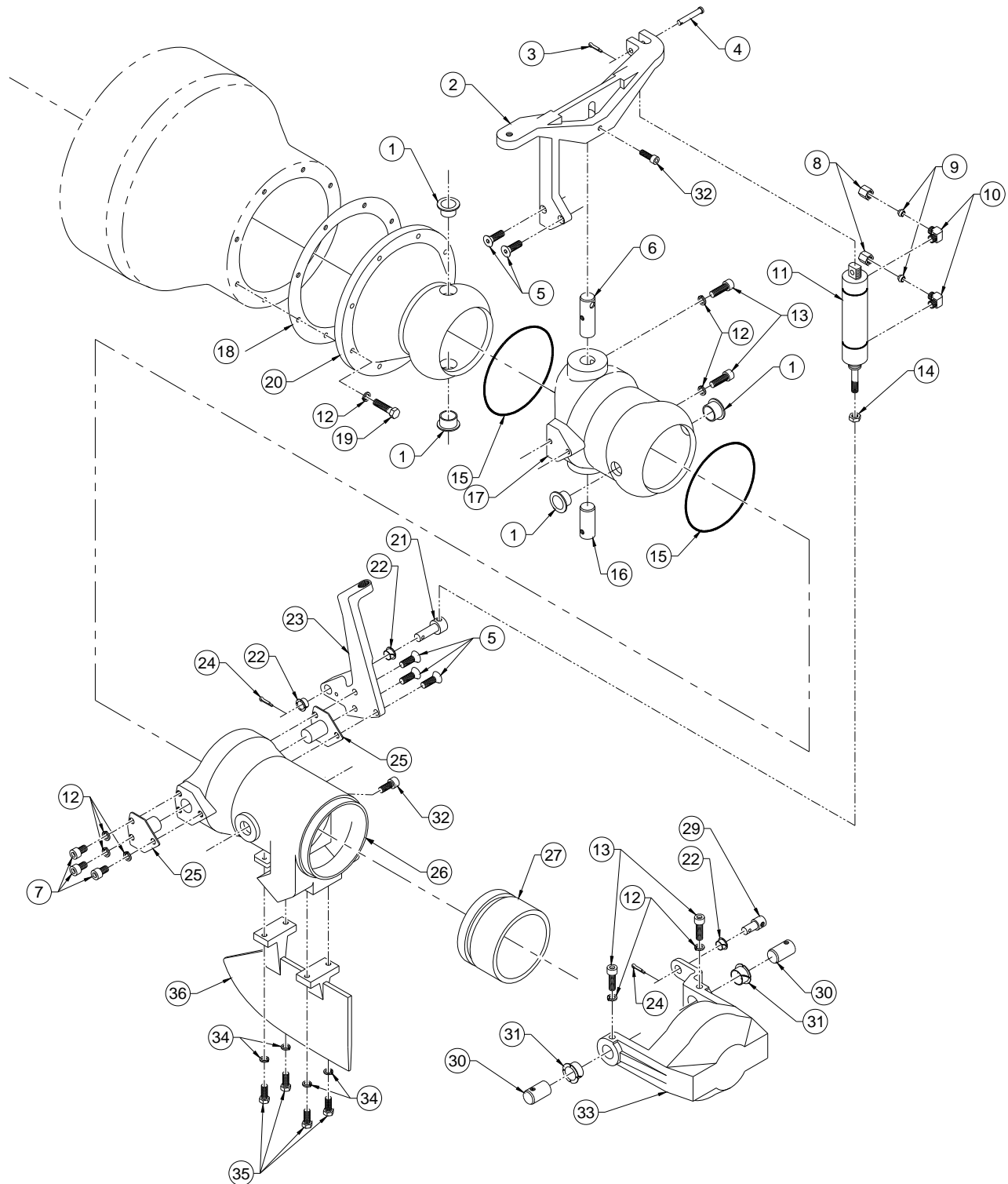
SYM.	DESCRIPTION	QTY.	PART NO.
1	HHCS, 5/8-11 X 1-3/4	2	F10 11 14 HH
2	THICK WASHER, 5/8	2	F10 TW
3	BOLT BUSHING, 5/8	2	RS2131
4	NYLINER BUSHING, 3/4	2	B2007
5	NOZZLE HOUSING	1	R1007
6	BUCKET BRACKET (RIGHT)	1	SR4001R
7	REVERSE BUCKET STOP	1	SR5101
8	SHIFT CABLE BRACKET	1	SR2005
9	HHCS, 5/16-18 X 3/4	3	F05 18 06 HH
10	SHCS, 1/4-20 X 7/8	1	F04 20 07 SH
11	1/2 X 1/2 NYLINER BUSHING	2	B2501
12	REVERSE BUCKET BOLT	2	BN2210
13	STAR LOCK WASHER, 5/8	2	F10 SW
14	LOCKWASHER, 5/16	11	F05 LW
15	HHCS, 5/16-18 X 1-3/4	4	F05 18 14 HH
16	HHCS, 5/16-18 X 1-1/4	4	F05 18 10 HH
17	BUCKET BRACKET (LEFT)	1	SR4001L
18	NOZZLE HOUSING GASKET	1	G2507

SYM.	DESCRIPTION	QTY.	PART NO.
19	HHCS, 3/8-24 X 1-1/4	2	F06 24 10 HH
20	AN FLAT WASHER, 3/8	2	F06 AN
21	3/8-24 THIN LOCK NUT	2	F06 24 TL
22	OFF-SET STEERING EXT.	1	SR6001
23	HEX NUT, 3/8-24	1	F06 24 HN
24	NOZZLE O-RING	1	O1505
25	MALE ROD END, 3/8-24	1	F06 24 MRE
26	LOCK NUT, 5/16-18	2	F05 18 LN
27	SET SCREW, 5/16-18 X 1-1/2	2	F05 18 12 SS
28	TILLER ARM	1	SR3001
29	NOZZLE	1	R2001
30	HHCS, 5/16-18 X 1	1	F05 18 10 HH
31	NOZZLE INSERT	1	R73**
32	FEMALE ROD END, 1/4-20	1	F04 20 FRE
33	CLEVIS PIN, 1/4	1	F04 CL
34	COTTER PIN, 5/64 X 3/4	1	F01 06 CP
35	REVERSE BUCKET	1	SR2101

# AMERICAN TURBINE

## TURBINE TRIM STEERING

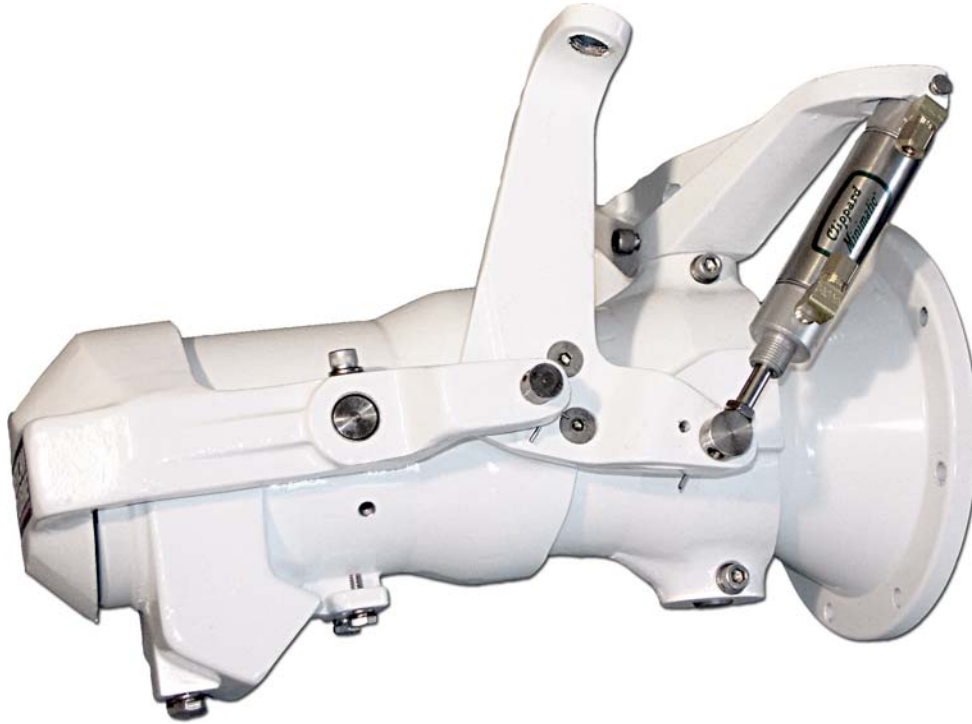
PART # RA8507



# AMERICAN TURBINE

## TURBINE TRIM STEERING

PART # RA8507



## LEGEND

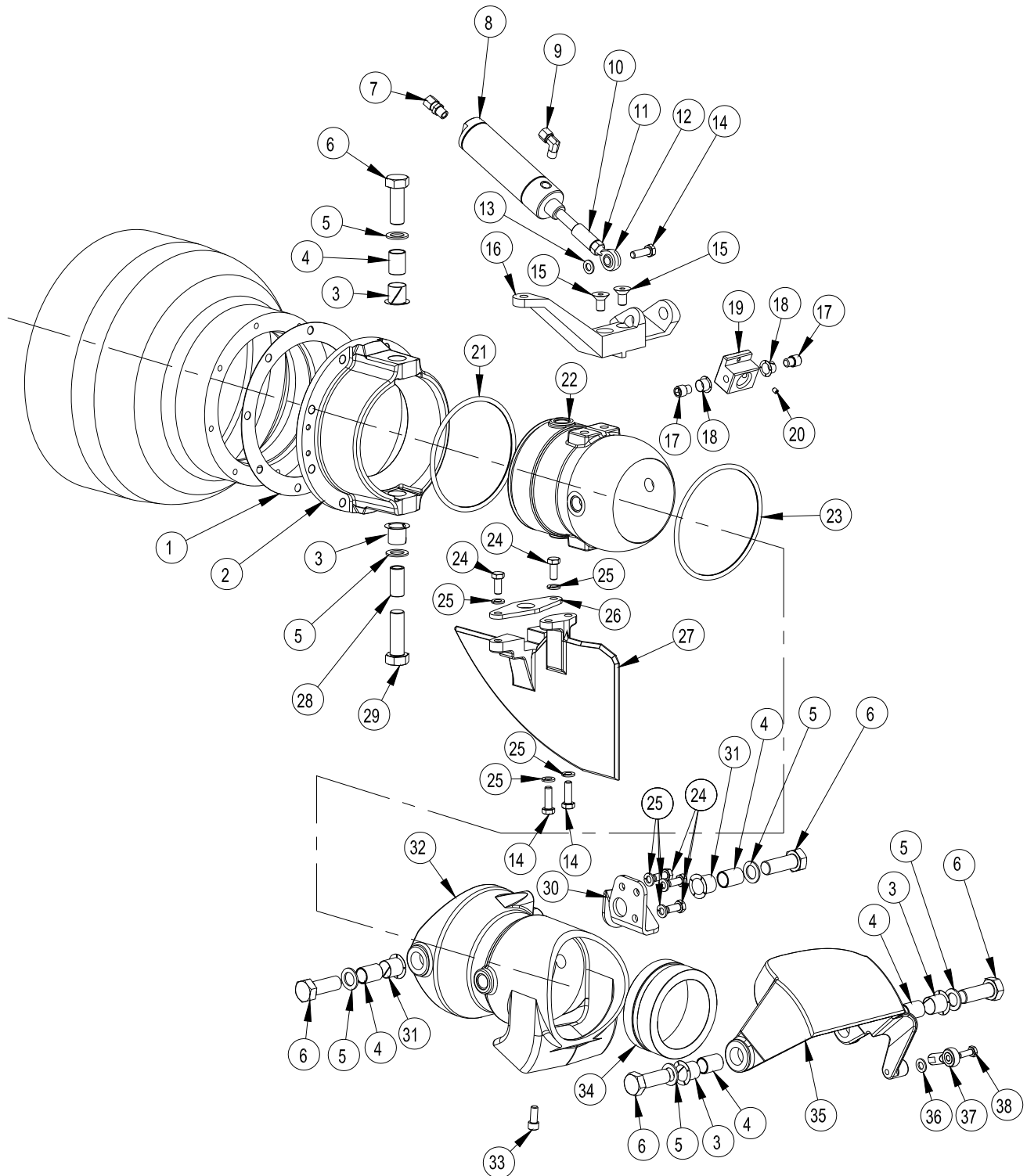
SYM.	DESCRIPTION	QTY.	PART NO.
1	BRASS BUSHING	4	B2201
2	TILLER ARM	1	R3201
3	COTTER PIN, 1/8 X 3/4	1	F02 06 CP
4	CLEVIS PIN, 1/4	1	F04 CL
5	FHMS, 5/16-18 X 1	5	F05 18 08 FH
6	UPPER TILLER PIN	1	R3601
7	SHCS, 5/16-18 X 1/2	3	F05 18 04 SH
8	BRASS FITTING	2	R8307
9	BRASS FITTING	2	R8307
10	BRASS FITTING	2	R8307
11	HYDRAULIC CYLINDER	1	R7201
12	LOCK WASHER, 5/16	15	F05 LW
13	SHCS, 5/16-18 X 1	4	F05 18 08 SH
14	5/16-24 JAMB NUT	1	F05 24 JN
15	NOZZLE O-RING	2	O1401
16	LOWER PIN	1	R3701
17	STEERING NOZZLE	1	R1401
18	NOZZLE HOUSING GASKET	1	G2507

SYM.	DESCRIPTION	QTY.	PART NO.
19	HHCS, 5/16-18 X 1-1/4	8	F05 18 10 HH
20	SHORT SNOOT	1	R6101
21	PIN HYDRAULIC PIVOT	1	R5201
22	3/8 NYLINER	3	B2105
23	UP /DOWN LEVER	1	R3801
24	COTTER PIN, 1/8 X 3/4	2	F02 06 CP
25	PIN, UP/DN	2	RA4701
26	NOZZLE	1	R1901
27	NOZZLE INSERT	1	R700**
29	REVERSE PIVOT PIN	1	R5005
30	REVERSE BUCKET PIN	2	R3701
31	NYLINER BUSHING 1/2	2	B2101
32	SHCS, 5/16-18 X 3/4	2	F05 18 06 SH
33	REVERSE BUCKET	1	R2101
34	LOCKWASHER, 1/4	4	F04 LW
35	HHCS, 1/4-20 X 3/4	4	F04 20 06 HH
36	RUDDER	1	R2505

# AMERICAN TURBINE

## JET TRIM STEERING

PART # JTA8507



# AMERICAN TURBINE

## JET TRIM STEERING

PART # JTA8507

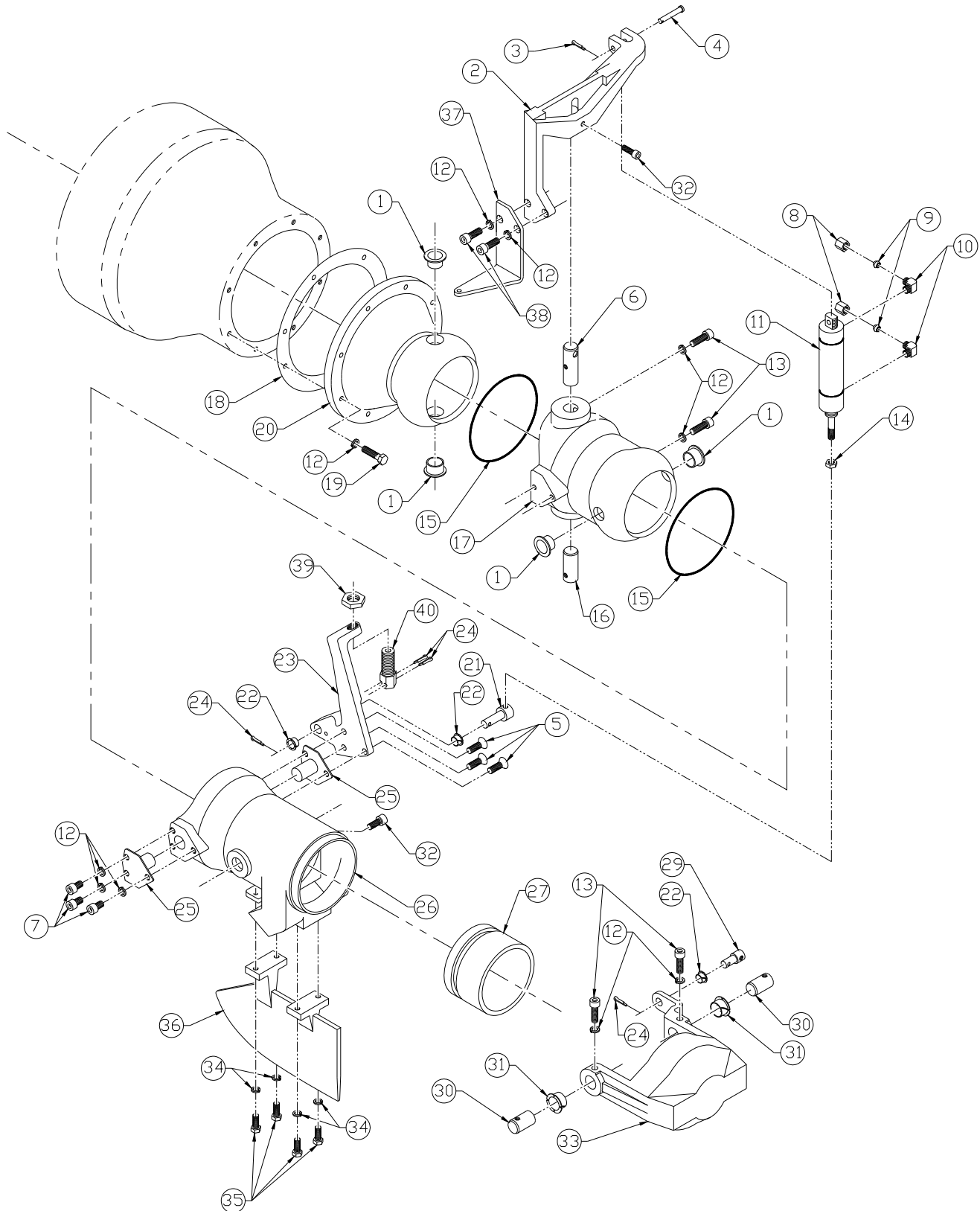
### LEGEND

SYM.	DESCRIPTION	QTY.	PART NO.	SYM.	DESCRIPTION	QTY.	PART NO.
1	NOZZLE HOUSING GASKET	1	G2507	20	10-32 X 3/8 SET SCREW	1	F03 32 03 SS
2	NOZZLE HOUSING	1	R1007	21	NOZZLE O-RING	1	O1505
3	NYLINER, 3/4	4	B2007	22	STEERING NOZZLE		JT1411
4	BOLT BUSHING	5	RS2131	23	ENCAPSULATED O-RING	1	O1501
5	THICK WASHER, 5/8	6	F10 TW	24	HHCS, 5/16-18 X 3/4	5	F05 18 06 HH
6	HHCS, 5/8-11 X 1-3/4	5	F10 11 14 HH	25	LOCKWASHER, 5/16	7	F05 LW
7	STRAIGHT FITTING	1	JT7311	26	RUDDER PIVOT BRACKET	1	JT0005
8	HYDRAULIC CYLINDER	1	JT7211	27	RUDDER	1	JT2401
9	90 DEGREE BRASS FITTING	1	R8307	28	LOWER PIVOT BUSHING	1	JT0001
10	STOP SLEEVE	1	JT0002	29	HHCS, 5/8-11 X 2	1	F10 11 16 HH
11	5/16-24 JAMB NUT	1	F05 24 JN	30	REVERSE CABLE BRACKET	1	JT0004
12	MALE ROD END, 5/16-24	1	F05 24 MRE	31	NYLINER BUSHING, 1/2 LONG	2	B2101
13	AN WASHER, 5/16	1	F05 AN	32	NOZZLE	1	JT1911
14	HHCS, 5/16-18 X 1	3	F05 18 08 HH	33	SHCS, 5/16-18 X 3/4	1	F05 18 06 SH
15	FHCS, 3/8-16 X 1-1/2	2	F06 16 12 FH	34	NOZZLE INSERT	1	R73**
16	TILLER ARM	1	JT3111	35	REVERSE BUCKET	1	JT2111
17	SHCS, 3/8-16 X 3/8	2	F06 16 03 SH	36	AN WASHER, 1/4	1	F04 AN
18	NYLINER BUSHING, SPLIT	2	B2102	37	FEMALE ROD END, 1/4-28	1	F04 28 FRE
19	HYD. CYLINDER PIVOT BLOCK	1	JT1011	38	HHCS, 1/4-20 X 1	1	F04 20 08 HH

# AMERICAN TURBINE

## FW-309 TURBINE TRIM STEERING

PART # RA8507



# AMERICAN TURBINE

## FW-309 TURBINE TRIM STEERING PART # RA8507

### LEGEND

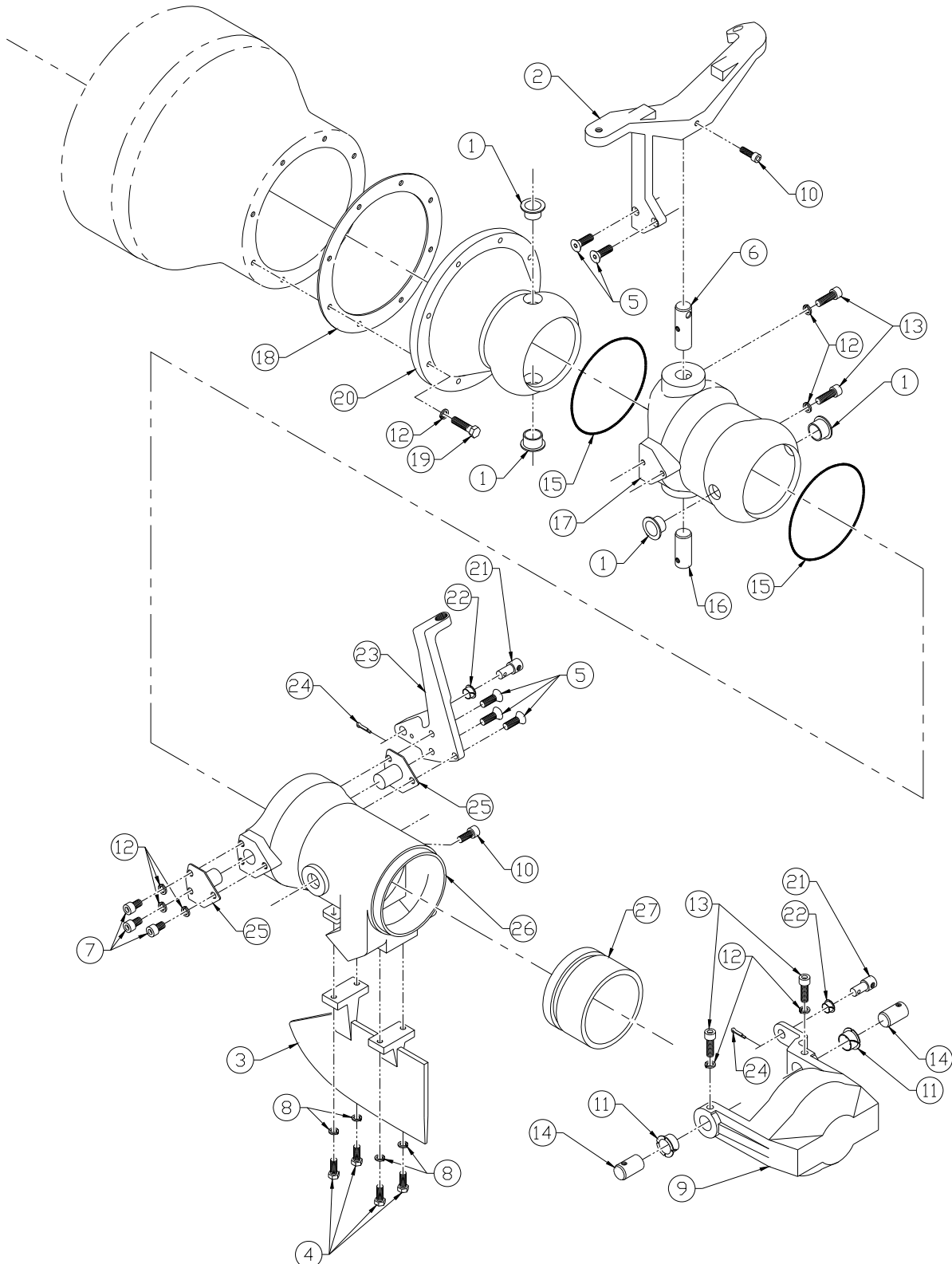
SYM.	DESCRIPTION	QTY.	PART NO.
1	BRASS BUSHING	4	B2201
2	TILLER ARM	1	R3201
3	COTTER PIN, 1/8 X 3/4	1	F02 06 CP
4	CLEVIS PIN, 1/4	1	F04 CL
5	FHMS, 5/16-18 X 1	3	F05 18 08 FH
6	UPPER TILLER PIN	1	R3601
7	SHCS, 5/16-18 X 1/2	3	F05 18 04 SH
8	BRASS FITTING	2	R8307
9	BRASS FITTING	2	R8307
10	BRASS FITTING	2	R8307
11	HYDRAULIC CYLINDER	1	R7201
12	LOCK WASHER, 5/16	17	F05 LW
13	SHCS, 5/16-18 X 1	4	F05 18 08 SH
14	5/16-24 JAMB NUT	1	F05 24 JN
15	NOZZLE O-RING	2	O1401
16	LOWER PIN	1	R3701
17	STEERING NOZZLE	1	R1401
18	NOZZLE HOUSING GASKET	1	G2507
19	HHCS, 5/16-18 X 1-1/4	8	F05 18 10 HH
20	SHORT SNOOT	1	R6101

SYM.	DESCRIPTION	QTY.	PART NO.
21	PIN HYDRAULIC PIVOT	1	R5201
22	3/8 NYLINER	3	B2105
23	UP /DOWN LEVER	1	R3801
24	COTTER PIN, 1/8 X 3/4	2	F02 06 CP
25	PIN, UP/DN	2	RA4701
26	NOZZLE	1	R1901
27	NOZZLE INSERT	1	R700**
29	REVERSE PIVOT PIN	1	R5108
30	REVERSE BUCKET PIN	2	R3701
31	NYLINER BUSHING 1/2	2	B2101
32	SHCS, 5/16-18 X 3/4	2	F05 18 06 SH
33	REVERSE BUCKET	1	R2101
34	LOCKWASHER, 1/4	4	F04 LW
35	HHCS, 1/4-20 X 3/4	4	F04 20 06 HH
36	RUDDER	1	R2505
37	TILLER BRACKET	1	R3401
38	SHCS, 5/16-18 X 1-1/4	2	F05 18 10 SH
39	JAMB NUT, 3/4-16	1	F12 16 JN
40	CABLE ADAPTER	1	R9208

# AMERICAN TURBINE

## MANUAL TURBINE TRIM STEERING

PART # RA8107





# AMERICAN TURBINE

## MANUAL TURBINE TRIM STEERING

### PART # RA8107

## LEGEND

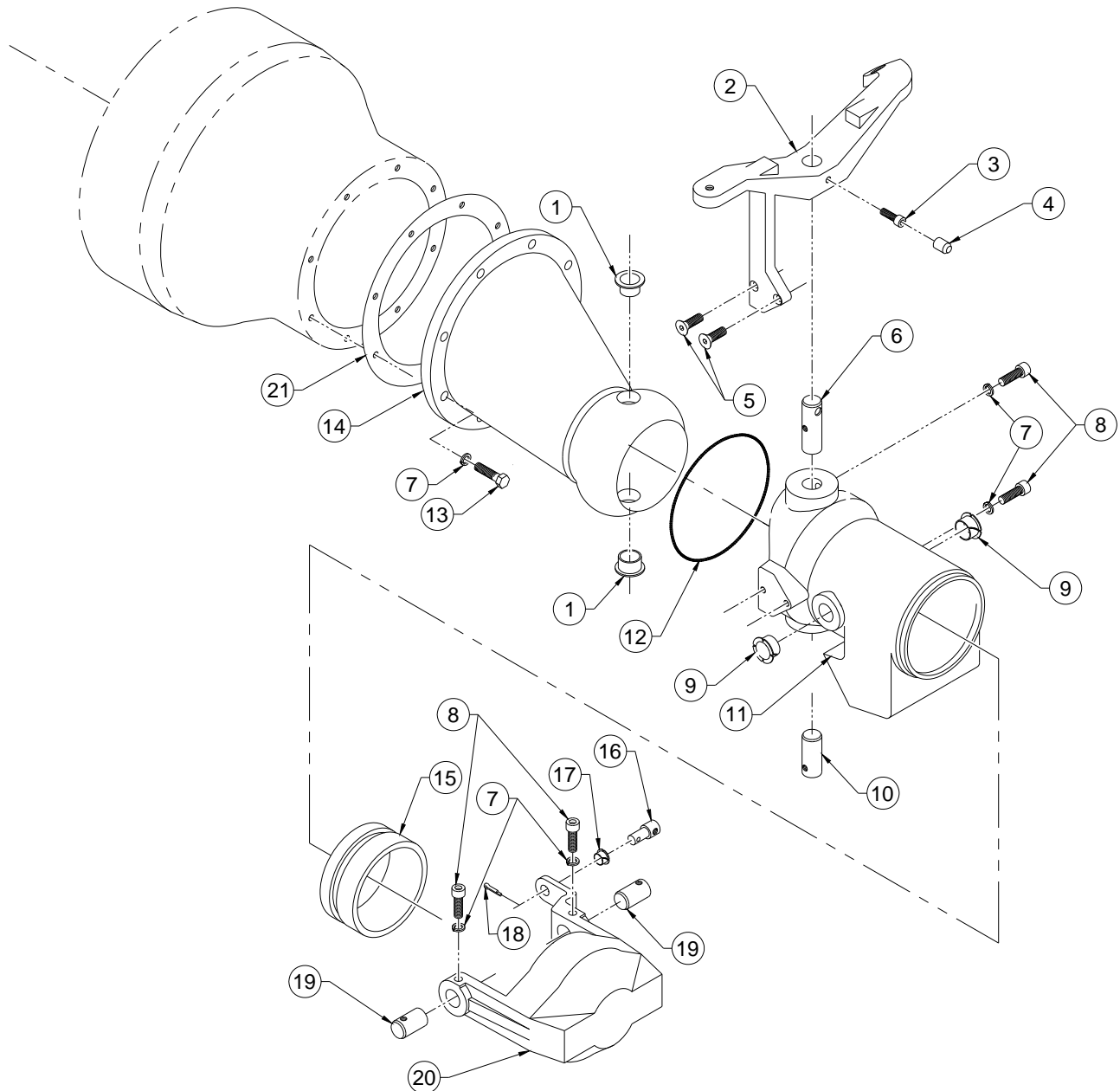
SYM.	DESCRIPTION	QTY.	PART NO.
1	BRASS BUSHING	4	B2201
2	TILLER ARM	1	R3101
3	RUDDER	1	R2505
4	HHCS, 1/4-20 X 3/4	4	F04 20 06 HH
5	FHMS, 5/16-18 X 1	5	F05 18 08 FH
6	UPPER TILLER PIN	1	R3601
7	SHCS, 5/16-18 X 1/2	3	F05 18 04 SH
8	LOCKWASHER, 1/4	4	F04 LW
9	REVERSE BUCKET	1	R2101
10	SHCS, 5/16-18 X 3/4	2	F05 18 06 SH
11	NYLINER BUSHING 1/2	2	B2101
12	LOCK WASHER, 5/16	15	F05 LW
13	SHCS, 5/16-18 X 1	4	F05 18 08 SH
14	REVERSE BUCKET PIN	2	R4601

SYM.	DESCRIPTION	QTY.	PART NO.
15	NOZZLE O-RING	2	O1401
16	LOWER PIN	1	R3701
17	STEERING NOZZLE	1	R1401
18	NOZZLE HOUSING GASKET	1	G2507
19	HHCS, 5/16-18 X 1-1/4	8	F05 18 10 HH
20	SHORT SNOOT	1	R6101
21	REVERSE PIVOT PIN	1	R5005
22	NYLINER, 3/8	2	B2105
23	UP / DOWN LEVER	1	R3901
24	COTTER PIN	2	F02 06 CP
25	PIN, UP / DOWN	2	R4701
26	NOZZLE	1	R1901
27	NOZZLE INSERT	1	R700**

# AMERICAN TURBINE

## HIGH FLOW DROOP SNOOT STEERING

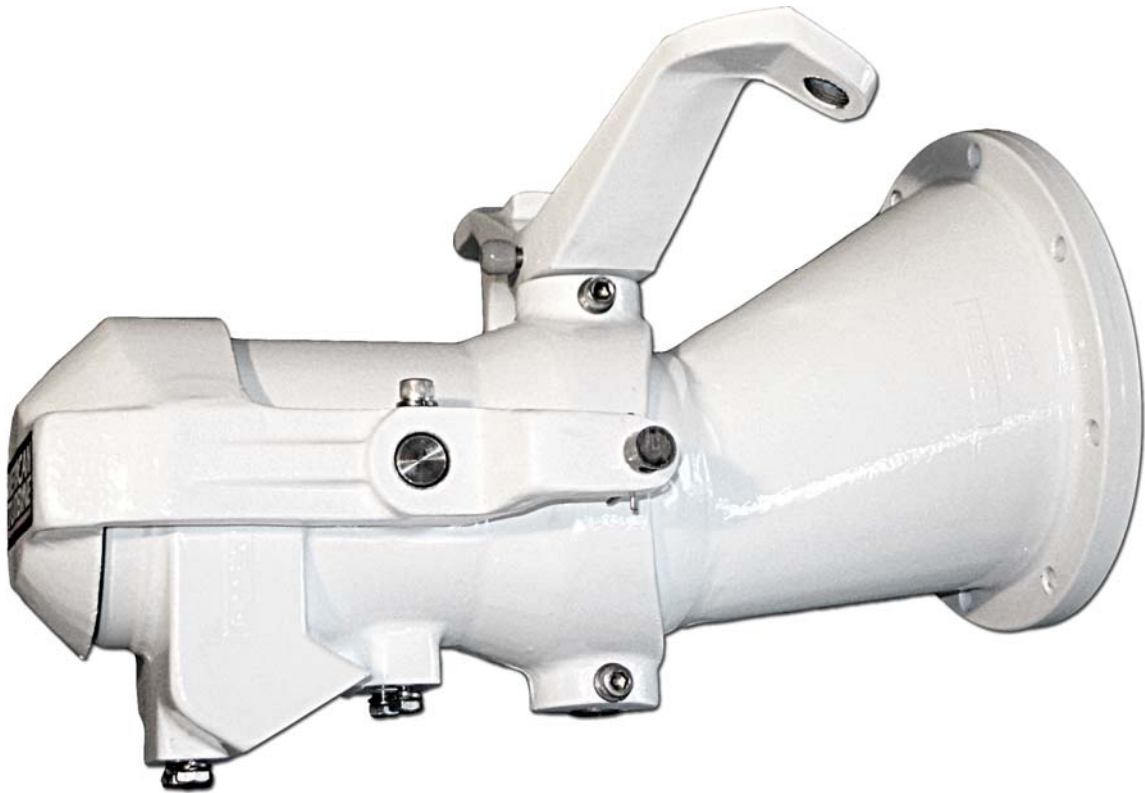
PART # RA1201



# AMERICAN TURBINE

## HIGH FLOW DROOP SNOOT STEERING

PART # RA1201



### LEGEND

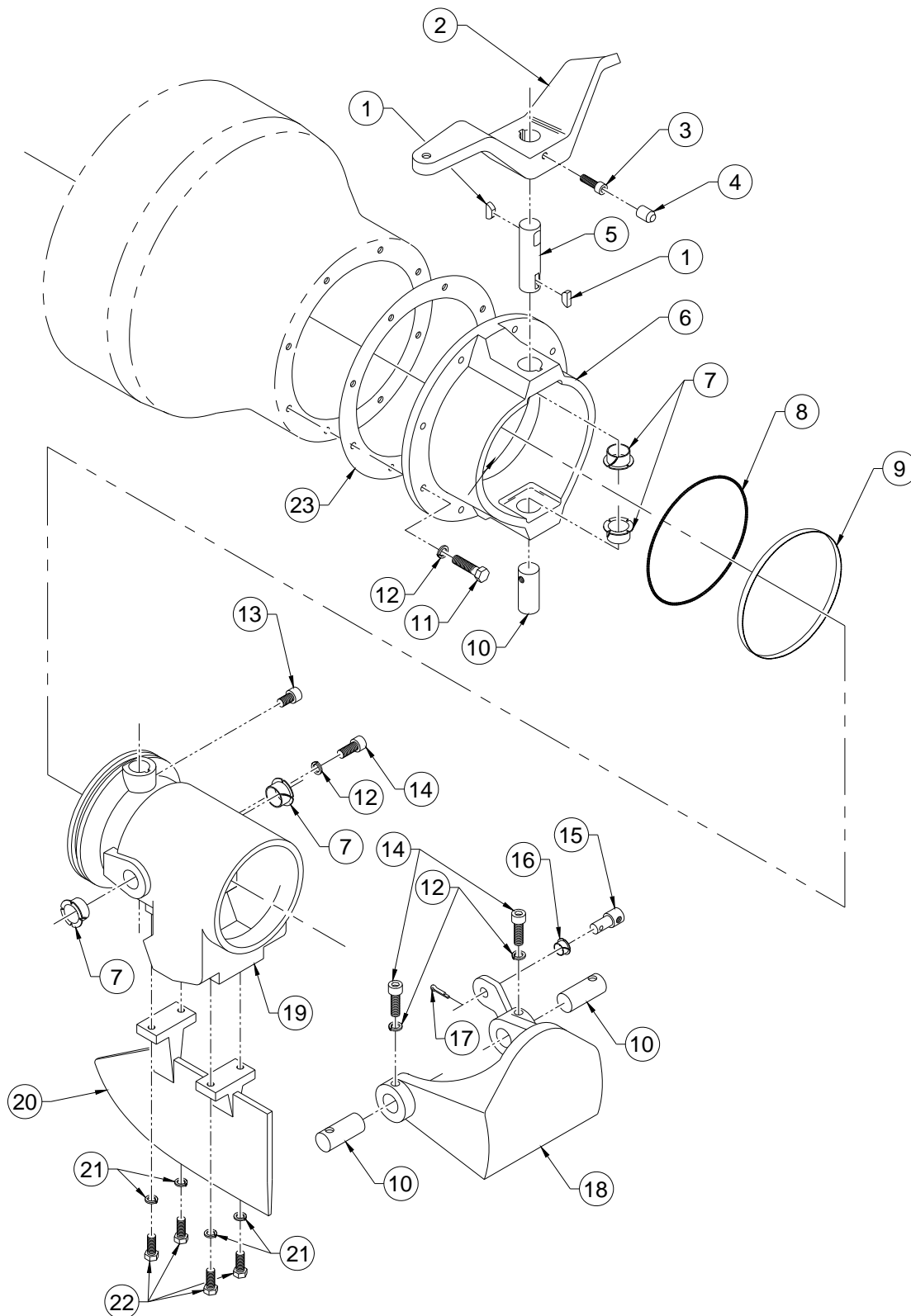
SYM.	DESCRIPTION	QTY.	PART NO.
1	BRASS BUSHING	2	B2201
2	TILLER ARM	1	R3301
3	SHCS, 5/16-18 X 3/4	1	F05 18 06 SH
4	VINYL CAP	1	M5001
5	FHMS, 5/16-18 X 1	2	F05 18 08 FH
6	UPPER STEERING PIN	1	R3601
7	LOCKWASHER, 5/16	12	F05 LW
8	SHCS, 5/16-18 X 1	4	F05 18 08 SH
9	1/2 NYLINER	2	B2101
10	LOWER STEERING PIN	1	R3701
11	NOZZLE	1	R1201

SYM.	DESCRIPTION	QTY.	PART NO.
12	NOZZLE O-RING	1	O1401
13	HHCS, 5/16-18 X 1-1/4	8	F05 18 10 HH
14	DROOP SNOOT HOUSING	1	R6301
15	NOZZLE INSERT	1	R710**
16	REVERSE PIVOT PIN	1	R5005
17	3/8 NYLINER	1	B2105
18	COTTER PIN, 1/8 X 3/4	1	F02 06 CP
19	REVERSE BUCKET PIN	2	R3701
20	REVERSE BUCKET	1	R2101
21	NOZZLE HOUSING GASKET	1	G2507

# AMERICAN TURBINE

## DOMINATOR STEERING

PART # RA1703



# AMERICAN TURBINE

## DOMINATOR STEERING

PART # RA1703



## LEGEND

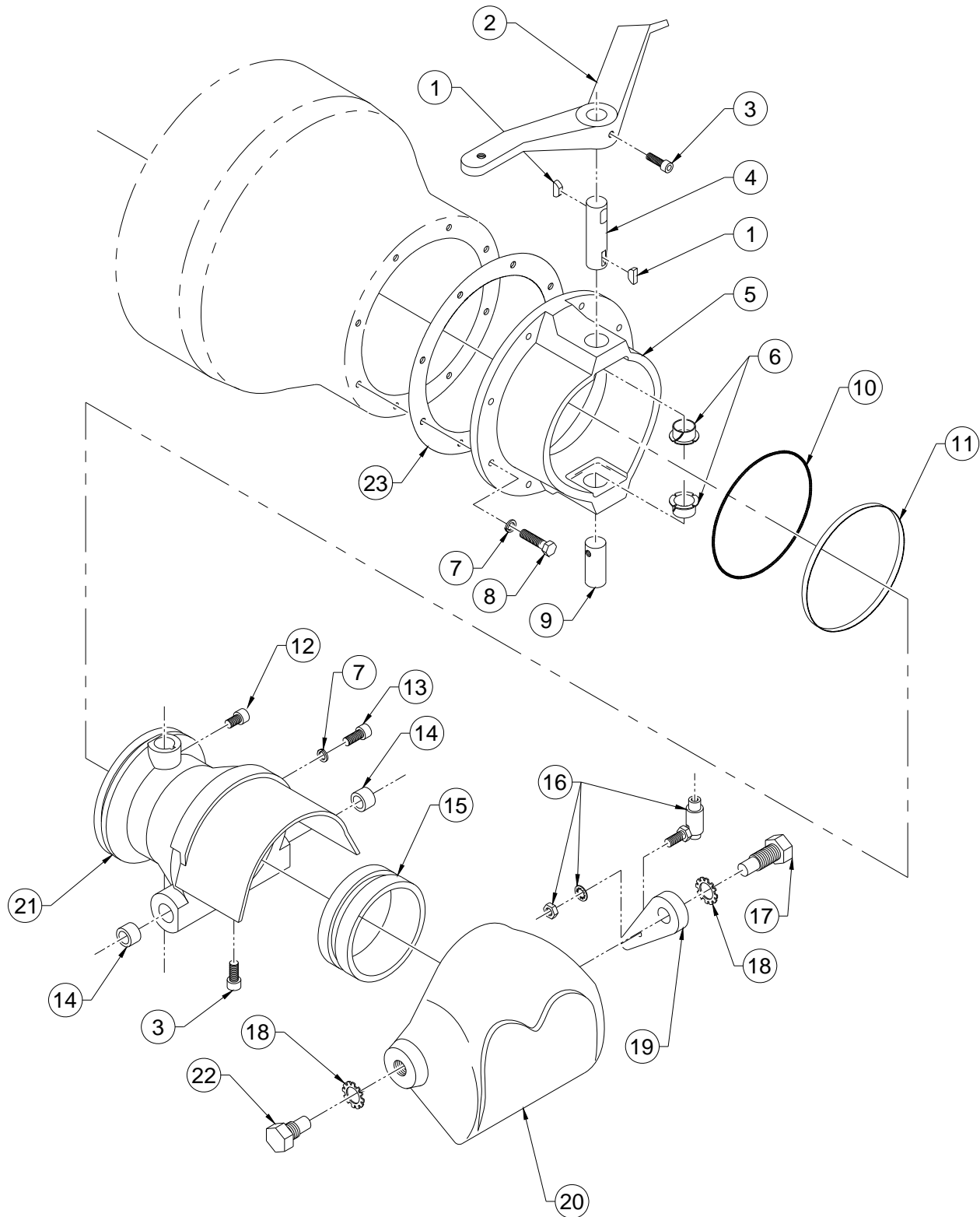
SYM.	DESCRIPTION	QTY.	PART NO.
1	WOODRUFF KEY #9	2	R5507
2	TILLER ARM	1	R3003
3	SHCS, 5/16-18 X 3/4	1	F05 18 06 SH
4	VINYL CAP	1	M5001
5	UPPER TILLER PIN	1	BN2410
6	NOZZLE HOUSING	1	R1007
7	NYLINER BEARING 3/4 X 3/4	4	B2007
8	O-RING	1	O1505
9	RUBBER BAND (OPTIONAL)	1	**
10	LOWER NOZZLE PIN	3	BN2510
11	HHCS, 5/16-18 X 1-1/4	8	F05 18 10 HH
12	LOCKWASHER, 5/16	11	F05 LW

SYM.	DESCRIPTION	QTY.	PART NO.
13	SHCS, 5/16-18 X 1/2	1	F05 18 04 SH
14	SHCS, 5/16-18 X 1	3	F05 18 08 SH
15	PIVOT, REVERSE CABLE	1	R5005
16	NYLINER, 3/8	1	B2105
17	COTTER PIN, 1/8 X 3/4	1	F02 06 CP
18	REVERSE BUCKET	1	R2103
19	NOZZLE	1	R1703
20	RUDDER	1	R2505
21	LOCK WASHER, 1/4	4	F04 LW
22	HHCS, 1/4-20 X 3/4	4	F04 20 06 HH
23	NOZZLE HOUSING GASKET	1	G2507

# AMERICAN TURBINE

## BEST STEERING

PART # BNA1407



# AMERICAN TURBINE

## BEST STEERING

PART # BNA1407



## LEGEND

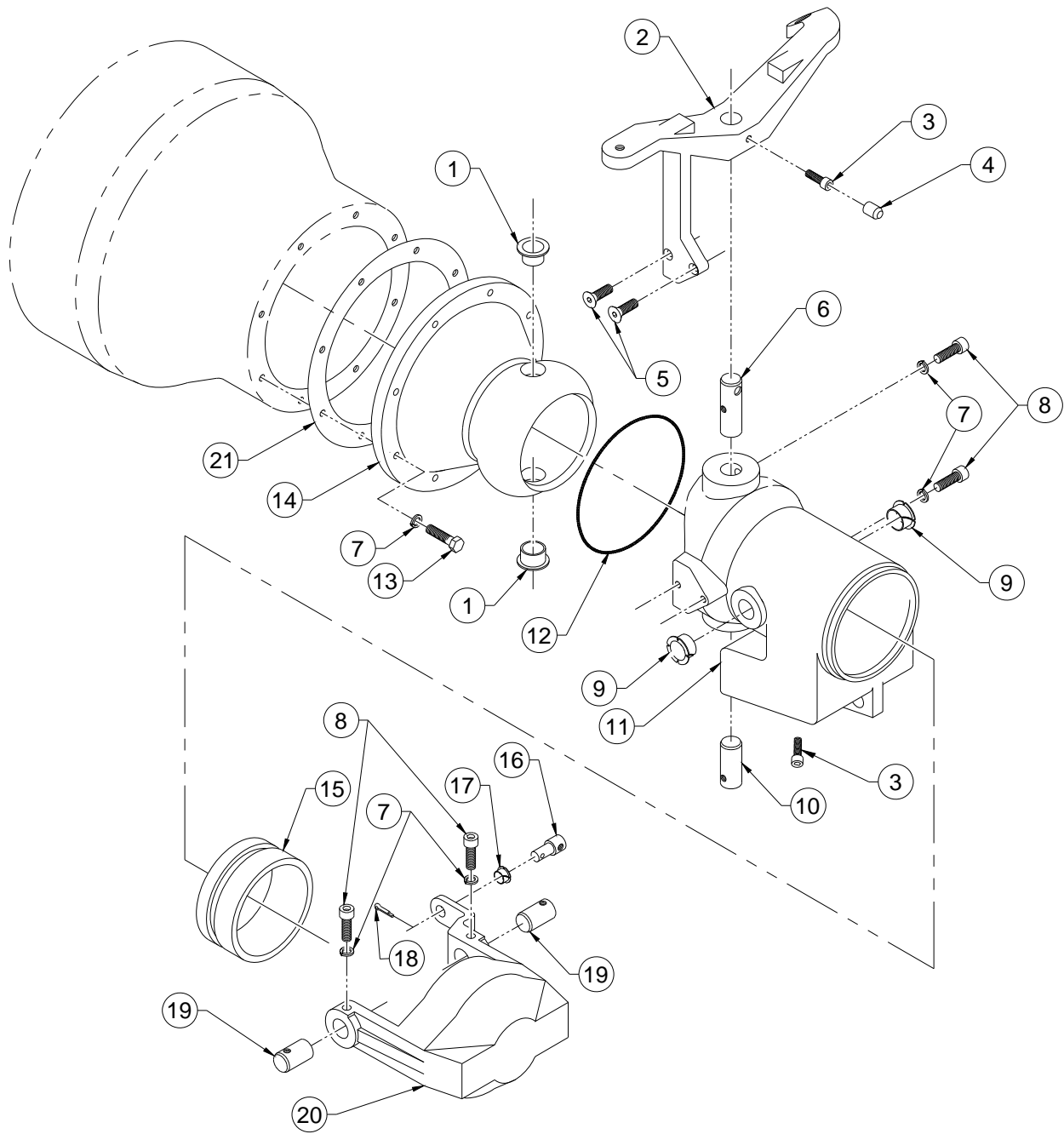
SYM.	DESCRIPTION	QTY.	PART NO.
1	WOODRUFF KEY #9	2	R5507
2	TILLER ARM	1	R3001
3	SHCS, 5/16-18 X 3/4	2	F05 18 06 SH
4	UPPER TILLER PIN	1	BN2410
5	NOZZLE HOUSING	1	R1007
6	NYLINER BEARING	2	B2007
7	LOCKWASHER, 5/16	8	F05 LW
8	HHCS, 5/16-18 X 1-1/4	8	F05 18 10 HH
9	LOWER PIN	1	BN2510
10	O-RING	1	O1505
11	RUBBER BAND (OPTIONAL)	1	**
12	SHCS, 5/16-18 X 1/2	1	F05 18 04 SH

SYM.	DESCRIPTION	QTY.	PART NO.
13	SHCS, 5/16-18 X 1	1	F05 18 08 SH
14	PLASTIC BUSHING	2	BN2010
15	NOZZLE INSERT	1	R710**
16	CABLE PIVOT	1	BN1910
17	RIGHT SIDE BOLT	1	BN2110
18	LOCKWASHER	2	BN2310
19	LEVER	1	BN1810
20	REVERSE BUCKET	1	BN1610
21	NOZZLE	1	BN1510
22	LEFT SIDE BOLT	1	BN2210
23	NOZZLE HOUSING GASKET	1	G2507

# AMERICAN TURBINE

## HTR STEERING

PART # RA1701





# AMERICAN TURBINE

## HTR STEERING

PART # RA1701



## LEGEND

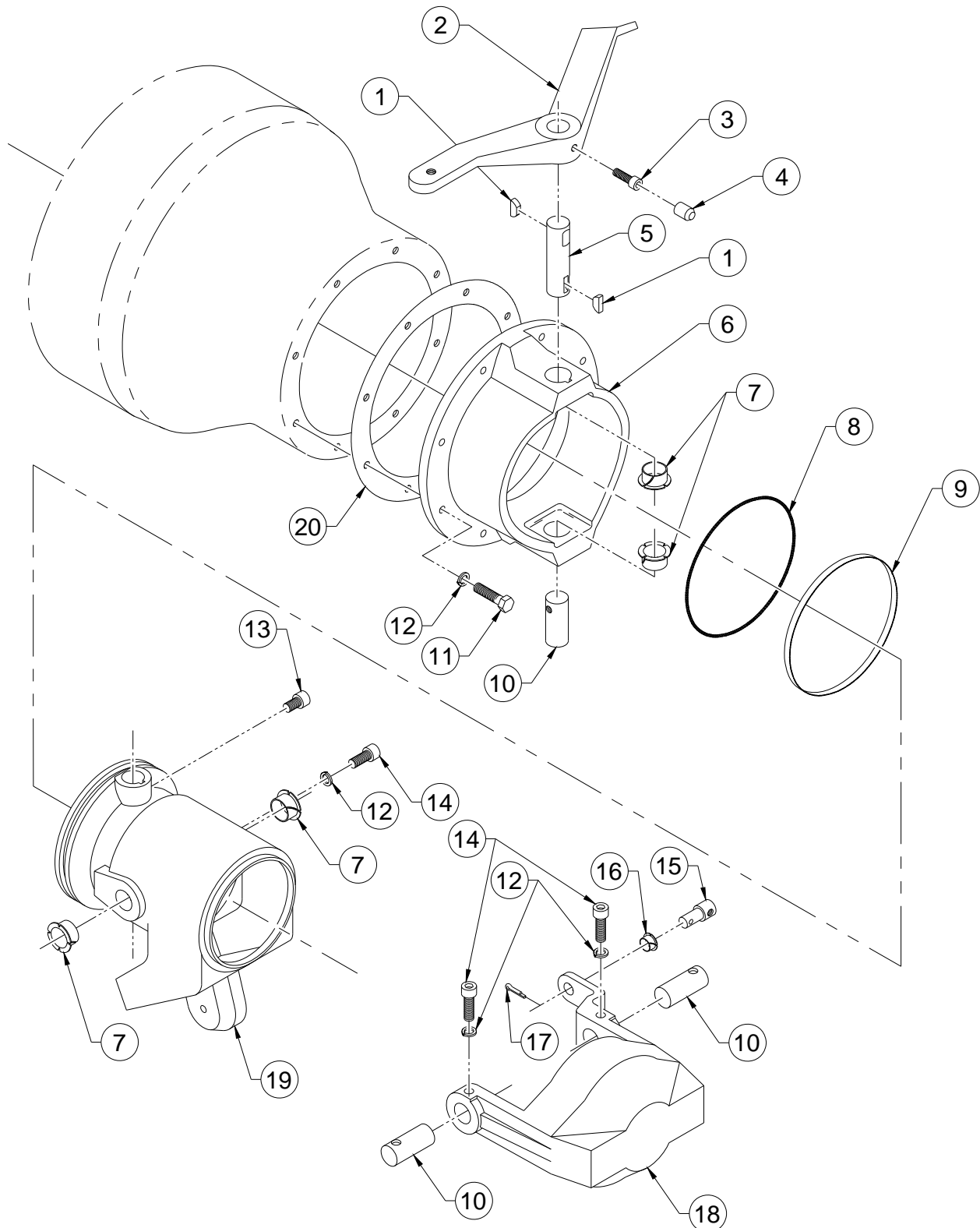
SYM.	DESCRIPTION	QTY.	PART NO.
1	BRASS BUSHING	2	B2201
2	TILLER ARM	1	R3301
3	SHCS, 5/16-18 X 3/4	2	F05 18 06 SH
4	VINYL CAP	1	M5001
5	FHMS, 5/16-18 X 1	2	F05 18 08 FH
6	UPPER STEERING PIN	1	R3601
7	LOCKWASHER, 5/16	12	F05 LW
8	SHCS, 5/16-18 X 1	4	F05 18 08 SH
9	1/2 NYLINER	2	B2101
10	LOWER STEERING PIN	1	R3701
11	NOZZLE	1	R1701

SYM.	DESCRIPTION	QTY.	PART NO.
12	NOZZLE O-RING	1	O1401
13	HHCS, 5/16-18 X 1-1/4	8	F05 18 10 HH
14	SHORT SNOOT	1	R6101
15	NOZZLE INSERT	1	R710**
16	REVERSE PIVOT PIN	1	R5005
17	3/8 NYLINER	1	B2105
18	COTTER PIN, 1/8 X 3/4	1	F02 06 CP
19	REVERSE BUCKET PIN	2	R3701
20	REVERSE BUCKET	1	R2101
21	NOZZLE HOUSING GASKET	1	G2507

# AMERICAN TURBINE

## BERKELEY STYLE STEERING

PART # RA1707



# AMERICAN TURBINE

## BERKELEY STYLE STEERING

PART # R5707



## LEGEND

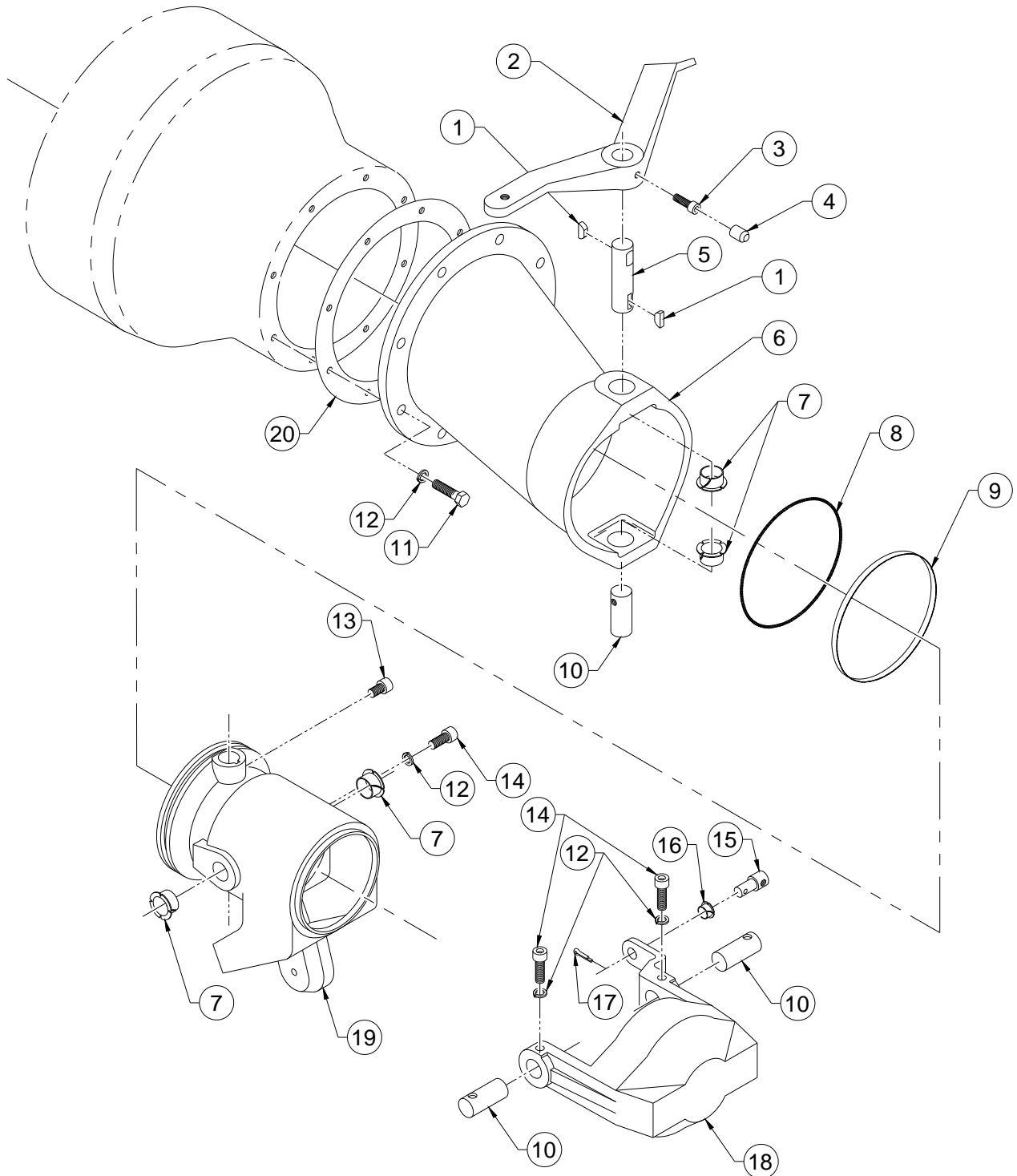
SYM.	DESCRIPTION	QTY.	PART NO.
1	WOODRUFF KEY #9	2	R5507
2	TILLER ARM	1	R3001
3	SHCS, 5/16-18 X 3/4	1	F05 18 06 SH
4	VINYL CAP	1	M5001
5	UPPER TILLER PIN	1	BN2410
6	NOZZLE HOUSING	1	R1007
7	NYLINER BEARING 3/4 X 3/4	4	B2007
8	O-RING	1	O1505
9	RUBBER BAND (OPTIONAL)	1	**
10	LOWER / REVERSE BUCKET PIN	3	BN2510

SYM.	DESCRIPTION	QTY.	PART NO.
11	HHCS, 5/16-18 X 1-1/4	8	F05 18 10 HH
12	LOCKWASHER, 5/16	11	F05 LW
13	SHCS, 5/16-18 X 1/2	1	F05 18 04 SH
14	SHCS, 5/16-18 X 1	3	F05 18 08 SH
15	PIVOT, REVERSE CABLE	1	R5005
16	NYLINER, 3/8	1	B2105
17	COTTER PIN, 1/8 X 3/4	1	F02 04 CP
18	REVERSE BUCKET	1	R2101B
19	NOZZLE	1	R1707
20	NOZZLE HOUSING GASKET	1	G2507

# AMERICAN TURBINE

## BERKELEY STYLE DROOP SNOOT STEERING

PART # R6107



# AMERICAN TURBINE

## BERKELEY STYLE DROOP SNOOT STEERING

PART # R6107



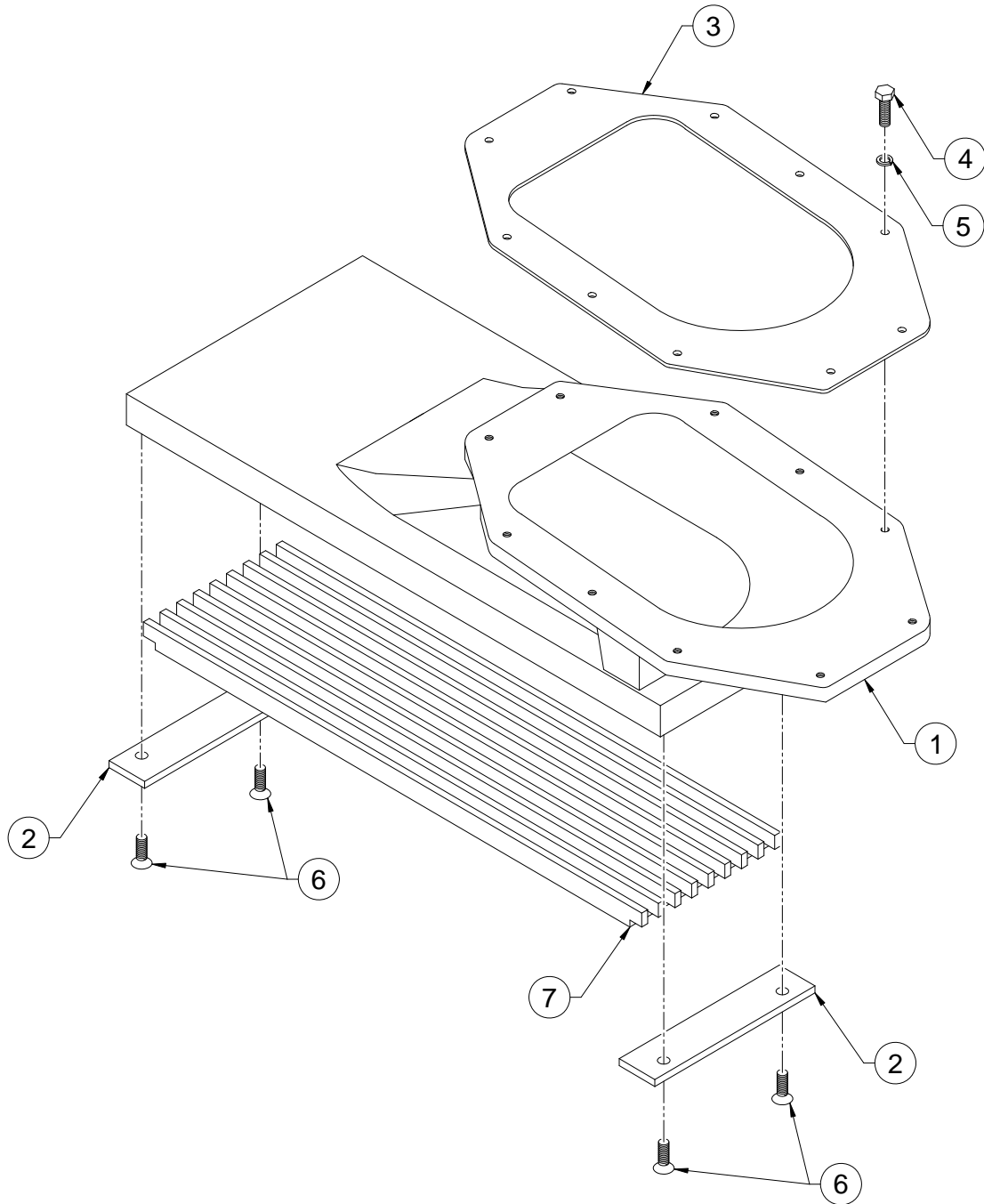
## LEGEND

SYM.	DESCRIPTION	QTY.	PART NO.	SYM.	DESCRIPTION	QTY.	PART NO.
1	WOODRUFF KEY #9	2	R5507	11	HHCS, 5/16-18 X 1-1/4	8	F05 18 10 HH
2	TILLER ARM	1	R3001	12	5/16 LOCKWASHER	11	F05 LW
3	SHCS, 5/16-18 X 3/4	1	F05 18 06 SH	13	SHCS, 5/16-18 X 1/2	1	F05 18 04 SH
4	VINYL CAP	1	M5001	14	SHCS, 5/16-18 X 1	3	F05 18 08 SH
5	UPPER TILLER PIN	1	BN2410	15	PIVOT, REVERSE CABLE	1	R5005
6	NOZZLE HOUSING	1	R6007	16	NYLINER, 3/8	1	B2105
7	NYLINER BEARING 3/4 X 3/4	4	B2007	17	COTTER PIN, 1/8 X 3/4	1	F02 06 CP
8	O-RING	1	O1505	18	REVERSE BUCKET	1	R2101B
9	RUBBER BAND (OPTIONAL)	1	**	19	NOZZLE	1	R1707
10	LOWER PIN	3	BN2510	20	NOZZLE HOUSING GASKET	1	G2507

# AMERICAN TURBINE

## IK-1307 INTAKE (9-BAR)

ALUMINUM BOAT W / SD-309 JET



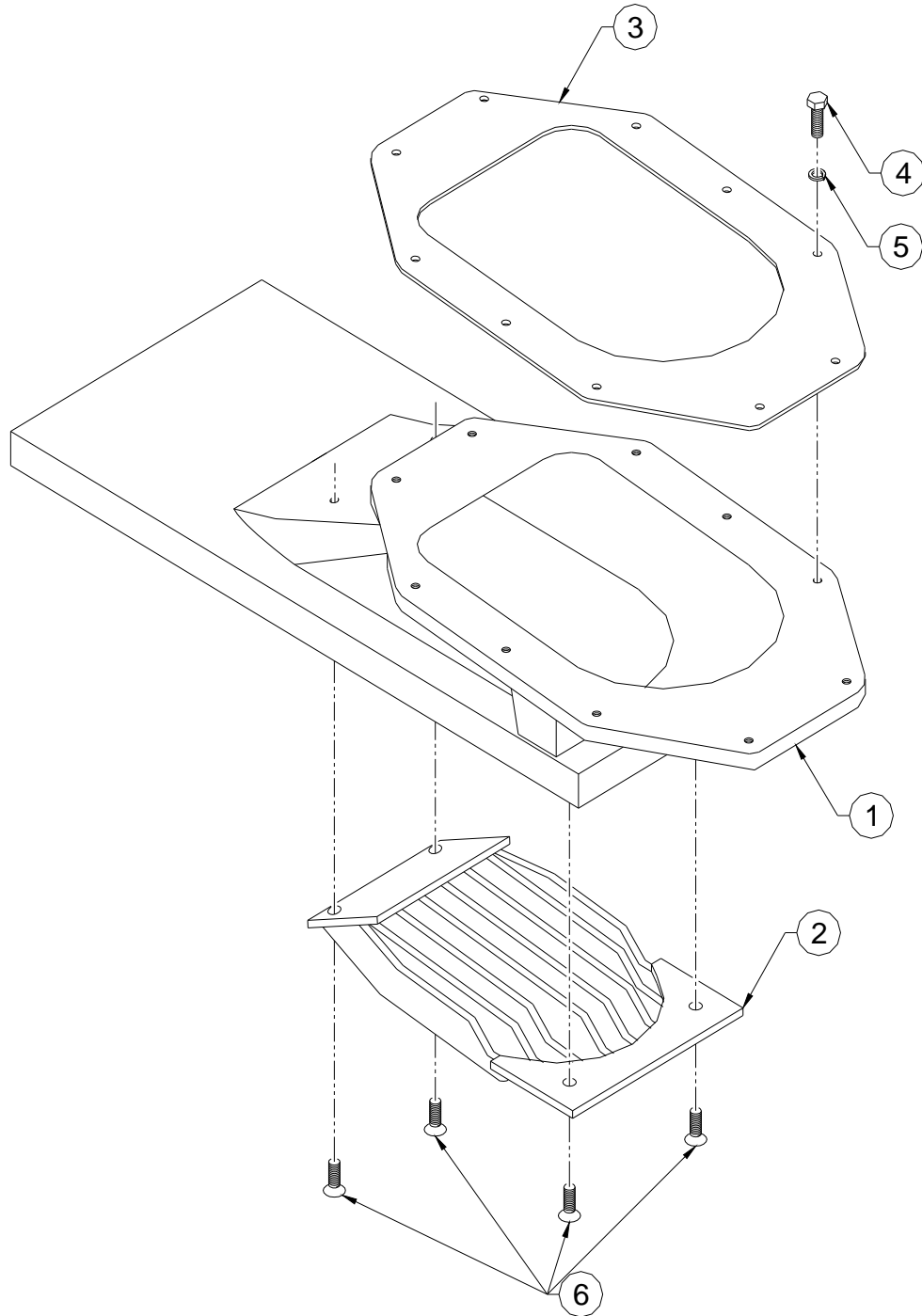
SYM.	DESCRIPTION	QTY.	PART NO.
1	INTAKE	1	I1307
2	LOCKING BAR	2	I9003
3	GASKET	1	G1001
4	HHCS, 5/16-18 X 1-1/4	10	F05 18 10 HH

SYM.	DESCRIPTION	QTY.	PART NO.
5	LOCKWASHER, 5/16	10	F05 LW
6	FHMS, 5/16-18 X 3/4	4	F05 18 FH
7	GRATE BARS	9	I9001

# AMERICAN TURBINE

## IK-1307 INTAKE (NEW STYLE)

ALUMINUM BOAT W / SD-309 JET



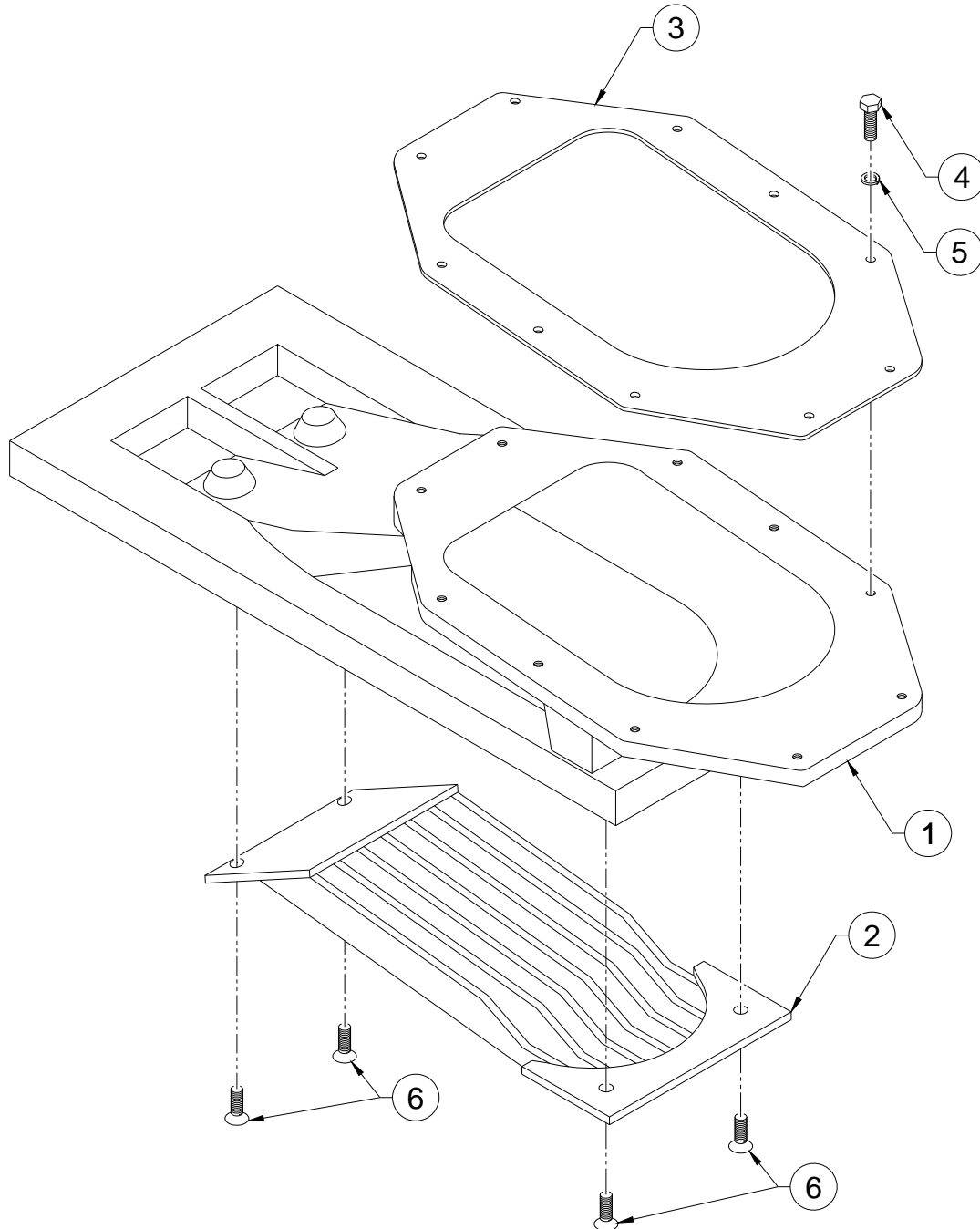
SYM.	DESCRIPTION	QTY.	PART NO.
1	INTAKE	1	I1307
2	GRATE	1	I4108
3	GASKET	1	G1001

SYM.	DESCRIPTION	QTY.	PART NO.
4	HHCS, 5/16-18 X 1-1/4	10	F05 18 10 HH
5	LOCKWASHER, 5/16	10	F05 LW
6	FHMS, 5/16-18 X 3/4	4	F05 18 06 FH

# AMERICAN TURBINE

## IK-1307 INTAKE (OLD STYLE)

ALUMINUM BOAT W / SD-309 JET



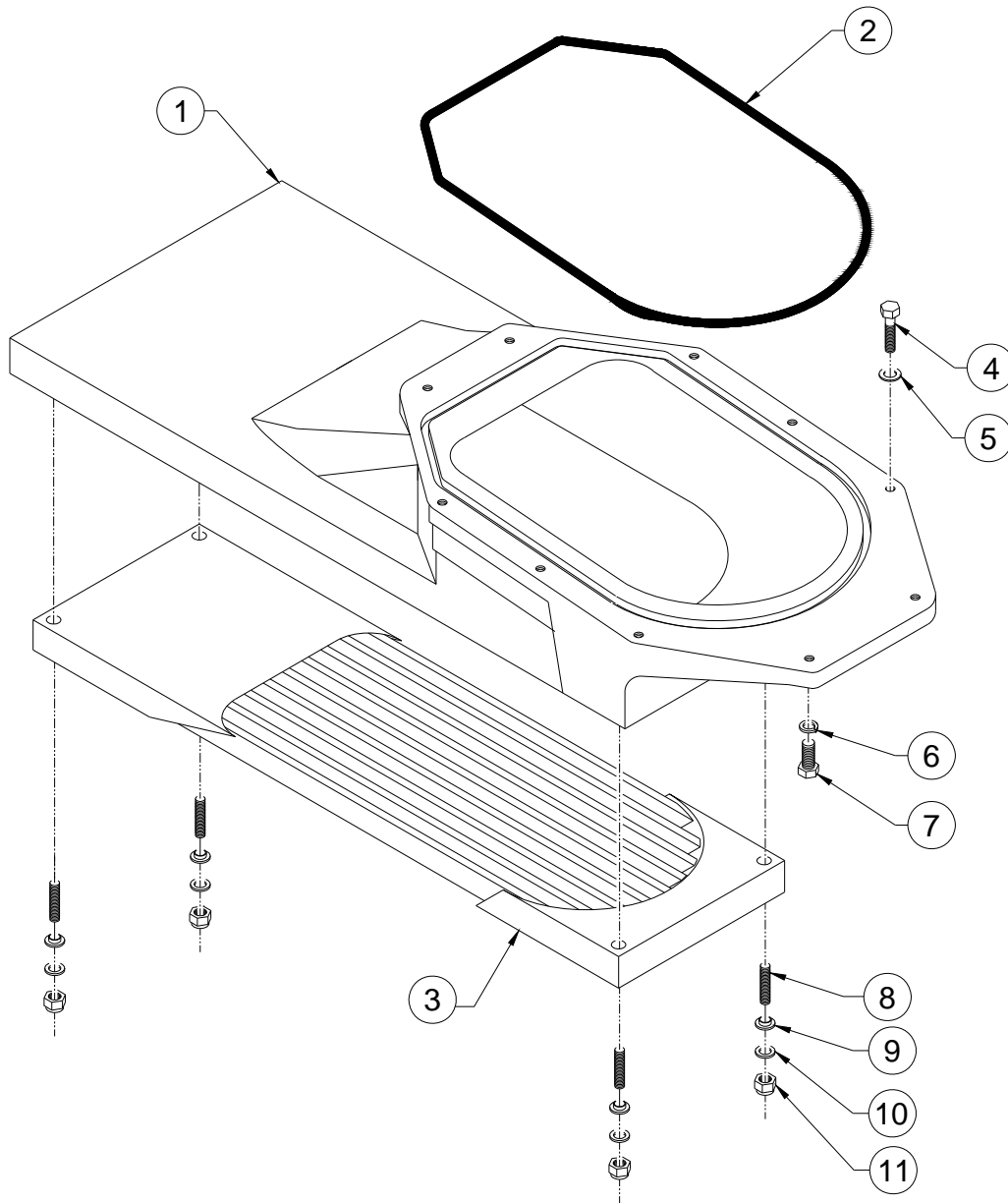
SYM.	DESCRIPTION	QTY.	PART NO.
1	INTAKE	1	I1307
2	GRATE	1	I4107
3	GASKET	1	G1001

SYM.	DESCRIPTION	QTY.	PART NO.
4	HHCS, 5/16-18 X 1-1/4	10	F05 18 10 HH
5	LOCKWASHER, 5/16	10	F05 LW
6	FHMS, 5/16-18 X 3/4	4	F05 18 06 FH



# AMERICAN TURBINE

## IK-1401 INTAKE ALUMINUM BOAT W / SD-312 JET



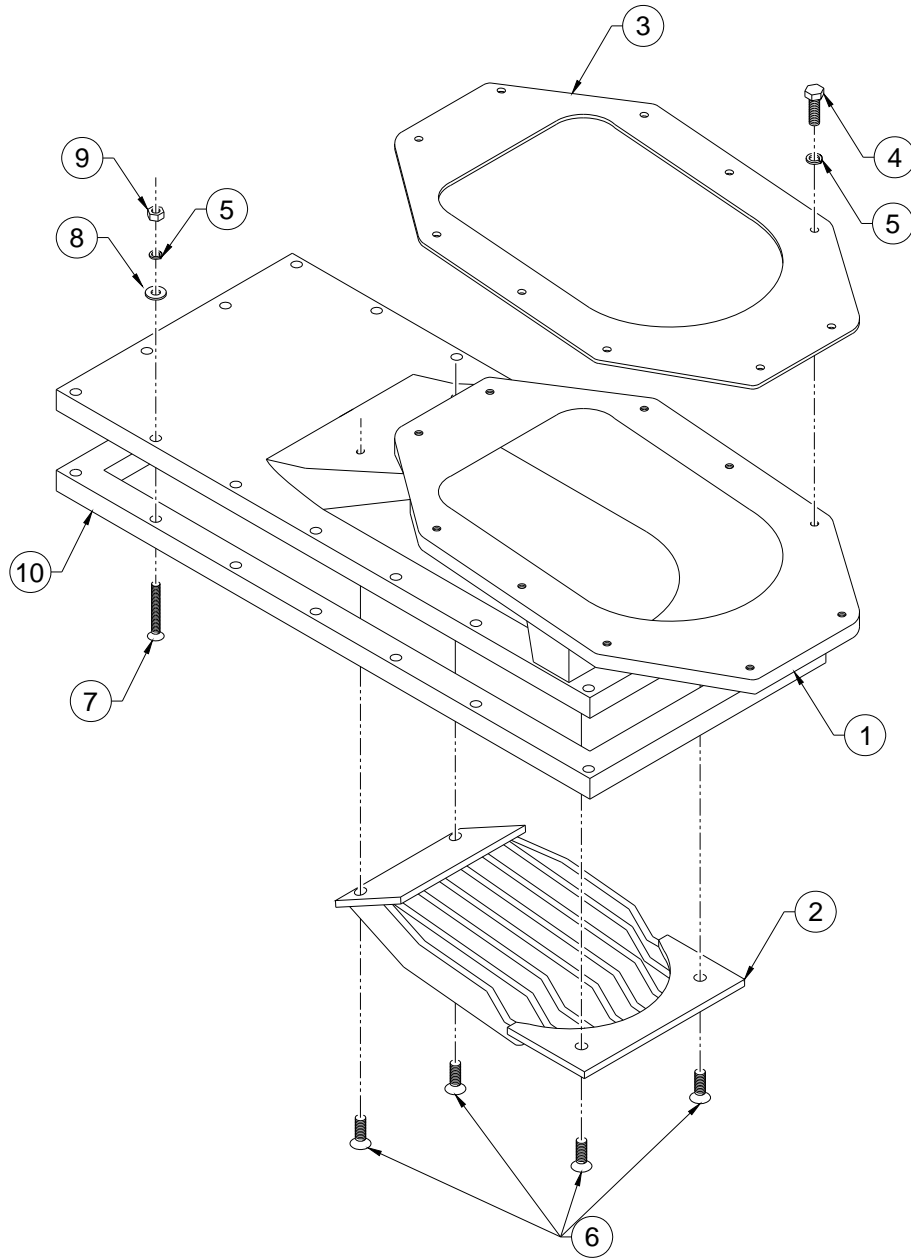
SYM.	DESCRIPTION	QTY.	PART NO.
1	INTAKE	1	I1401
2	O-RING	1	O3901
3	GRATE	1	I4401
4	HHCS, 5/16-18 X 1-1/4	8	F05 18 10 HH
5	LOCKWASHER, 5/16	8	F05 LW
6	LOCKWASHER, 5/16	2	F05 LW

SYM.	DESCRIPTION	QTY.	PART NO.
7	HHCS, 5/16-18 X 1	2	F05 18 08 HH
8	SET SCREW, 5/16-18 X 1-1/2	4	F05 18 12 SS
9	PLASTIC BUSHING	4	M4301
10	LOCKNUT, 5/16-18	4	F05 18 LN
11	AN WASHER, 5/16	4	F05 AN

# AMERICAN TURBINE

## IK-1 407 INTAKE (NEW STYLE)

ALUMINUM BOAT W / AT-309 JET



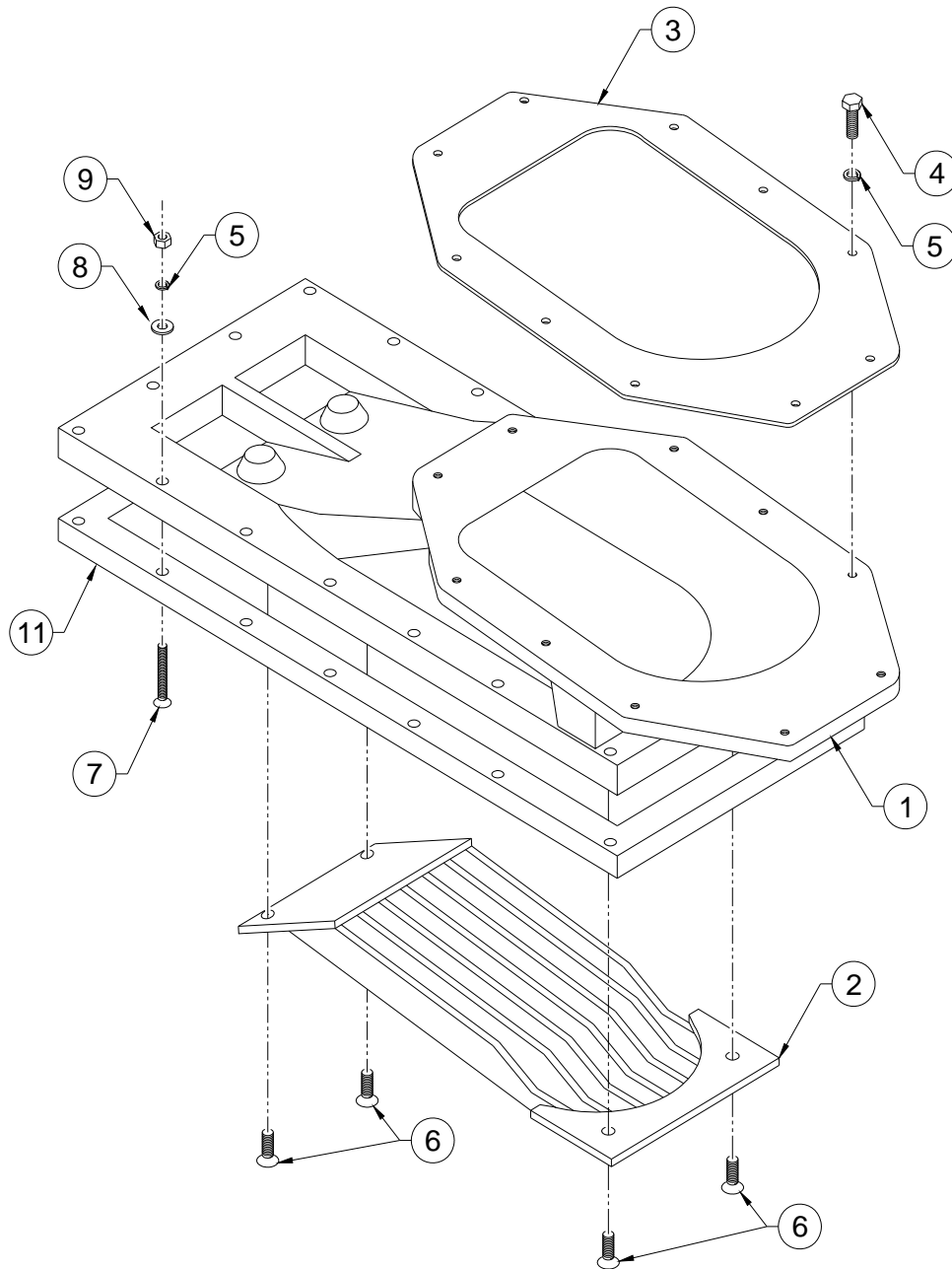
SYM.	DESCRIPTION	QTY.	PART NO.
1	INTAKE	1	I1407
2	GRATE	1	I4108
3	GASKET	1	G1001
4	HHCS, 5/16-18 X 1-1/4	10	F05 18 10 HH
5	LOCKWASHER, 5/16	26	F05 LW

SYM.	DESCRIPTION	QTY.	PART NO.
6	FHMS, 5/16-18 X 3/4	4	F05 18 06 FH
7	FHMS, 5/16-18 X 2	16	F05 18 16 FH
8	NEOBOND WASHER, 5/16	16	F05 NW
9	HEX NUT, 5/16-18	16	F05 18 HN
10	GASKET	1	G5001

# AMERICAN TURBINE

## IK-1407 INTAKE (OLD STYLE)

ALUMINUM BOAT W / AT-309 JET

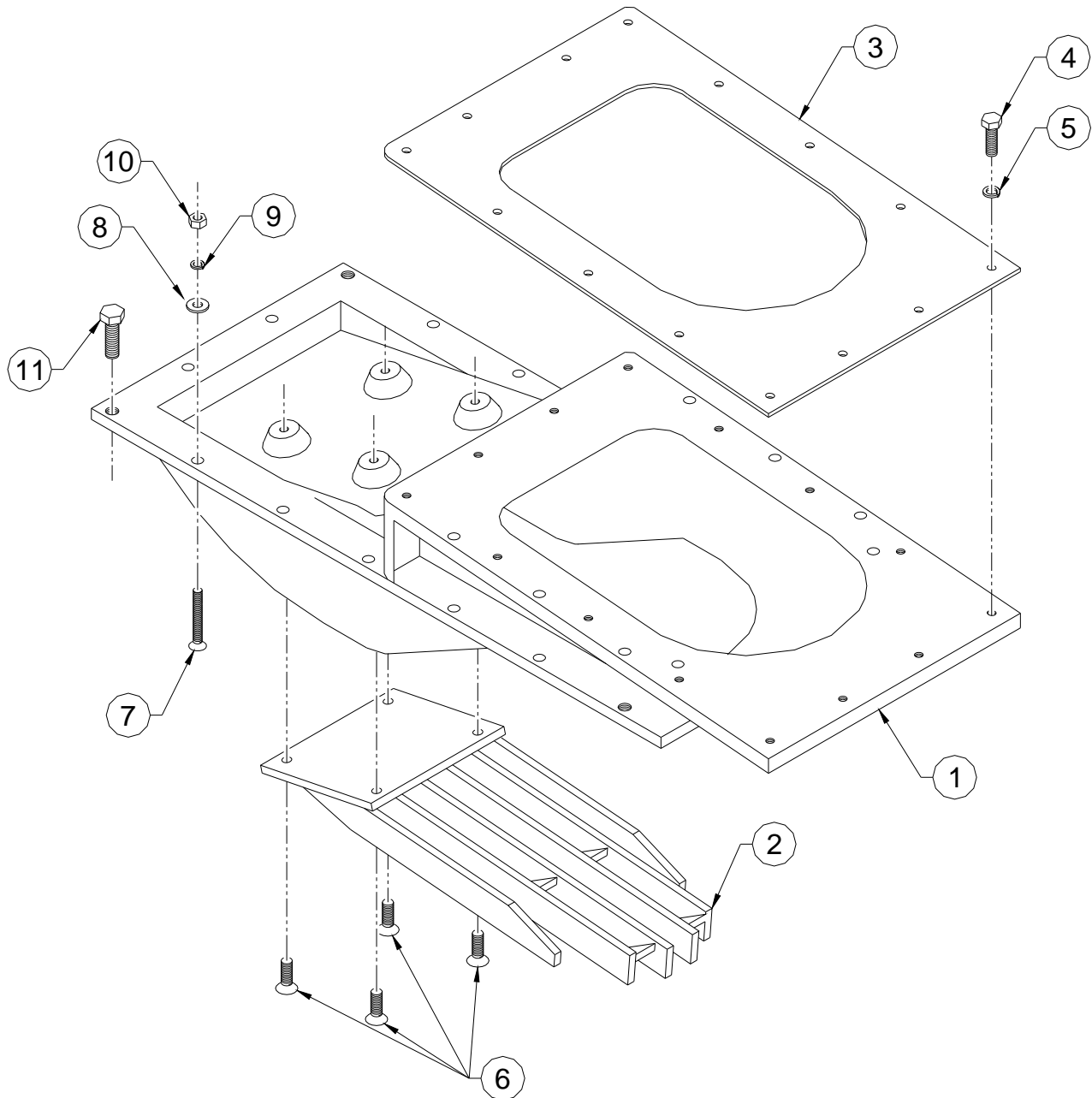


SYM.	DESCRIPTION	QTY.	PART NO.
1	INTAKE	1	I1407
2	GRATE	1	I4107
3	GASKET	1	G1001
4	HHCS, 5/16-18 X 1-1/4	10	F05 18 10 HH
5	LOCKWASHER, 5/16	10	F05 LW
6	FHMS, 5/16-18 X 3/4	4	F05 18 06 FH

SYM.	DESCRIPTION	QTY.	PART NO.
7	FHMS, 1/4-20 X 2	18	F04 20 16 FH
8	AN WASHER, 1/4	18	F04 AN
9	LOCKWASHER, 1/4	18	F04 LW
10	HEX NUT, 1/4-20	18	F04 20 HN
11	GASKET	1	G5001

# AMERICAN TURBINE

## IK-1003 INTAKE FIBERGLASS BOAT W / 12-S JET

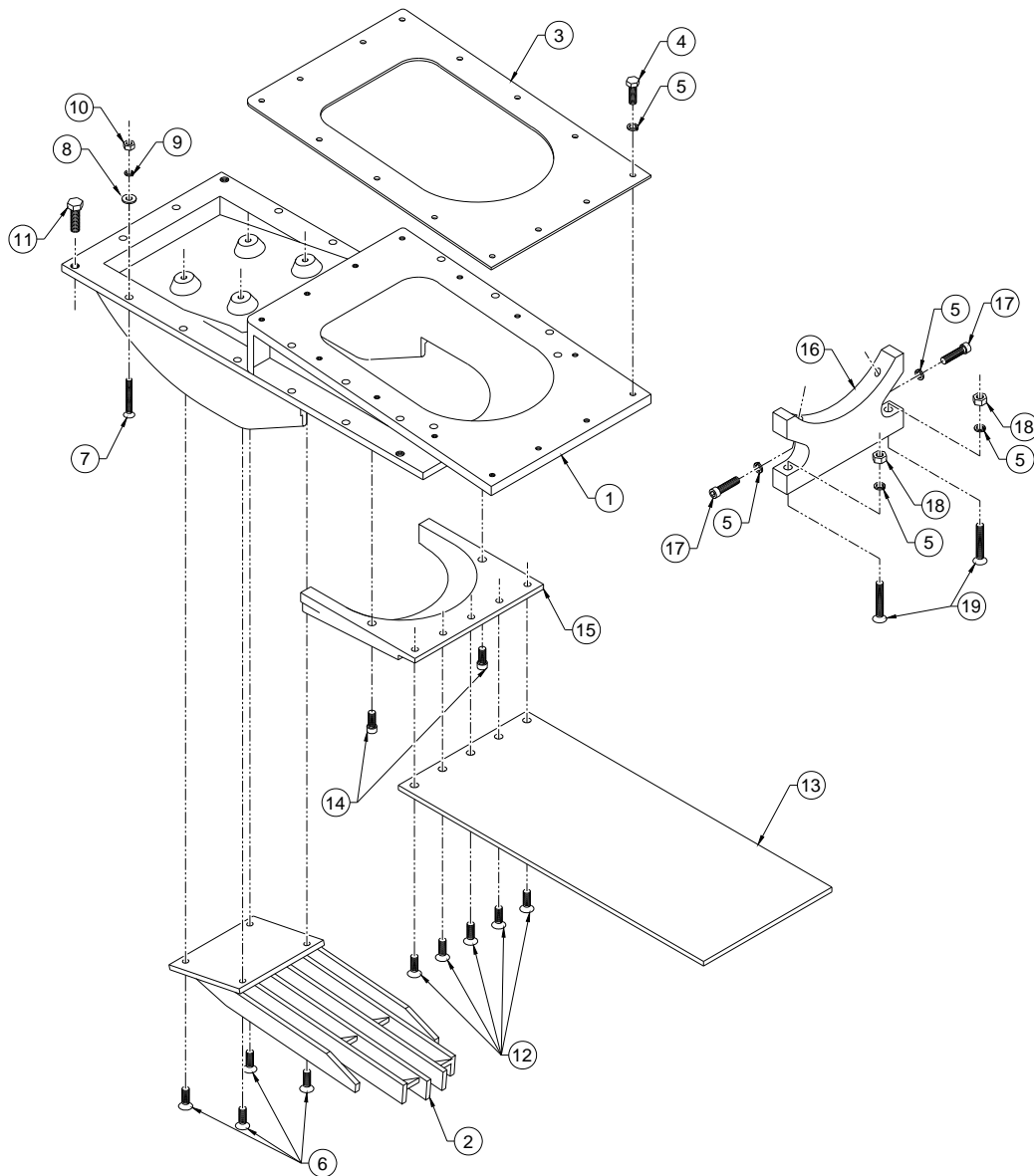


SYM.	DESCRIPTION	QTY.	PART NO.
1	INTAKE	1	I1003
2	SPEED GRATE	1	I4007
3	INTAKE GASKET	1	G1006
4	HHCS, 5/16-18 X 1-1/4	14	F05 18 10 HH
5	LOCKWASHER, 5/16	14	F05 LW
6	FHMS, 5/16-18 X 3/4	4	F05 18 06 FH

SYM.	DESCRIPTION	QTY.	PART NO.
7	FHMS, 1/4-20 X 2	14	F04 20 16 FH
8	AN WASHER, 1/4	14	F04 AN
9	LOCKWASHER, 1/4	14	F04 LW
10	HEX NUT, 1/4-20	14	F04 20 HN
11	HHCS, 3/8-16 X 1-1/4	4	F06 16 10 HH

# AMERICAN TURBINE

## IK-1003HP INTAKE FIBERGLASS BOAT W / 12-S JET

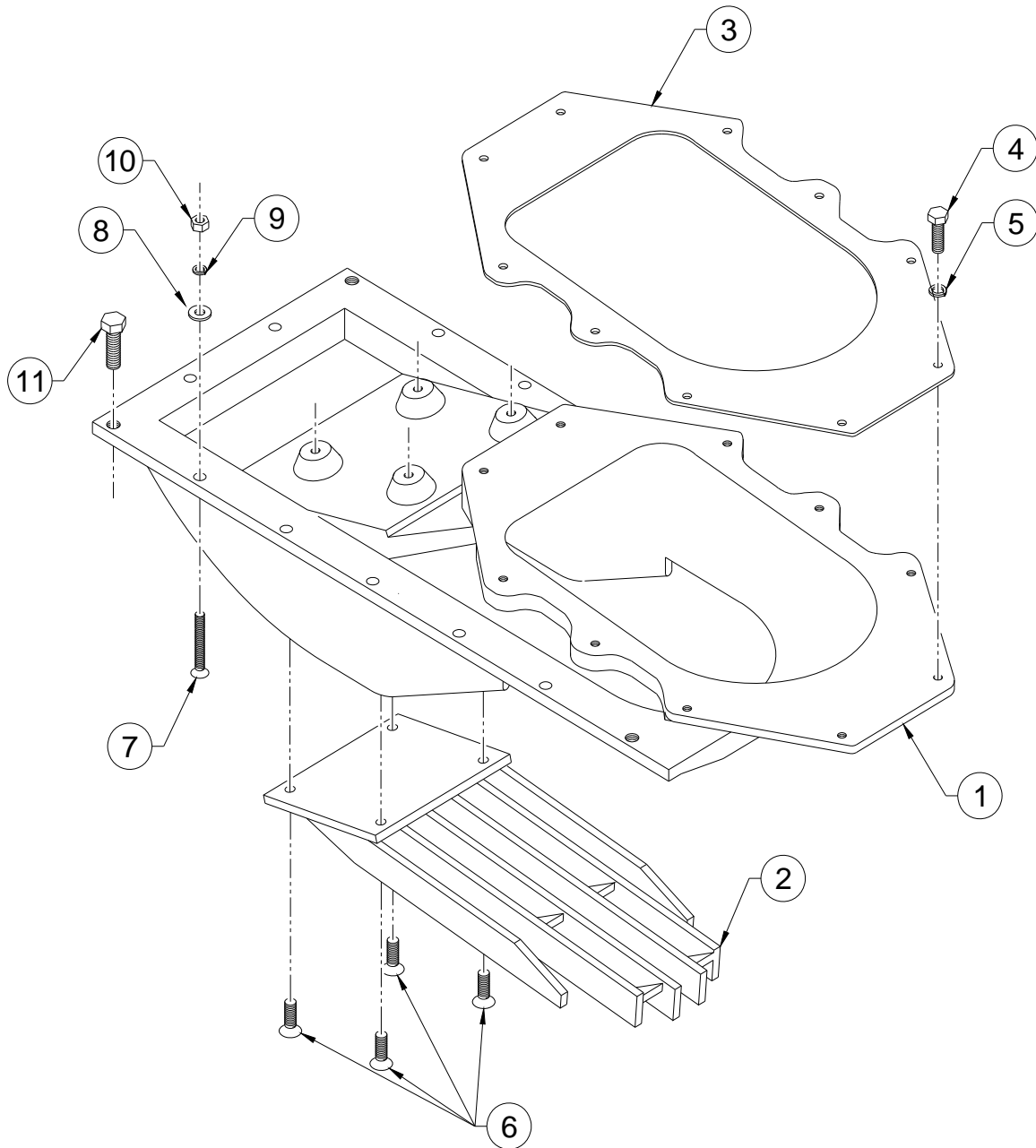


SYM.	DESCRIPTION	QTY.	PART NO.
1	INTAKE	1	I1003HP
2	SPEED GRATE	1	I4007
3	GASKET	1	G1006
4	HHCS, 5/16-18 X 1-1/4	14	F05 18 10 HH
5	LOCKWASHER, 5/16	18	F05 LW
6	FHMS, 5/16-18 X 3/4	4	F05 18 06 FH
7	FHMS, 1/4-20 X 2	14	F04 20 16 FH
8	AN WASHER, 1/4	14	F04 AN
9	LOCKWASHER, 1/4	14	F04 LW
10	HEX NUT, 1/4-20	14	F04 20 HN

SYM.	DESCRIPTION	QTY.	PART NO.
11	HHCS, 3/8-16 X 1-1/4	4	F06 16 10 HH
12	FHMS, 5/16-18 X 1	5	F05 18 08 FH
13	RIDEPLATE	1	I6607
14	SHCS, 5/16-18 X 1/2	2	F05 18 04 SH
15	SHOE	1	I6***
16	YOKE	1	I7003
17	SHCS, 5/16-18 X 1-1/4	2	F05 18 10 SH
18	HEX NUT, 5/16-18	2	F05 18 HN
19	FHMS, 5/16-18 X 2	2	F05 18 16 FH

# AMERICAN TURBINE

## I-1007 INTAKE FIBERGLASS BOAT W / AT-309 JET

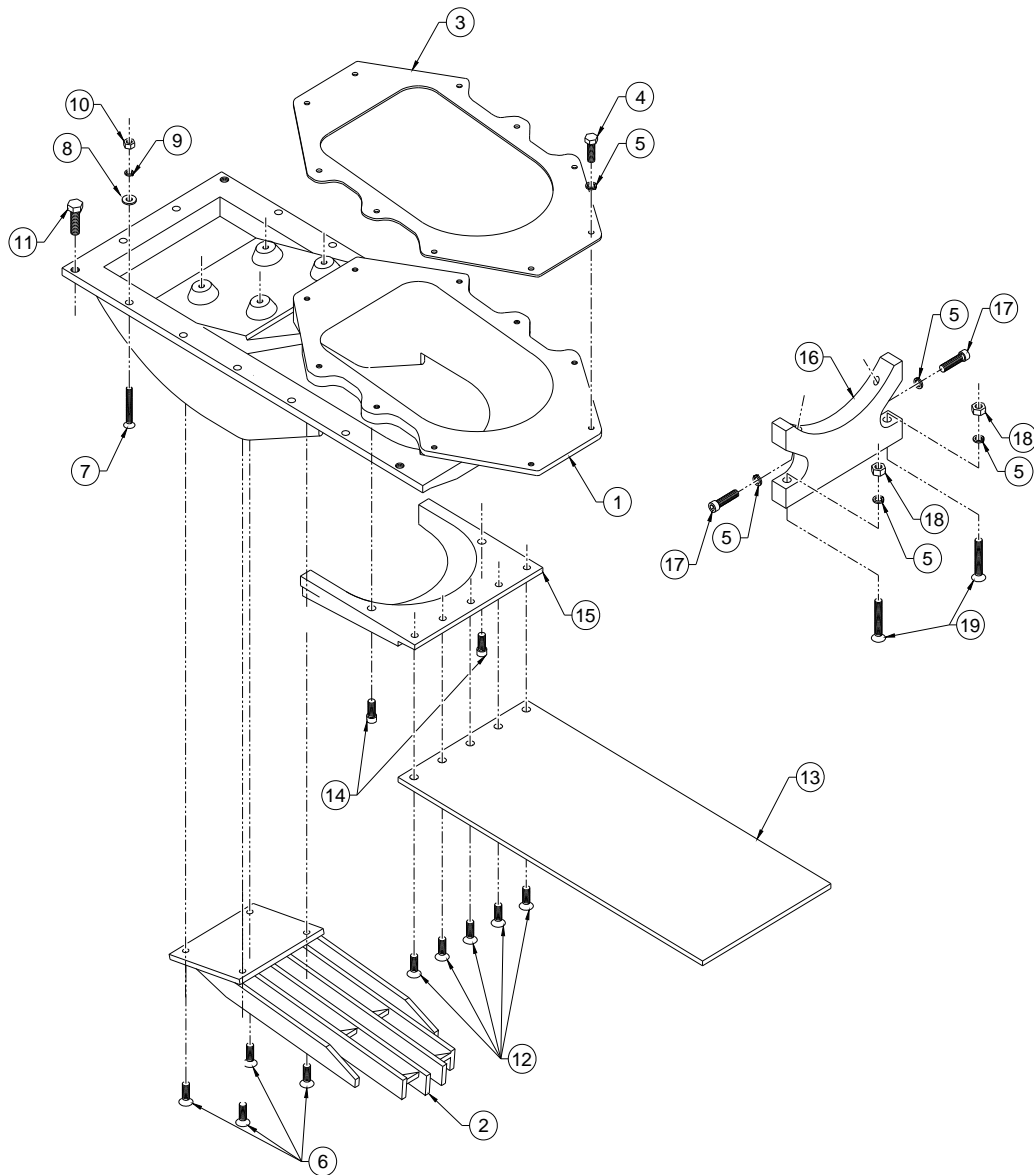


SYM.	DESCRIPTION	QTY.	PART NO.
1	INTAKE	1	I1007
2	SPEED GRATE	1	I4007
3	INTAKE GASKET	1	G1001
4	HHCS, 5/16-18 X 1-1/4	10	F05 18 10 HH
5	LOCKWASHER, 5/16	10	F05 LW
6	FHMS, 5/16-18 X 3/4	4	F05 18 06 FH

SYM.	DESCRIPTION	QTY.	PART NO.
7	FHMS, 1/4-20 X 2	12	F04 20 16 FH
8	AN WASHER, 1/4	12	F04 AN
9	LOCKWASHER, 1/4	12	F04 LW
10	HEX NUT, 1/4-20	12	F04 20 HN
11	HHCS, 3/8-16 X 1-1/4	4	F06 16 10 HH

# AMERICAN TURBINE

## I-1007HP INTAKE FIBERGLASS BOAT W / AT-309 JET

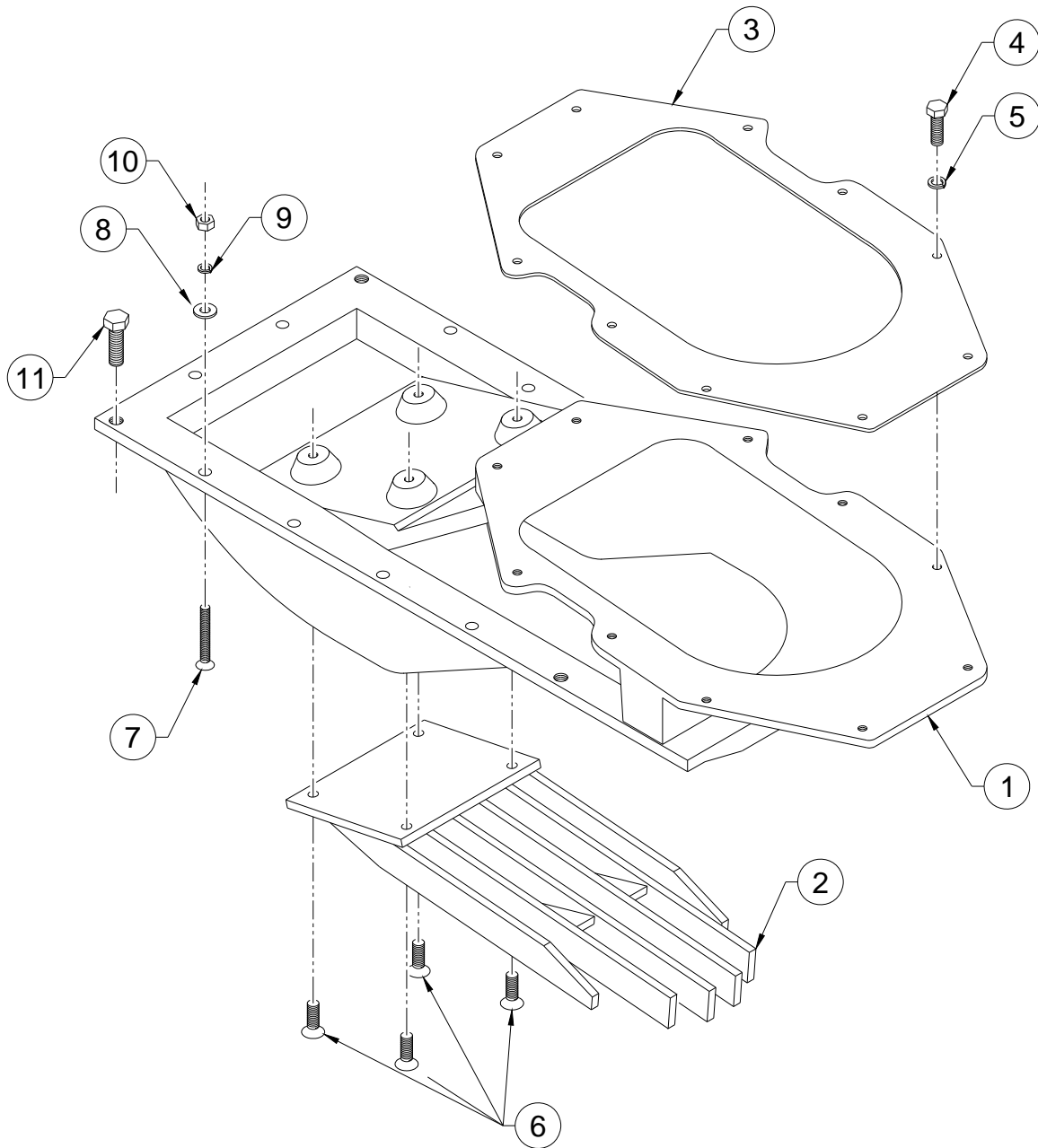


SYM.	DESCRIPTION	QTY.	PART NO.
1	INTAKE	1	I1007HP
2	SPEED GRATE	1	I4007
3	GASKET	1	G1001
4	HHCS, 5/16-18 X 1-1/4	10	F05 18 10 HH
5	LOCKWASHER, 5/16	14	F05 LW
6	FHMS, 5/16-18 X 3/4	4	F05 18 06 FH
7	FHMS, 1/4-20 X 2	12	F04 20 16 FH
8	AN WASHER, 1/4	12	F04 AN
9	LOCKWASHER, 1/4	12	F04 LW
10	HEX NUT, 1/4-20	12	F04 20 HN

SYM.	DESCRIPTION	QTY.	PART NO.
11	HHCS, 3/8-16 X 1-1/4	4	F06 16 10 HH
12	FHMS, 5/16-18 X 1	5	F05 18 08 FH
13	RIDEPLATE	1	I6607
14	SHCS, 5/16-18 X 1/2	2	F05 18 04 SH
15	SHOE	1	I6***
16	YOKE	1	I7003
17	SHCS, 5/16-18 X 1-1/4	2	F05 18 10 SH
18	HEX NUT, 5/16-18	2	F05 18 HN
19	FHMS, 5/16-18 X 2	2	F05 18 16 FH

# AMERICAN TURBINE

## I-1507 INTAKE FIBERGLASS BOAT W / SD-309 JET



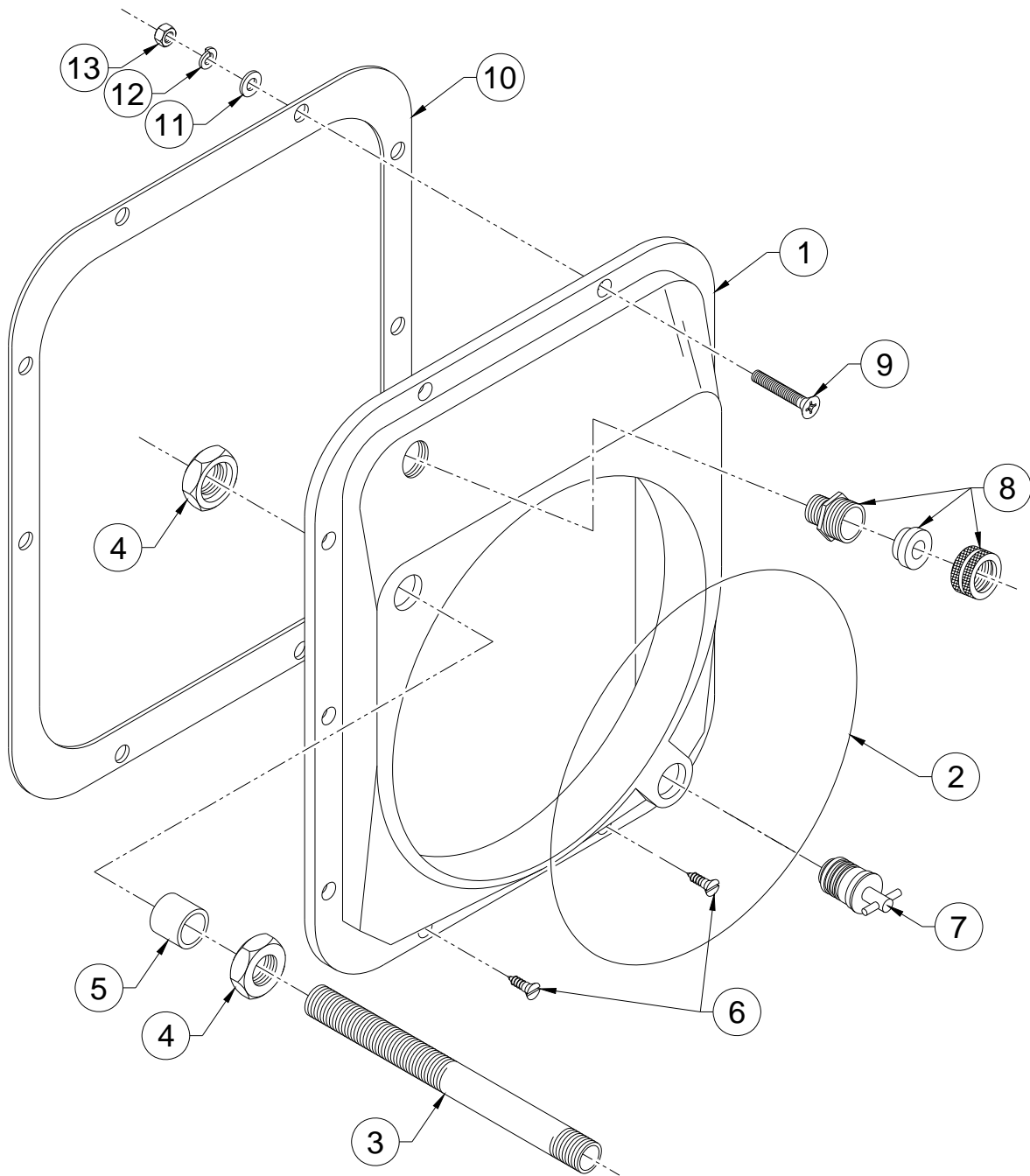
SYM.	DESCRIPTION	QTY.	PART NO.
1	INTAKE	1	I1507
2	SPEED GRATE	1	I4007
3	INTAKE GASKET	1	G1001
4	HHCS, 5/16-18 X 1-1/4	10	F05 18 10 HH
5	LOCKWASHER, 5/16	10	F05 LW
6	FHMS, 5/16-18 X 3/4	4	F05 18 06 FH

SYM.	DESCRIPTION	QTY.	PART NO.
7	FHMS, 1/4-20 X 2	12	F04 20 16 FH
8	AN WASHER, 1/4	12	F04 AN
9	LOCKWASHER, 1/4	12	F04 LW
10	HEX NUT, 1/4-20	12	F04 20 HN
11	HHCS, 3/8-16 X 1-1/4	4	F06 16 10 HH



# AMERICAN TURBINE

## 0 / 9 DEGREE TRANSOM HOUSING

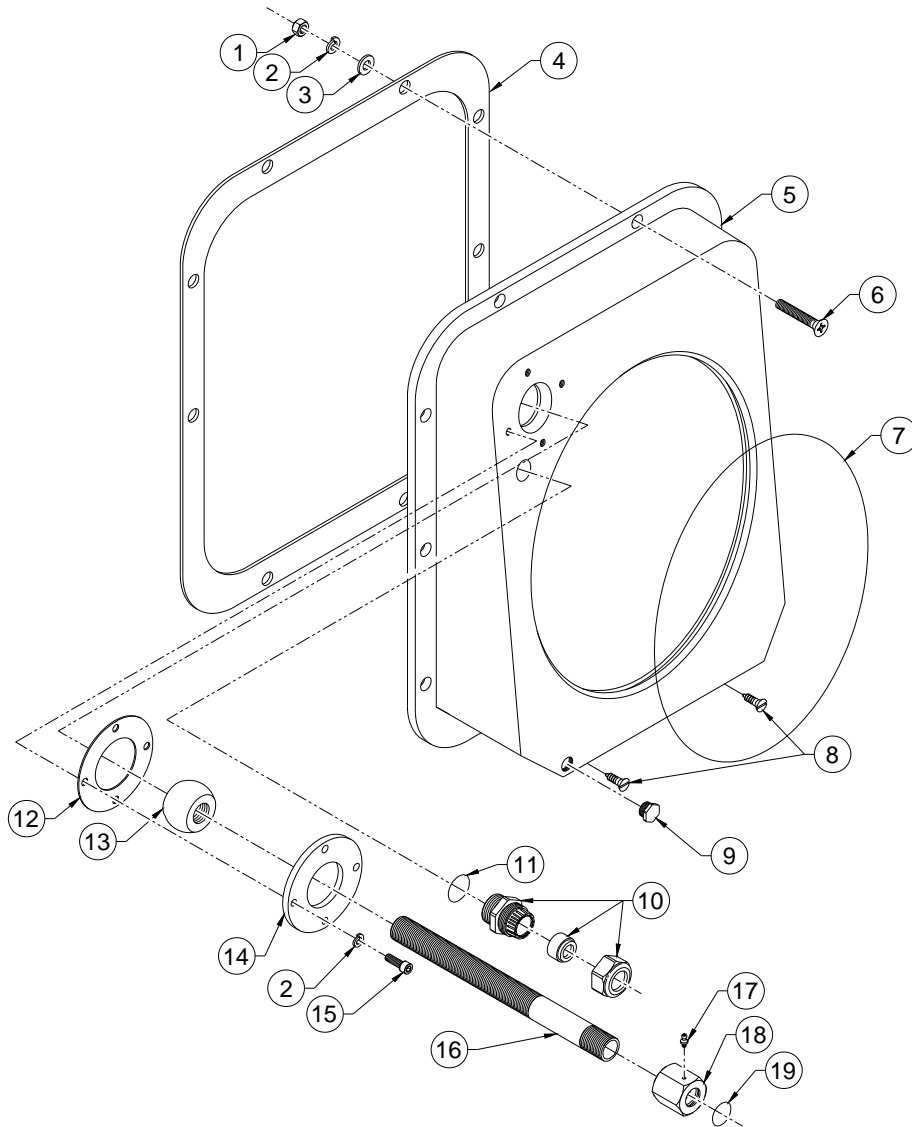


SYM.	DESCRIPTION	QTY.	PART NO.
1	0-9 TRANSOM HOUSING	1	****
2	TRANSOM O-RING	1	O2002
3	STEERING TUBE	1	T3007
4	STEERING TUBE NUT	2	R9206
5	STEERING TUBE GROMMET	1	R9106
6	WOODSCREW, #14 X 1	2	F04 08 WS
7	DRAIN PLUG	1	M4601

SYM.	DESCRIPTION	QTY.	PART NO.
8	REVERSE CABLE PACKER	1	T2007
9	FHMS, 1/4-20 X 2	10	F04 20 16 FH
10	TRANSOM GASKET	1	G3006
11	AN WASHER, 1/4	10	F04 AN
12	LOCKWASHER, 1/4	10	F04 LW
13	HEX NUT, 1/4-20	10	F04 20 HN

# AMERICAN TURBINE

## 9 / 18 DEGREE TRANSOM HOUSING PART # TK1105



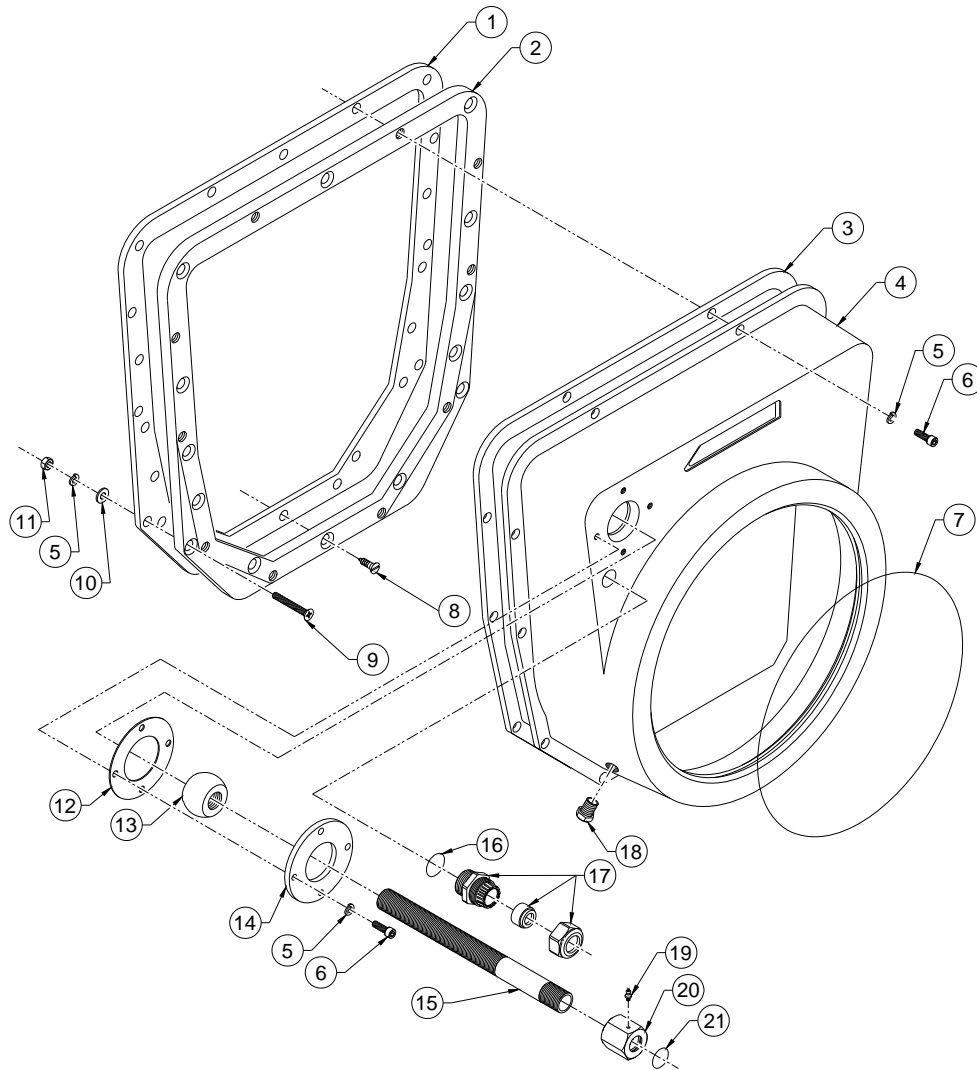
SYM.	DESCRIPTION	QTY.	PART NO.
1	HEXNUT, 1/4-20	8	F04 20 HN
2	LOCKWASHER, 1/4	12	F04 LW
3	FLAT WASHER, 1/4	8	F04 FW
4	TRANSOM GASKET	1	G3001
5	TRANSOM HOUSING	1	T1105
6	FHMS, 1/4-20 X 2	8	F04 20 16 FH
7	O-RING	1	O1201
8	WOOD SCREW, #14 X 1	2	F04 08 WS
9	BRASS DRAIN PLUG	1	T3501
10	REVERSE CABLE PACKER	1	T2101

SYM.	DESCRIPTION	QTY.	PART NO.
11	O-RING REV CABLE PACKER	1	O3001
12	STEERING MOUNT GASKET	1	G4001
13	STEERING TUBE BALL	1	T2601
14	BALL FLANGE	1	T2701
15	SHCS, 1/4-20 X 7/8	4	F04 20 07 SH
16	STEERING TUBE	1	T3007
17	GREASE ZERK	1	M4801
18	STEERING TUBE SEAL	1	T3107
19	O-RING, STEERING TUBE SEAL	1	O3501

# AMERICAN TURBINE

## DEEP TRANSOM HOUSING

PART # TK1001



SYM.	DESCRIPTION	QTY.	PART NO.
1	GASKET, TRANSOM	1	G3601
2	TRANSOM RING	1	T1601
3	GASKET, TRANSOM RING	1	G3501
4	TRANSOM HOUSING	1	T1001
5	LOCKWASHER, 1/4	27	F04 LW
6	SHCS, 1/4-20 X 7/8	14	F04 20 07 SH
7	TRANSOM O-RING	1	O1201
8	WOOD SCREW, #14 X 1	1	F04 08 WS
9	FHMS, 1/4-20 X 2	13	F04 20 16
10	FLAT WASHER, 1/4	13	F04 FW
11	HEXNUT, 1/4-20	13	F04 20 HN

SYM.	DESCRIPTION	QTY.	PART NO.
12	FLANGE GASKET	1	G4001
13	STEERING TUBE BALL	1	T2601
14	BALL FLANGE	1	T2701
15	STEERING TUBE	1	T3007
16	O-RING, CABLE PACKER	1	O3001
17	REVERSE CABLE PACKER	1	T2101
18	DRAIN PLUG	1	T3501
19	GREASE ZERT	1	M4801
20	STEERING TUBE SEAL	1	T3107
21	O-RING, STR. TUBE SEAL	1	O3501

# AMERICAN TURBINE

## JETDRIVE INSTALLATION

MODEL SD-309

FIBERGLASS

These instructions apply to transom angle of 8 degrees and from 3/8 to 1" thick and dead rise angles from 0 to 20 degrees. If your mold has a greater transom angle a wedge can be clayed into the mold to correct the angle.

### INTAKE CUTOUT

The intake cutout dimensions are shown on Exhibit A.

### TRANSOM CUTOUT

An initial cut-out is made in the transom to allow the intake to be installed. See Exhibit A.

### INSTALLING INTAKE

There are four 3/8 – 16 tapped holes in each mounting flange that is used for jack screws. These screws allow for setting of the intake to the proper angle. An intake setting fixture, that bolts to the rear of the intake, is available to set the intake the proper distance from the transom as well as a means to check the correct angle.

- a. Set the intake in the hull with the four jack screws installed.
- b. The bottom center of the intake at the front of the intake must be flush with the bottom of the hull at the front cut-out use the jack screws at the front of the intake to hold your setting.
- c. Using the jack screws at the rear of the intake to move the intake up or down. Set the machined surface (where the pump unit bolts) at 4-5 degrees relative to the keel.
- d. Check the intake to insure that it is level with the hull side to side.
- e. Tape around the perimeter 1 – 1/2" from the cut-out. (This makes your epoxy job look much nicer.)
- f. Mix your bonding compound according to the instructions. Place the compound around the cut-out and also the mounting flange of the intake.
- g. Set the intake in the hull so the jack screws come in contact with the hull.
- h. Double check the intake setting.
- i. Smooth out and fare in the compound to the tape line also smooth out the compound on the bottom side of the intake.
- j. Remove the tape.
- k. Wait for the compound to kick-out.
- l. Drill the mounting holes with a 17/64" drill.
- m. Counter-sink the drilled holes for Flathead Machine screws. (From the outside of the hull.)
- n. Use bonding compound under the heads of the machine screws to make them water tight. Install screws, washers, and nuts.
- o. Mark and drill transom mounting holes.
- p. Mark and drill cutout holes.
- q. Complete transom cutout.

**SPECIAL NOTE:** If you are using a HIGH-PERFORMANCE INTAKE you must follow these steps to insure the ride-plate centers up with the bowl.

- a. Bolt the ride-plate to the intake.
- b. Bolt the jet-unit to the intake and to the transom but do not tighten. Use the gaskets provided.
- c. Set the yoke on the ride-plate.
- d. Move the jet-unit side to side to line up with the ride-plate and yoke.
- e. Tighten jet-unit and transom flange bolts.

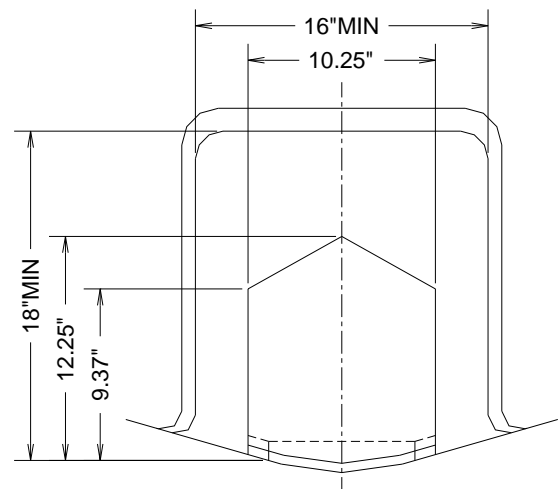
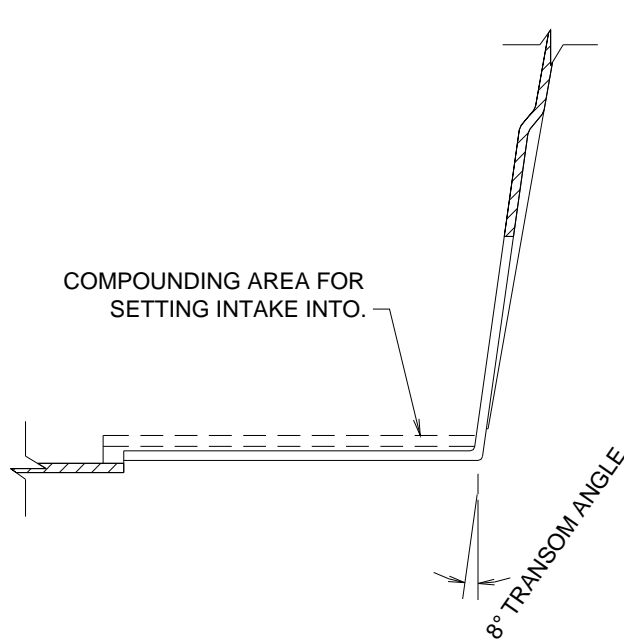
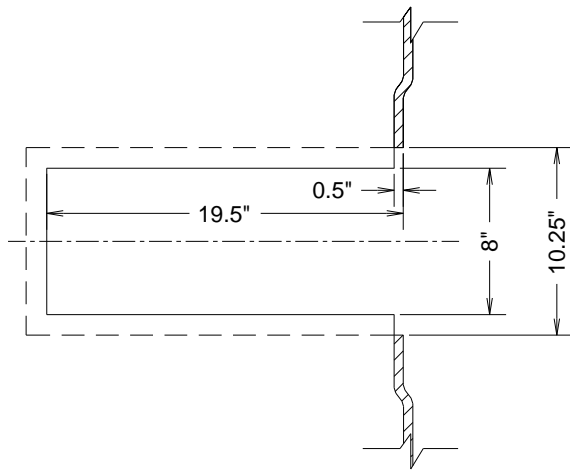
# AMERICAN TURBINE

## INTAKE INSTALLATION

SD-309

FIBERGLASS HULL PREPARATION DETAILS

EXHIBIT A



# **AMERICAN TURBINE**

## **JETDRIVE INSTALLATION**

### **MODEL SD-309**

### **WELDED ALUMINUM**

These instructions apply to transom angle of 8 degrees and from 1/8" to 3/8" thick and dead rise angles from 0 to 20 degrees.

#### **INTAKE CUTOUT**

The intake cutout dimensions are shown on Exhibit B or C. Exhibit B is for a Vee Bottom boat and Exhibit C is for a Delta Bottom boat.

#### **TRANSOM CUTOUT**

An initial cut-out is made in the transom to allow the intake to be installed. See Exhibit B or C.

#### **INSTALLING INTAKE**

- a. A setup jig is provided to aid in the alignment of the intake. Bolt to the intake.
- b. Weld both sides of the intake inside and out.
- c. Mark and drill transom mounting holes.
- d. Mark and drill cutout holes.
- e. Complete transom cutout for standard steering. See Exhibit D.
- f. Complete transom cutout for HTR II steering. See Exhibit E.

# AMERICAN TURBINE

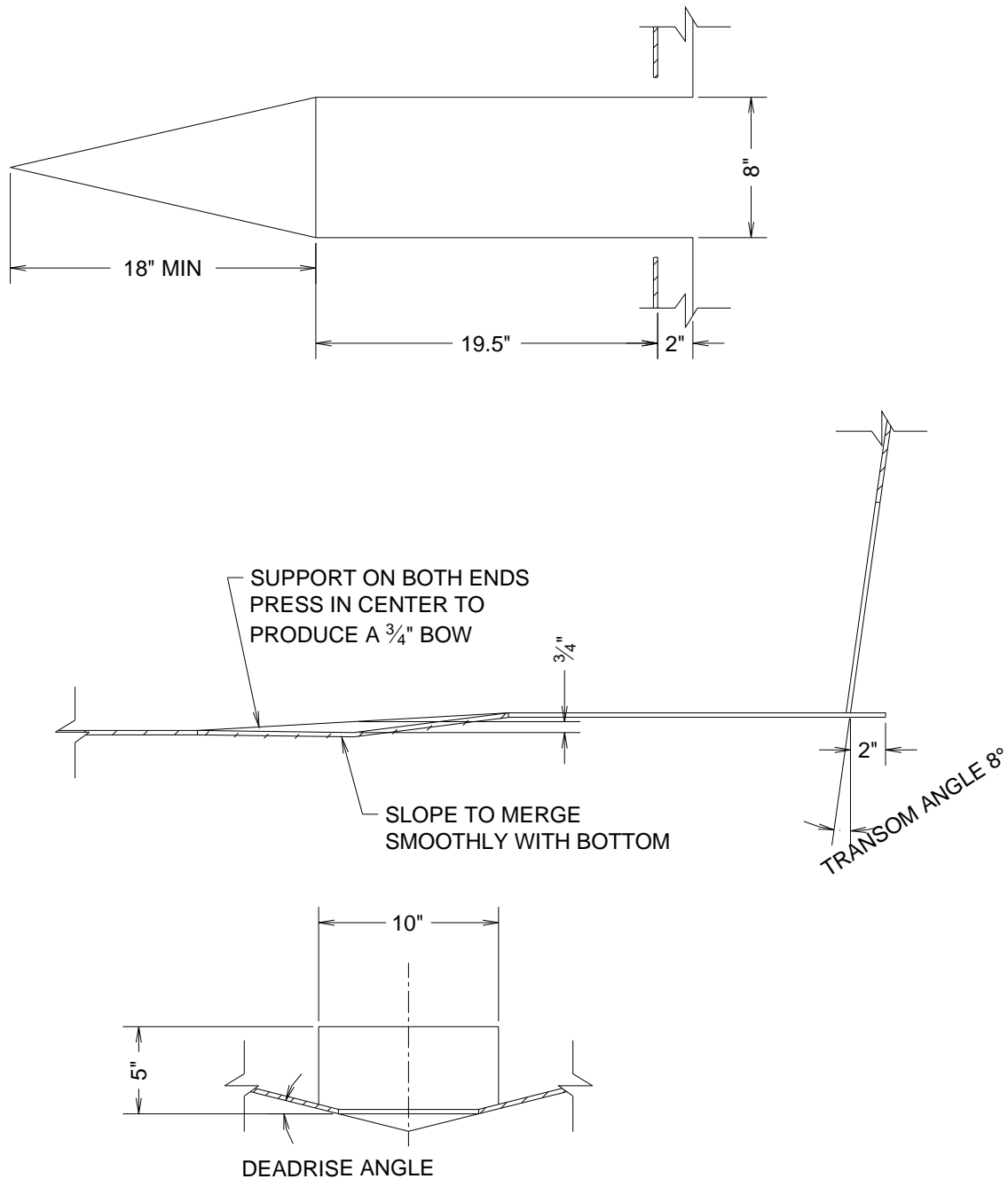
## INTAKE INSTALLATION

SD-309

ALUMINUM HULL PREPARATION

DETAILS FOR VEE BOTTOM

EXHIBIT B



PELIMINARY TRANSOM CUT

# AMERICAN TURBINE

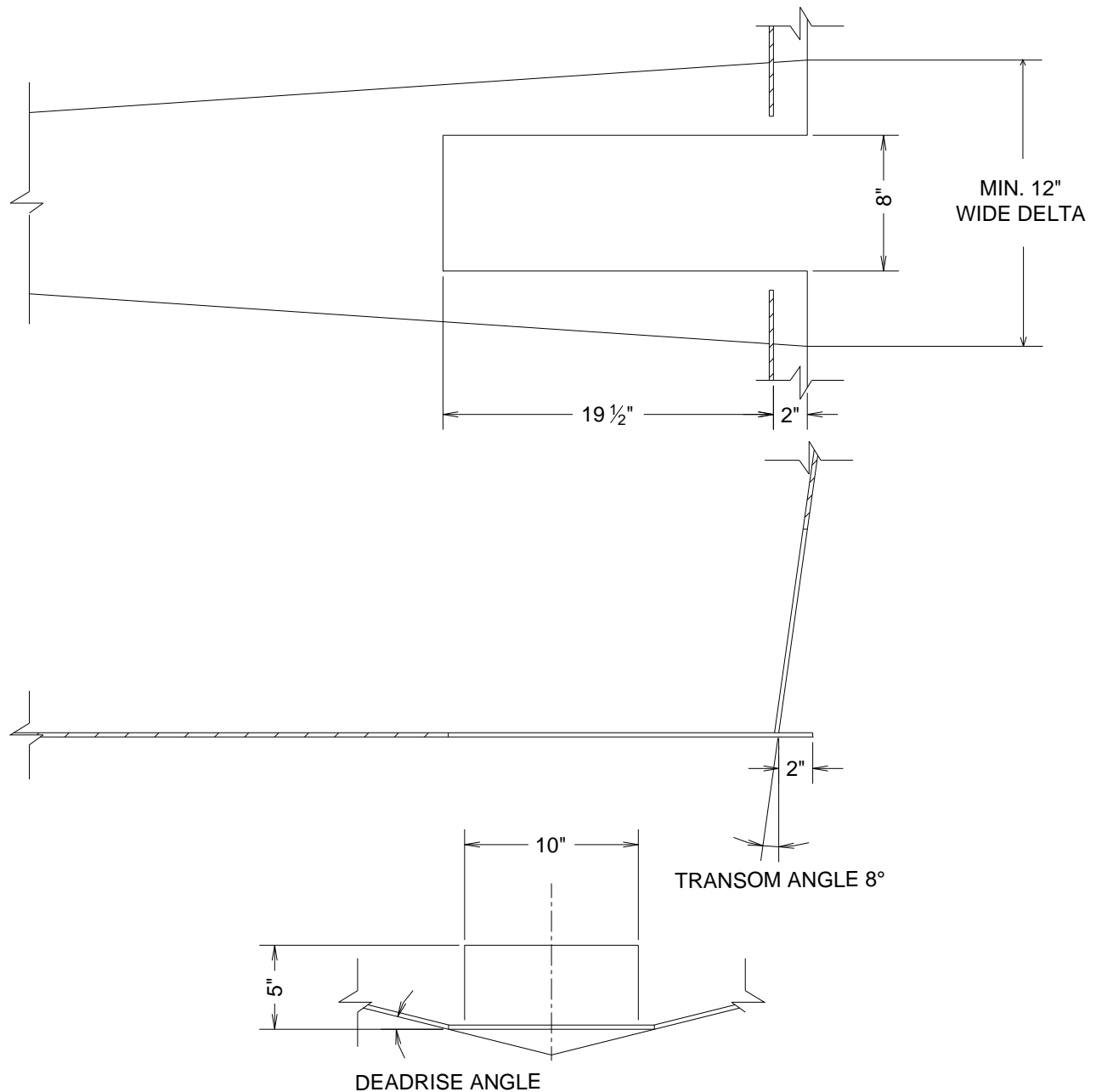
## INTAKE INSTALLATION

SD-309

ALUMINUM HULL PREPARATION

DETAILS FOR DELTA BOTTOM

EXHIBIT C



PELIMINARY TRANSOM CUT

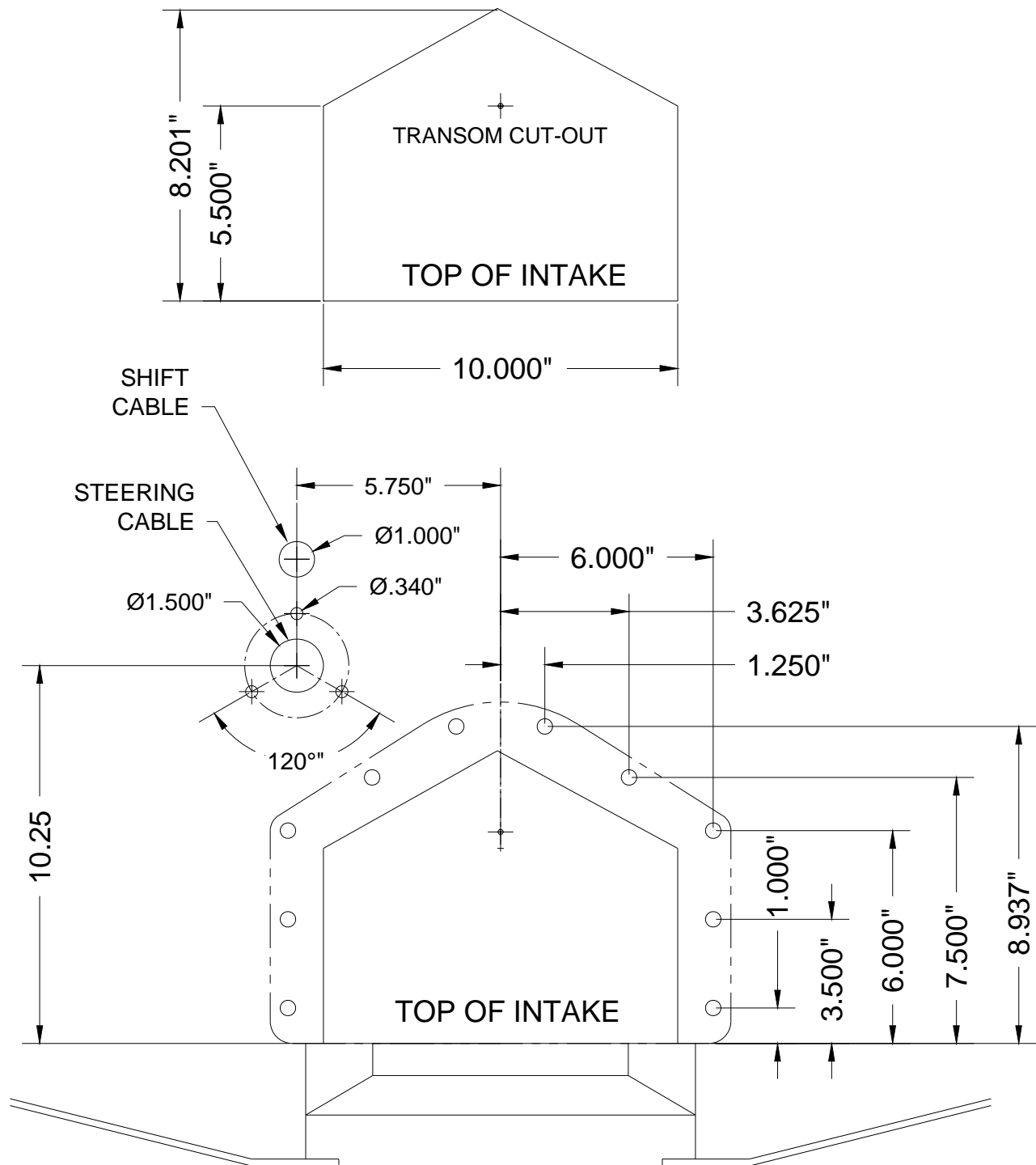


# AMERICAN TURBINE

## TRANSOM LAYOUT SD-309

W / STANDARD STEERING

EXHIBIT D



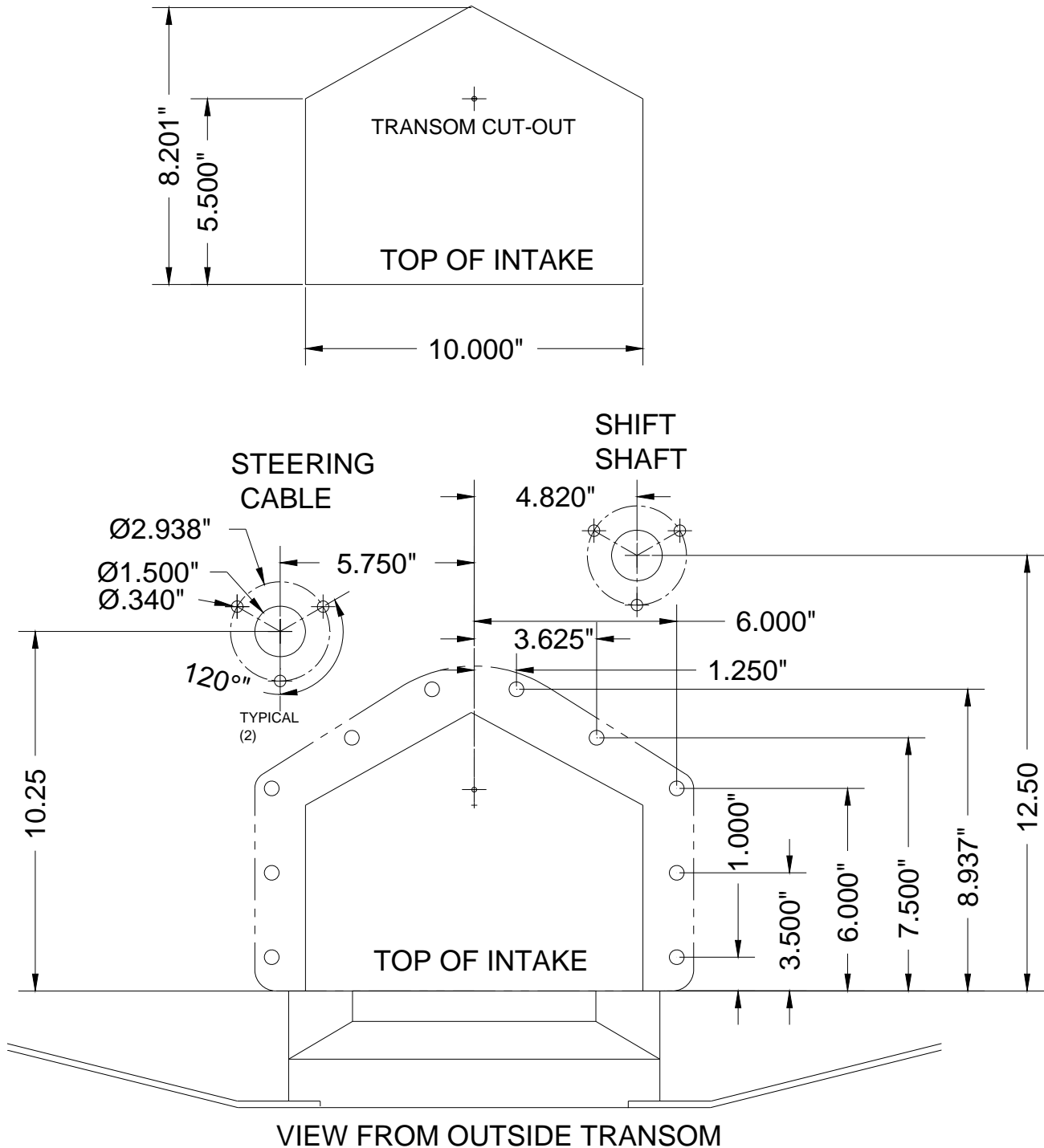
VIEW FROM OUTSIDE TRANSOM

# AMERICAN TURBINE

## TRANSOM LAYOUT SD-309

W / HTR II STEERING

EXHIBIT E



# AMERICAN TURBINE

## JETDRIVE INSTALLATION MODELS AT-309 & DOMINATOR 12-S USING TK1105 TRANSOM HOUSING

These instructions apply to transom angles from 9 to 16 degrees and from 3/8 to 1" thick and deadrise angles from 0 to 20 degrees.

### INTAKE CUTOUT

The intake cutout dimensions are shown on Exhibit F.

### TRANSOM CUTOUT

A transom cutout marking template is available from American Turbine. This template is designed for quick and accurate marking of the transom cutout. You may order the template by calling the main office.

When using the template for the very first time always check the scribed cutout marking on the boat against the dimensions given on Exhibit G. If the template cutout marking is more than 1/8 inch higher or lower than the dimensions given on Exhibit G then adjust the template's bottom pegs up or down accordingly.

Without the template, the cutout procedure for the transom should be as follows:

- a. Measure 2" up the transom 4" outward either side of the transom center line. Mark these two points (Exhibit G).
- b. Scribe a horizontal line between these points.
- c. Using the transom sealing ring, place the inside bottom edge along the scribed line.
- d. Hold the ring against the transom and mark along the inside of the ring.
- e. Cut 1/2" inside the line except at the bottom where you must cut to the line.

### INSTALLING INTAKE

There are four 3/8 – 16 tapped holes in each corner of the mounting flange that are used for jack screws. These screws allow for setting of the intake to the proper angle.

### PREPARATION

The coating must be ground off where the bonding compound comes in contact with the intake, also grind the fiberglass around the intake cut-out in the hull.

- a. Set the intake in the hull with the four jack screws installed.
- b. The bottom center of the intake at the front of the intake must be flush with the bottom of the hull at the front cut-out. Use the jack screws at the front of the intake to hold your setting.
- c. Using the jack screws at the rear of the intake to move the intake up or down. Set the machined surface (where the jet unit bolts) at 4-5 degrees relative to the keel.
- d. Check the intake to insure that it is level with the hull side to side.
- e. Tape around the perimeter 1 – 1/2" from the cut-out. (This makes your epoxy job look much nicer).
- f. Mix your bonding compound according to the instructions. Place the compound around the cut-out and also the mounting flange of the intake.
- g. Set the intake in the hull so the jack screws come in contact with the hull.
- h. Double check the intake setting.
- i. Smooth out and fare in the compound to the tape line also smooth out the compound on the bottom side of the intake.
- j. Remove the tape.
- k. Wait for the compound to kick-out.
- l. Drill the mounting holes with a 17/64" drill.
- m. Counter-sink the drilled holes for Flathead Machine screws. (From the outside of the hull).
- n. Use bonding compound under the heads of the machine screws to make them water tight. Install screws washers and nuts.

# AMERICAN TURBINE

## JETDRIVE INSTALLATION

MODELS AT-309 & DOMINATOR 12-S

USING TK1105 TRANSOM HOUSING

(CONTINUED)

### INSTALLING TRANSOM HOUSING

**SPECIAL NOTE:** If you are using a HIGH-PERFORMANCE INTAKE you must follow these steps to insure the ride-plate centers up with the bowl.

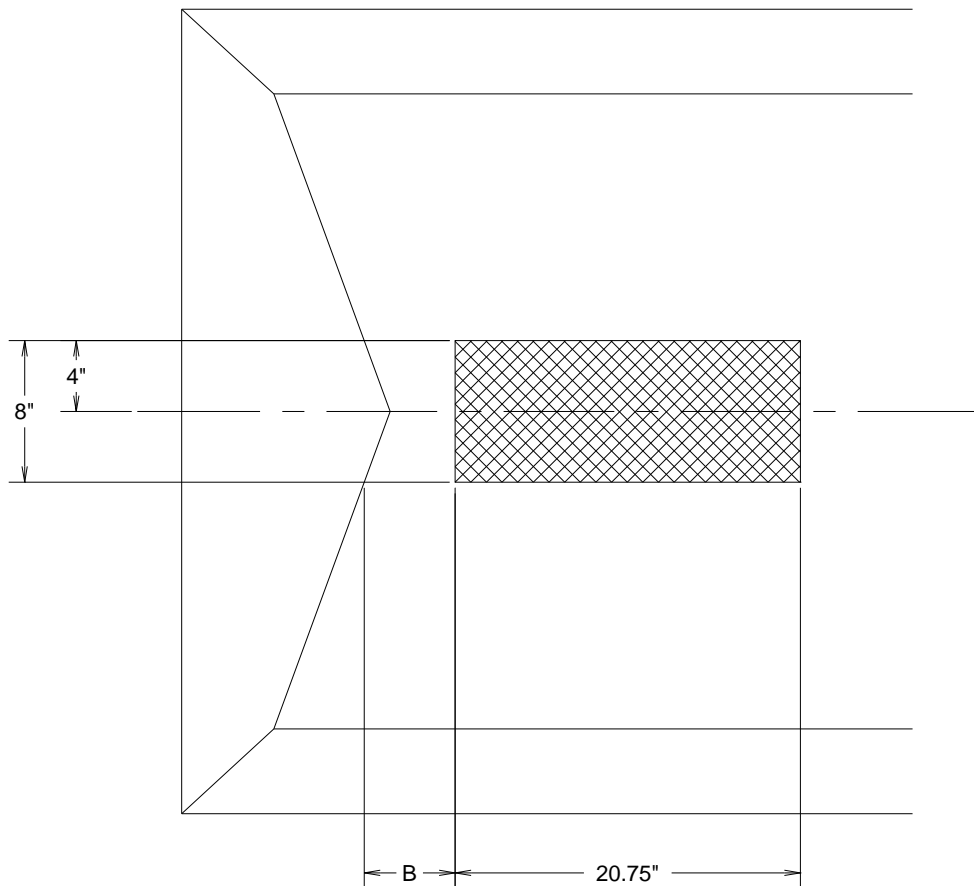
- a. Bolt the ride-plate to the intake.
- b. Bolt the jet-unit to the intake but do not tighten.
- c. Set the yoke on the ride-plate.
- d. Move the jet-unit side to side to line up with the ride-plate and yoke.
- e. Tighten jet-unit bolts.
- f. With the transom ring and transom gasket held in place on the ring with either glue or tape, slide the entire transom housing assembly over the bowl flush against the transom. A small amount of WD-40 or similar lubricant will help the o-ring to slide.
- g. You will note that there are two chamfered bolt holes in the transom ring outside the housing. With the transom housing squares up, drill through both chamfered bolt holes with a 17/64" drill. Using the 1/4 - 20 x 2" FHMS washer and nut, place a small amount of silicone sealer under the bolt head. Install and tighten.
- h. Unbolt the transom housing from the ring.
- i. Drill through all the chamfered bolt holes except the bottom center hole with a 17-64" drill. Drill the bottom, center hole with the appropriate size drill for the #14 x 1 1/4" Flathead wood screw.
- j. Bolt the transom housing to the ring.
- k. Connect all cables.

Properly installed, this transom is designed to seal without the use of silicone or any other sealant. **NOTE:** If the transom of the boat is particularly wavy you may want to run a bead of silicone between the transom and the transom ring.

# AMERICAN TURBINE

## INTAKE INSTALLATION

AT-309 & DOMINATOR 12-S  
FIBERGLASS & WELDED ALUMINUM  
W / DEEP SET TRANSOM HOUSING  
EXHIBIT F



### **IMPORTANT:**

IN ORDER TO ESTABLISH LENGTH "B", ANGLE "A" MUST FIRST BE DETERMINED.

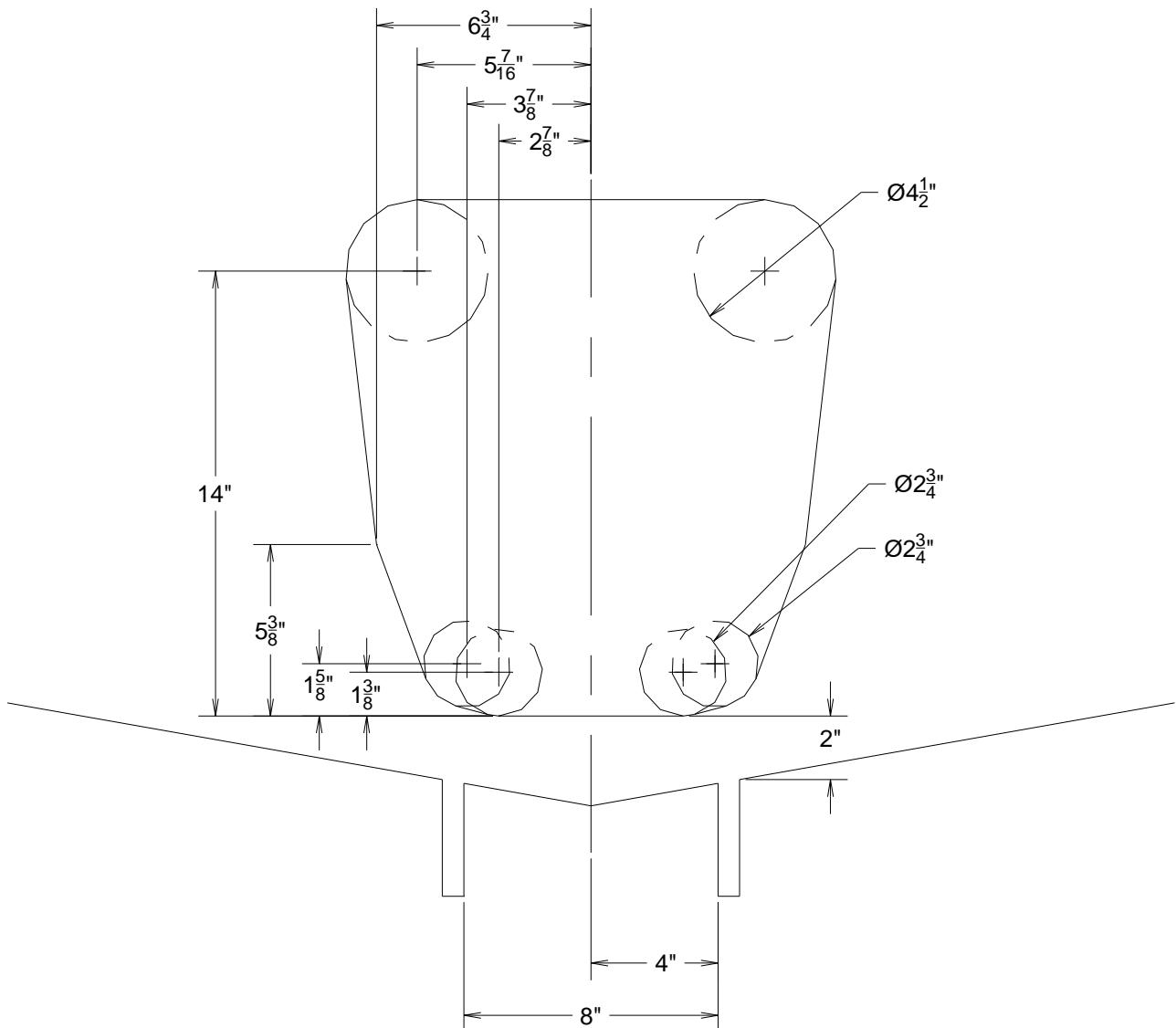
### **NOTE:**

LENGTH "B" IS ALWAYS MEASURED 4" OFF BOAT CENTER LINE.

TRANSOM ANGLE "A" DEGREES	LENGTH OF "B" IN INCHES
9°	2 <sup>3</sup> / <sub>8</sub> "
10°	2 <sup>5</sup> / <sub>16</sub> "
11°	2 <sup>1</sup> / <sub>4</sub> "
12°	2 <sup>3</sup> / <sub>16</sub> "
13°	2 <sup>1</sup> / <sub>4</sub> "
14°	2 <sup>5</sup> / <sub>16</sub> "
15°	2 <sup>3</sup> / <sub>8</sub> "
16°	2 <sup>7</sup> / <sub>16</sub> "

# AMERICAN TURBINE

## TRANSOM CUTOUT TRANSOM HOUSING PART # TK1105 EXHIBIT G



# AMERICAN TURBINE

## JETDRIVE INSTALLATION MODELS AT-309 & DOMINATOR 12-S USING TK1001 TRANSOM HOUSING

These instructions apply to transom angles from 9 to 16 degrees and from 3/8 to 1" thick and dead rise angles from 0 to 20 degrees.

### INTAKE CUTOUT

The intake cutout dimensions are shown on Exhibit H.

### TRANSOM CUTOUT

The transom cutout dimensions are shown on Exhibit I.

### INSTALLING INTAKE

There are four 3/8 – 16 tapped holes in each corner of the mounting flange that are used for jack screws. These screws allow for setting of the intake to the proper angle.

### PREPARATION

The coating must be ground off where the bonding compound comes in contact with the intake, also grind the fiberglass around the intake cut-out in the hull.

- a. Set the intake in the hull with the four jack screws installed.
- b. The bottom center of the intake at the front of the intake must be flush with the bottom of the hull at the front cut-out use the jack screws at the front of the intake to hold your setting.
- c. Using the jack screws at the rear of the intake to move the intake up or down. Set the machined surface (where the jet unit bolts) at 4-5 degrees relative to the keel.
- d. Check the intake to insure that it is level with the hull side to side.
- e. Tape around the perimeter 1 – 1/2" from the cut-out. (This makes your epoxy job look much nicer).
- f. Mix your bonding compound according to the instructions. Place the compound around the cut-out and also the mounting flange of the intake.
- g. Set the intake in the hull so the jack screws come in contact with the hull.
- h. Double check the intake setting.
- i. Smooth out and fare in the compound to the tape line also smooth out the compound on the bottom side of the intake.
- j. Remove the tape.
- k. Wait for the compound to kick-out.
- l. Drill the mounting holes with a 17/64" drill.
- m. Counter-sink the drilled holes for Flathead Machine screws. (From the outside of the hull).
- n. Use bonding compound under the heads of the machine screws to make them water tight. Install screws washers and nuts.

# AMERICAN TURBINE

## JETDRIVE INSTALLATION

MODELS AT-309 & DOMINATOR 12-S

USING TK1001 TRANSOM HOUSING

(CONTINUED)

### INSTALLING TRANSOM HOUSING

**SPECIAL NOTE:** If you are using a HIGH-PERFORMANCE INTAKE you must follow these steps to insure the ride plate centers up with the bowl.

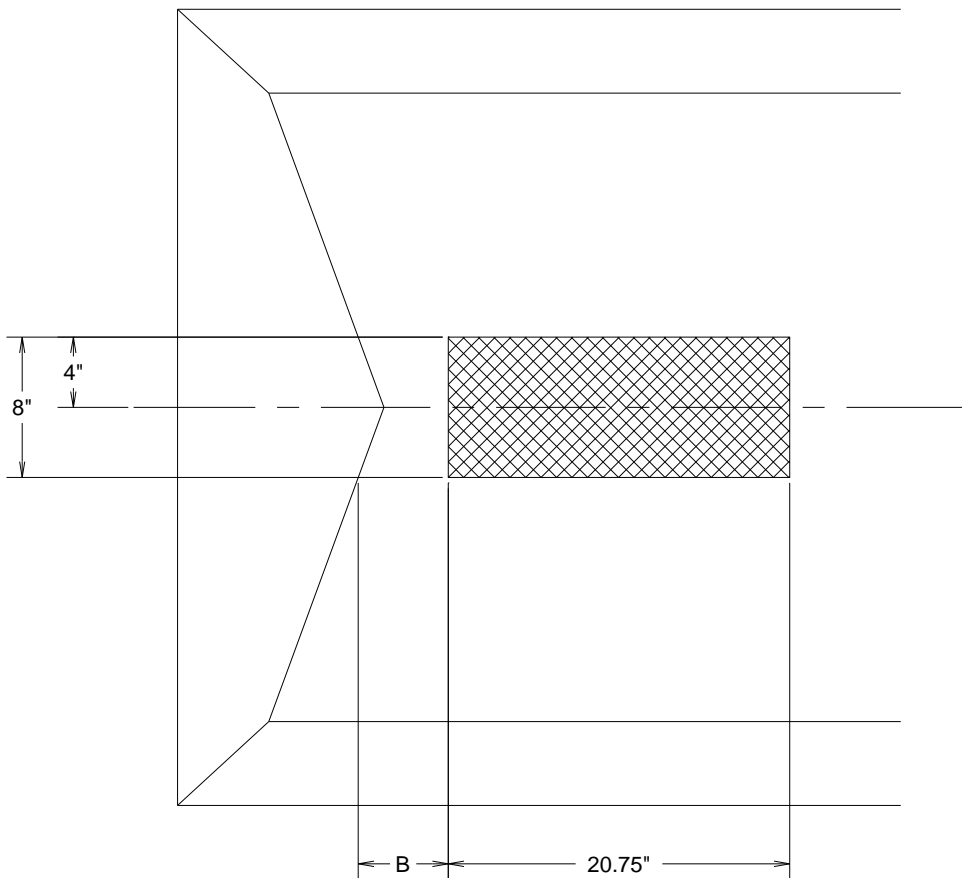
- a. Bolt the ride plate to the intake.
- b. Bolt the jet-unit to the intake but do not tighten.
- c. Set the yoke on the ride plate.
- d. Move the jet-unit side to side to line up with the ride plate and yoke.
- e. Tighten jet-unit bolts.
- f. With the transom gasket held in place on the housing with either glue or tape, slide the entire transom housing assembly over the bowl flush against the transom. A small amount of WD-40 or similar lubricant will help the o-ring to slide.
- g. With the transom housing squared up, drill through chamfered bolt holes with a 17/64" drill. Using the 1/4 - 20 x 2" FHMS washer and nut, place a small amount of silicone sealer under the bolt head. Install and tighten.
- h. Drill through all the chamfered bolt holes except the bottom holes with a 17/64" drill. Drill the bottom, center holes with the appropriate size drill for the #14 x 11/4" Flathead wood screw.
- i. Connect all cables.

Properly installed, this transom is designed to seal without the use of silicone or any other sealant. **NOTE:** If the transom of the boat is particularly wavy you may want to run a bead of silicone between the transom and the transom housing.



# AMERICAN TURBINE

## INTAKE INSTALLATION TRANSOM HOUSING PART # TK1001 EXHIBIT H



### **IMPORTANT:**

IN ORDER TO ESTABLISH LENGTH "B", ANGLE "A" MUST FIRST BE DETERMINED.

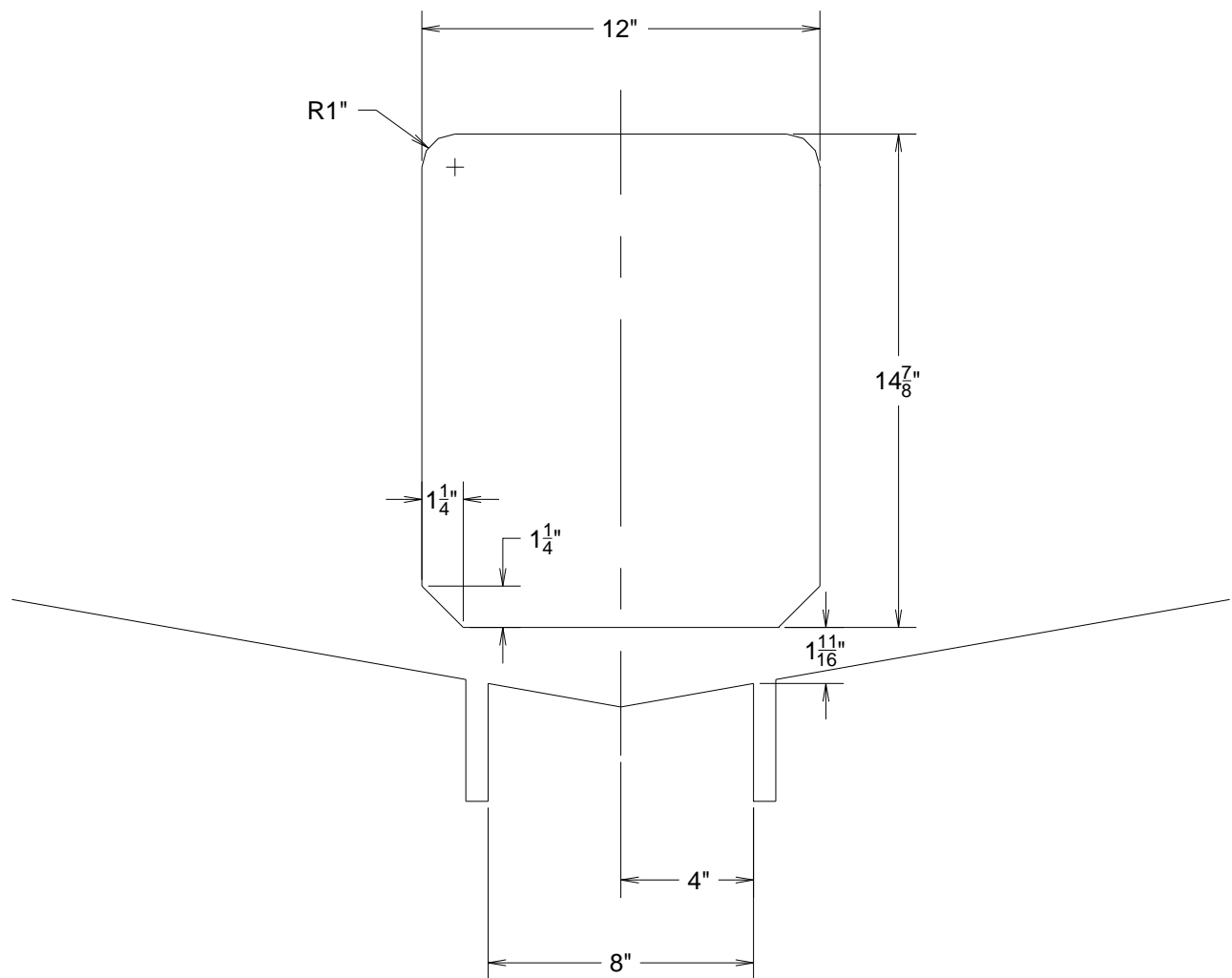
### **NOTE:**

LENGTH "B" IS ALWAYS MEASURED 4" OFF BOAT CENTER LINE.

TRANSOM ANGLE "A" DEGREES	LENGTH OF "B" IN INCHES
9°	3 <sup>3</sup> / <sub>4</sub> "
10°	3 <sup>9</sup> / <sub>16</sub> "
11°	3 <sup>3</sup> / <sub>8</sub> "
12°	3 <sup>1</sup> / <sub>8</sub> "
13°	3"
14°	2 <sup>13</sup> / <sub>16</sub> "
15°	2 <sup>5</sup> / <sub>8</sub> "
16°	2 <sup>7</sup> / <sub>16</sub> "

# AMERICAN TURBINE

## TRANSOM CUTOUT TRANSOM HOUSING PART # TK1001 EXHIBIT I



# **AMERICAN TURBINE**

## **JETDRIVE INSTALLATION**

### **MODEL SD-312 WELDED ALUMINUM**

These instructions apply to transom angle of 8 degrees and from 1/8" to 3/8" thick and dead rise angles from 0 to 20 degrees.

#### **INTAKE CUTOUT**

The intake cutout dimensions are shown on Exhibit J or K. Exhibit J is for a Vee Bottom boat and Exhibit K is for a Delta Bottom boat.

#### **TRANSOM CUTOUT**

An initial cut-out is made in the transom to allow the intake to be installed. See Exhibit J or K.

#### **INSTALLING INTAKE**

- a. Weld both sides of the intake inside and out.
- b. Mark and drill transom mounting holes.
- c. Mark and drill cutout holes.
- d. Complete transom cutout for standard steering. See Exhibit L.
- e. Complete transom cutout for HTR II steering. See Exhibit M.
- f. See sealant placement detail before installing jet unit. See Exhibit N.

# AMERICAN TURBINE

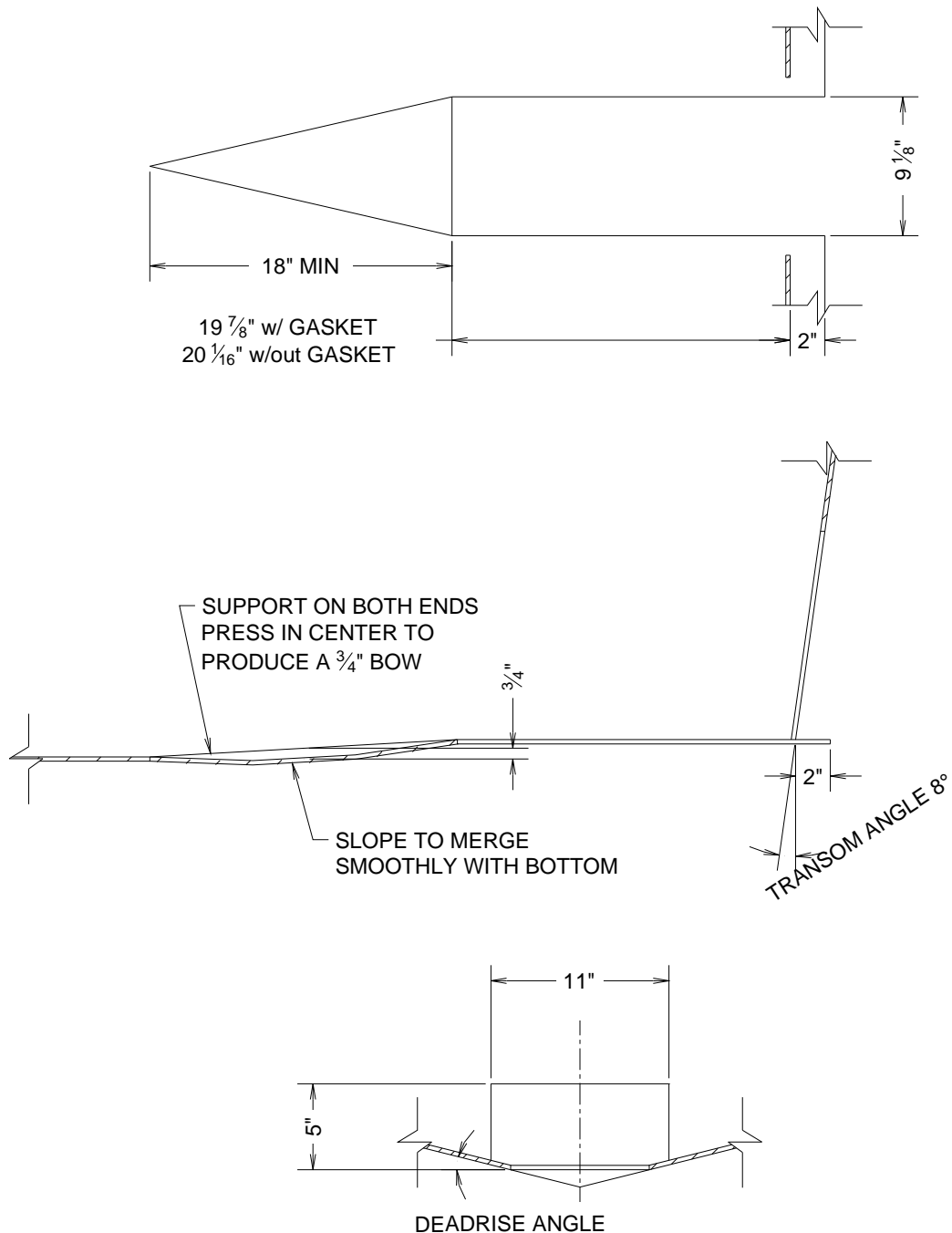
## INTAKE INSTALLATION

SD-312

ALUMINUM HULL PREPARATION

DETAILS FOR VEE BOTTOM

EXHIBIT J



PELIMINARY TRANSOM CUT

# AMERICAN TURBINE

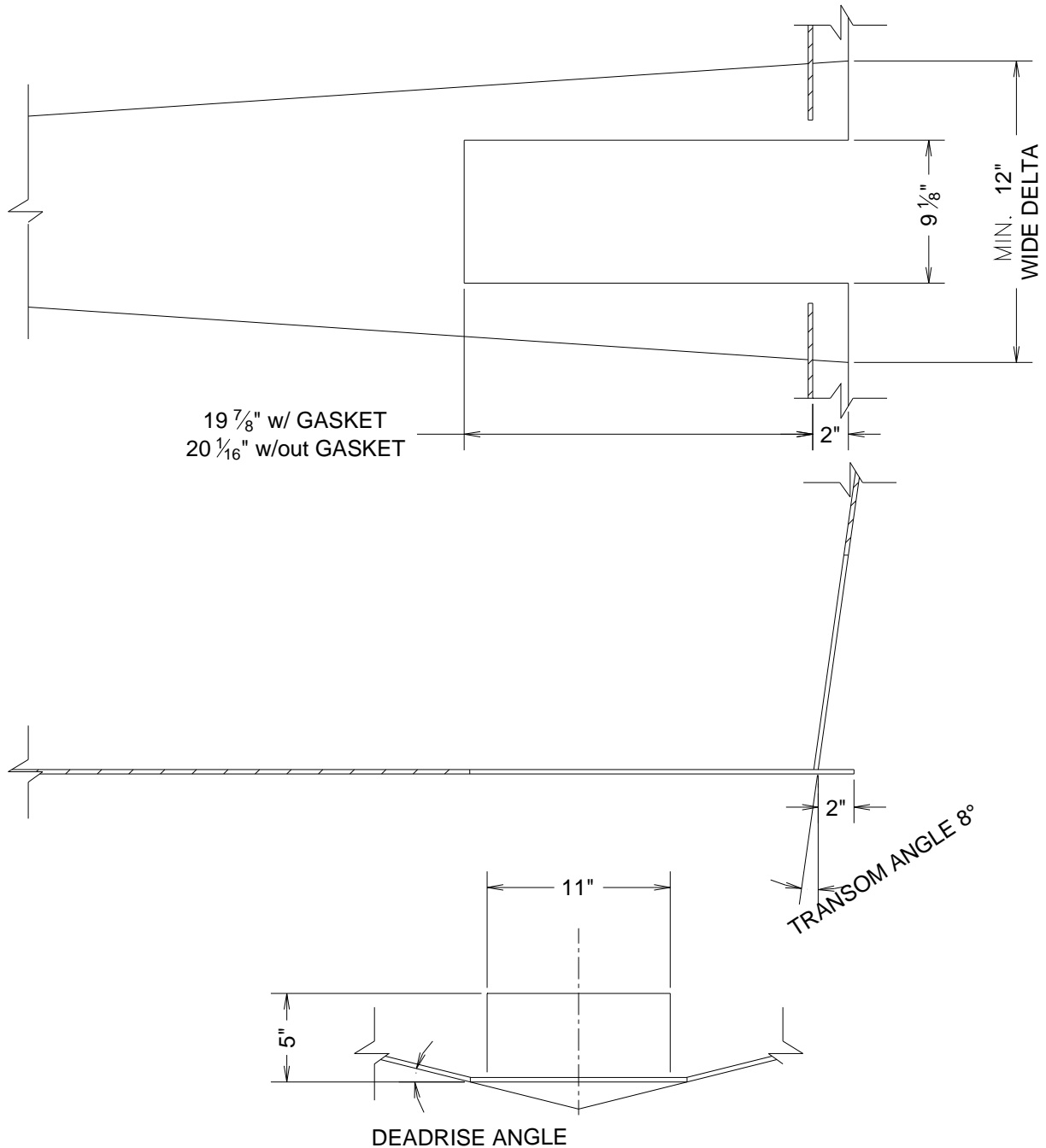
## INTAKE INSTALLATION

SD-312

ALUMINUM HULL PREPARATION

DETAILS FOR DELTA BOTTOM

EXHIBIT K



PELIMINARY TRANSOM CUT

**TRANSOM LAYOUT SD-312**  
**W / STANDARD STEERING**  
**EXHIBIT L**

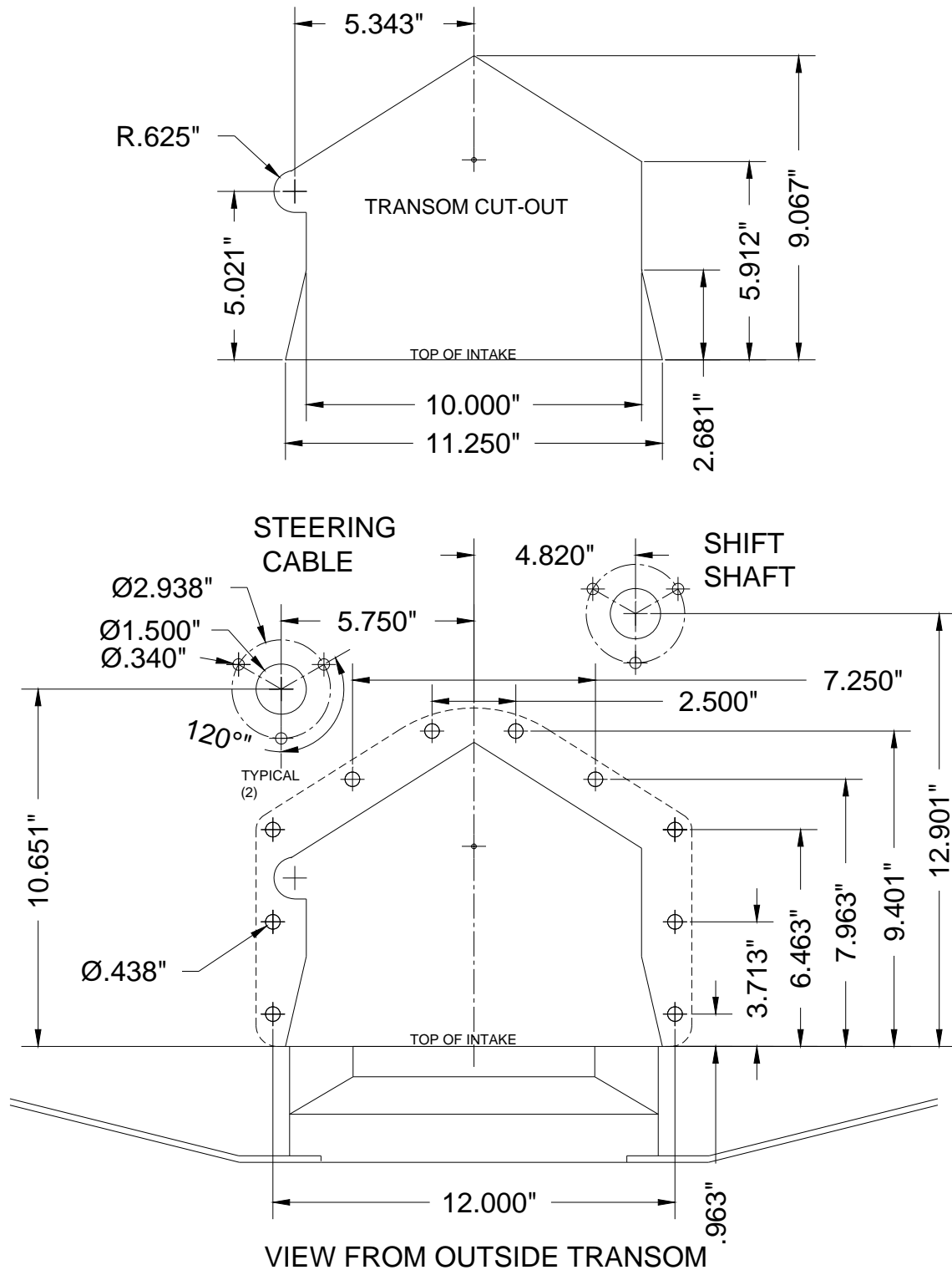


# AMERICAN TURBINE

## TRANSOM LAYOUT SD-312

W / HTR II

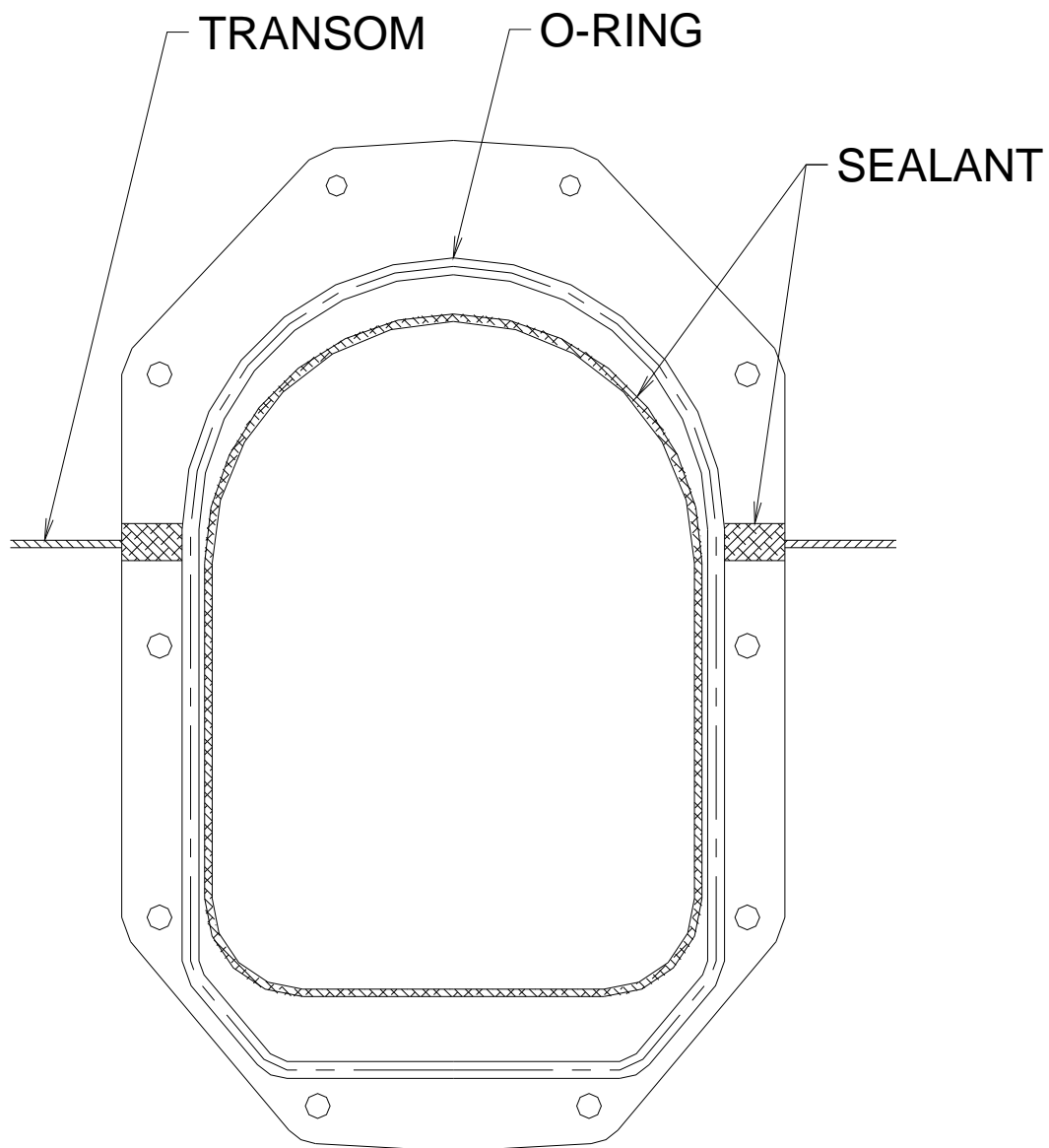
EXHIBIT M



# AMERICAN TURBINE

## SEALANT PLACEMENT

SD-312  
EXHIBIT N



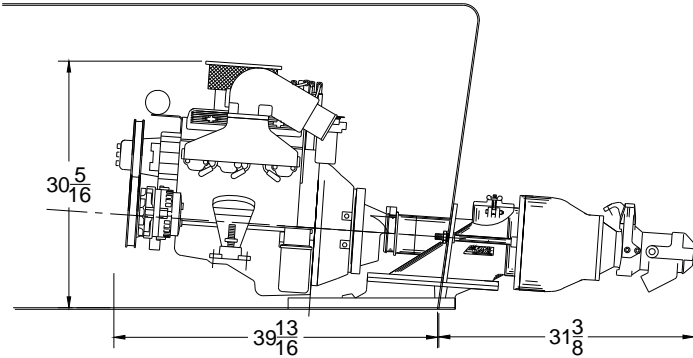
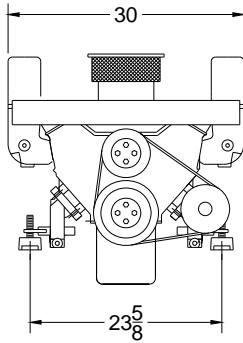


# AMERICAN TURBINE

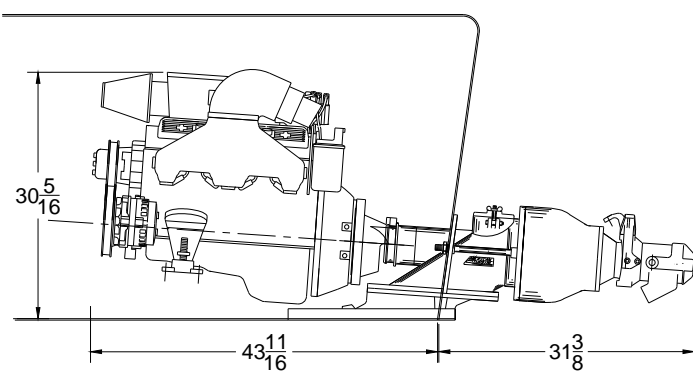
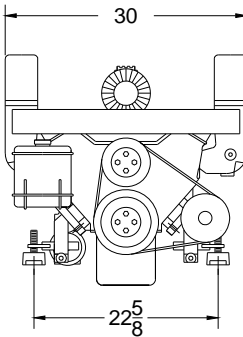
## CHEVY ENGINE & JET DIMENSIONS

### W / SD-309 - SD-312

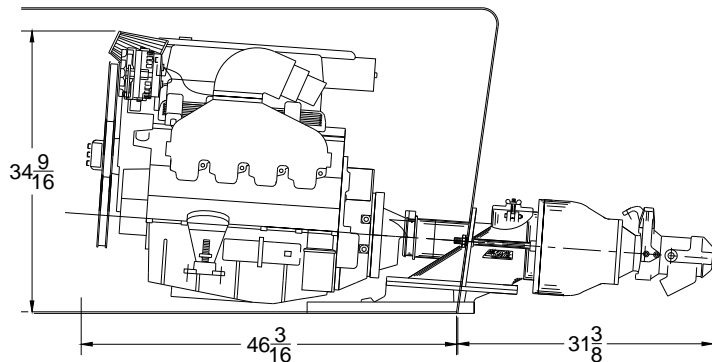
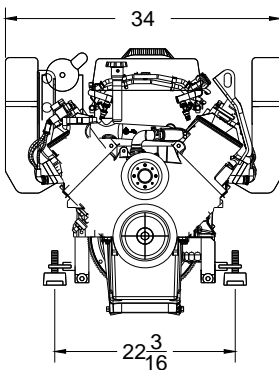
4.3L Chevy SD309/ SD312



5.7L Chevy SD309/ SD312



8.1L. Chevy SD309/ SD312



Engine Dimensions are for reference only. Check with your engine supplier for current updates.

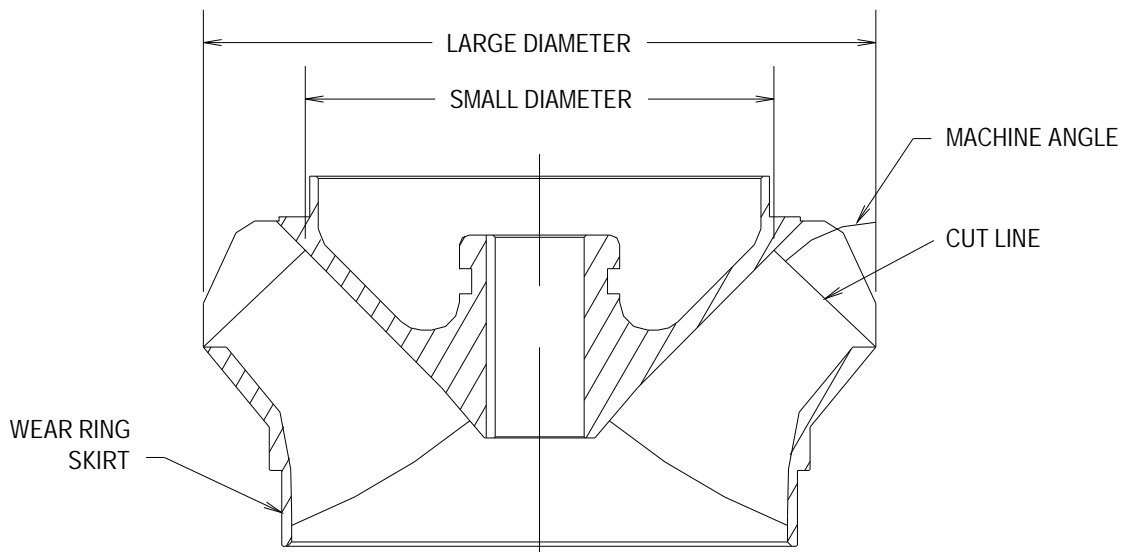
Close Couple Kits may be purchased with your KEM (Kodiak) engines to reduce the engine length by 4-5 inches.

# AMERICAN TURBINE

## IMPELLER SELECTION CHART

AT, TJ, SD-309, DOMINATOR, BERKELEY, ENERGIZER KITS

H.P.	9.5	9.25	AA	A	B	C
150	2900	3050	3200	3600	3800	4050
200	3200	3350	3500	4000	4200	4450
250	3450	3600	3700	4300	4500	4800
300	3800	3950	4050	4550	4800	5100
350	4050	4200	4300	4750	5100	5350
400	4250	4400	4500	5050	5300	5600
450	4450	4600	4700	5250	5500	5850
500	4650	4800	4950	5400	5700	6050
550	4800	4950	5100	5550	5850	N/A
*THESE RPM VALUES MAY VARY ACCORDING TO HOW YOUR BOAT AL- LWS THE PUMP TO LOAD						
HORSE POWER REQUIREMENTS ARE AT THE PUMP SHAFT						



AMERICAN TURBINE JET DRIVE IMPELLER SPECIFICATIONS			
IMPELLER SIZE	LARGE DIAMETER	SMALL DIAMETER	MACHINED ANGLE
9 1/2"	9-1/2"	8-1/4"	25 DEGREES
9 1/4"	9-1/4"	8-1/4"	20 DEGREES
AA	9-3/32"	7-13/16"	25 DEGREES
A	9"	7-1/4"	30 DEGREES
B	8-3/4"	6-3/4"	33-1/2 DEGREES
C	8-1/2"	6-1/2"	33-1/2 DEGREES

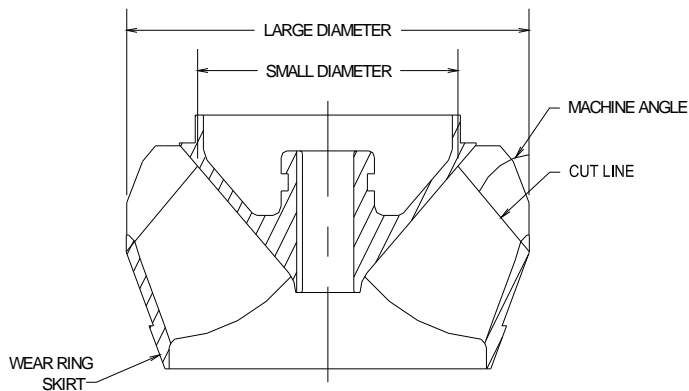
# AMERICAN TURBINE

## IMPELLER SELECTION CHART

### SD-312

#### FOR MODEL SD-312 GEN 1 STAINLESS

H.P.	8.1S	8.1A	5.7S	5.7A	4.3S	4.3A
150	3075	3200	3350	3500	3650	3800
200	3400	3550	3700	3850	4000	4200
250	3650	3800	4000	4150	4300	4500
300	3850	4050	4200	4400	4575	4800
350	4050	4225	4450	4625	4825	5025
400	4250	4425	4625	4850	5025	5300
450	4475	4650	4800	5025	5250	5500
500	4575	4800	5000	5225	5415	5700
550	4725	4950	5175	5400	5600	5900
*THESE RPM VALUES MAY VARY ACCORDING TO HOW YOUR BOAT AL- LWS THE PUMP TO LOAD						
HORSE POWER REQUIREMENTS ARE AT THE PUMP SHAFT						



#### AMERICAN TURBINE JET DRIVE IMPELLER SPECIFICATIONS

IMP. SIZE	SMALL DIA.	MACH. ANGLE
8.1S	AS CAST	DEGREES
8.1A	7.878	26 DEGREES
5.7S	7.15	28 DEGREES
5.7A	6.95	28 DEGREES
4.3S	6.75	28 DEGREES
4.3A	6.57	28 DEGREES

#### FOR MODEL SD-312 GEN 2 STAINLESS

H.P.	2.4 KW	2.6 KW	2.9 KW	3.3 KW	4.0 KW	5.0 KW
150	3600	3500	3400	3250	3050	2825
200	4000	3900	3700	3550	3325	3100
250	4300	4200	4000	3850	3600	3325
300	4550	4400	4250	4100	3825	3575
350	4800	4650	4500	4300	4025	3725
400	5000	4850	4700	4500	4225	3900
450	5200	5050	4900	4675	4375	4075
500	5400	5250	5050	4850	4550	4225
550	5550	5400	5200	5000	4700	4350
*THESE RPM VALUES MAY VARY ACCORDING TO HOW YOUR BOAT ALLOWS THE PUMP TO LOAD						
HORSE POWER REQUIREMENTS ARE AT THE PUMP SHAFT						

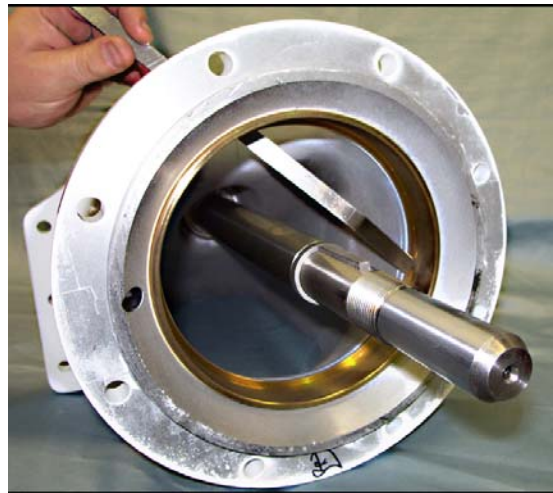
# AMERICAN TURBINE

## IMPELLER / WEAR RING SHIMMING INSTRUCTIONS

AT, TJ, SD-309, DOMINATOR, BERKELEY, ENERGIZER KITS

### Tools Needed:

- |                      |                     |
|----------------------|---------------------|
| 1. .030 Feeler Gauge | 5. Impeller Wrench  |
| 2. Propane Torch     | 6. 3/4 Wrench       |
| 3. Bent Screw driver | 7. 9/16 Wrench      |
| 4. WD-40             | 8. Dead Blow Hammer |



### To remove old wear ring:

Use a propane torch. Place the flame on the brass ring go around in a circular motion until the insulator starts to melt. Grab the ring with a bent over screwdriver (90deg.) and pull out. Clean up wear ring bore.

### Installation:

Place wear ring in freezer for four hours. Place insulator in suction bore. Spray with WD-40. Start wear ring by hand. Tap wear ring in using a wooden block and a mallet. You may use an old impeller but it may bottom out on the shaft before seating the ring.

### Important:

Wear ring must be seated square in the bore with-in 0.004" side to side.

The axial clearance between the impeller and the impeller shoulder must be 0.025"-0.035" (check several places around the wear ring). Check again after the impeller nut has been tightened.

Use Zinc Anti-seize for steel lock nut. Use Red Loctite for aluminum nut. Torque impeller nut to 150 ft/lbs. Torque bowl bolts to 50 ft/lbs.

# AMERICAN TURBINE

## IMPELLER / WEAR RING SHIMMING INSTRUCTIONS

SD-312

### Tools Needed:

- |                      |                     |
|----------------------|---------------------|
| 1. Feeler Gauge      | 6. 9/16 Wrench      |
| 2. Propane Torch     | 7. Dead Blow Hammer |
| 3. Bent Screw driver | 8. Wooden Block     |
| 4. WD-40             | 9. Caliper          |
| 5. Impeller Wrench   | 10. Straight Edge   |



FIGURE 1



FIGURE 2

### To remove old wear ring:

Use a propane torch. Place the flame on the brass ring go around in a circular motion until the insulator starts to melt. Grab the ring with a bent over screwdriver (90deg.) and pull out. Clean up wear ring bore.

### Installation:

Place wear ring in freezer for four hours. Place insulator in suction bore. Spray with WD-40. Start wear ring by hand. Tap wear ring in using a wooden block and a mallet. You may use an old impeller but it may bottom out on the shaft before seating the ring. Do Not use impeller nut to pull impeller in.

Wear ring must be seated square in the bore with-in 0.004" side to side. Use dial caliper and straight edge as shown in FIGURE 1.

The axial clearance between the impeller and the wear ring must be 0.022"-0.024" (check at the top of the impeller as shown in FIGURE 2). Check again after the impeller nut has been tightened.

Use Zinc Anti-seize for steel lock nut. Use Red Loctite for aluminum nut. Torque impeller nut to 150 ft/lbs. Torque bowl nuts to 25-30 ft/lbs.

**IMPORTANT:** Do Not shim impeller tighter than 0.022". Severe damage can result.

# AMERICAN TURBINE

## UNDERSTANDING YOUR JET BOAT

Most boat owners like to perform at least a certain amount of their boat maintenance themselves to ensure continuing good performance and reliability.

To avoid unnecessary trips to the service center, it might be useful to have a checklist which can be run through systematically, in the hope of pinpointing the problem quickly. The boat can be divided into three categories - jet unit, engine, and hull.

If something is "wrong" with the boat it is usually poor acceleration and load carrying, coupled with excessive fuel consumption or engine RPM's. It could be unusual noise coming from the mechanicals, or possibly just poor top speed. All of these things may be present to some degree, but the usual complaint is that the boat is just plain "gutless".

### **TACHOMETER**

The most important single instrument on the boat when considering performance drop-off is the engine tachometer. The great thing about jet boats is that the engine RPM's should remain the same throughout the life of the boat, regardless of age, loading, water conditions, towing, whatever.

There is no situation where the RPM's should be different from when the boat was new, and as an owner, you will know what these are. At any time, you should be able to open the throttle fully and get exactly the same maximum reading you have been used to. Or perhaps you are finding it needs more RPM's to cruise your normal load? RPM's are a most important indicator of proper operation of the boat.

It is important at this stage to feel confident that your tachometer is reading accurately.

Now we come to our check list, and determination of which major area is the problem. The simplest way is a check on the RPM's first. They could be normal, high, or low, and this will pin point the place to look:

#### ***A. Normal maximum RPM = hull problem.***

If the boat is performing poorly and the maximum RPM's are normal and what you are used to, you can look to the hull and some of the external parts. These include:

1. *Overload*: Too much weight aboard.
2. *Balance*: Either too much weight aft, which will cause the nose to be too high and make planing difficult, or if the weight is too far forward, it will cause the nose to plow, difficult steering, wetness, and poor top speed.
3. *Reverse bucket*: Is the bucket dragging in the reverse stream? Make sure the control is fully up.
4. *Excessive hull drag*: Is there some external hull obstruction such as rough surface, broken keel strips, or other reason impeding the smooth flow of water over the hull bottom? A visual check on the trailer should reveal if there is. Metal hulls can have a "hook" bashed into them forward of the transom which can cause the bow to plow. The planing surface forward of the transom six to nine feet should be true and flat.

#### ***B. High rpm = jet unit problem.***

Higher than normal RPM's, lack of thrust, slipping clutch feel, engine racing and no go?

1. *Blockage*: The most common problem is weeds and stones blocking the intake grate. Also be aware of ski rope, fishing line and plastic bags winding around the pump shaft. Small sticks and stones can become lodged in the impeller affecting the performance dramatically, objects trapped in the impeller can cause the rotating assembly to be out of balance, causing severe vibration. Make sure the water passage through the jet is clear.
2. *Impeller wear*: The heart of the jet is the impeller, and its condition. If you run in shallow gravel beds or across sand bars the leading edges will become dull and inefficient. Pumping sand will increase the wear-ring to impeller clearance. Causing cavitation and loss of performance.
3. *Bowl / stator vanes*: Its not too much of a problem, but the leading edge of the fixed stator vanes can become blunt and damaged.
4. *Air leaks*: If excessive air leaks into the intake ahead of the impeller, the jet unit will "slip". Possible sources of air leaks are though a faulty gland seal, which is usually accompanied by a static water leak into the boat when standing idle.

So if the gland is worn out and leaking into the boat with the engine off, it can also suck air when accelerating on to plane, and if this happens, then the thrust is reduced dramatically. Air can also be introduced into the system via the inspection cover, so you will want to make sure the cover is tight.

# AMERICAN TURBINE

## UNDERSTANDING YOUR JET BOAT (CONT.)

### **C. Low RPM = engine problem**

There is generally no way the jet unit can overload the engine and bring the RPM's down. If the RPM's are down from usual, it is almost certain to be a engine problem. A compression check will usually reveal leaking piston rings or valves, but the most common reasons for reduced engine power are:

1. *Throttle*: Check that the throttle is opening fully.
2. *Fuel*: The fuel supply must be adequate for the engine size. Racing boats frequently have a fuel pressure gauge which is, with the tachometer, probably the most important engine instrument. Sufficient fuel must be reaching the engine.
3. *Air to the engine*: The carburetor must be getting its full quota of cool air. If the engine has to work to get adequate air, and if it is hot air, this will reduce power.
4. *Ignition spark*: Be satisfied the ignition system is operating properly. A problem here is usually indicated by a rough running or missing engine.
5. *Exhaust*: Check for a free flowing exhaust system. Some silencers can become blocked, rubber hoses disintegrate internally, or there is excessive water injection. Such things can cause excessive back pressure and reduce power.

Provided your engine is getting its full quota of air and fuel, and is getting enough spark and at the right time, the engine will usually be OK, and maximum RPM's will result. However if the RPM's are down and you believe the tachometer, look for an engine problem.

The hull, engine, and jet unit are the three main areas to look at when your performance is down.

### **D. Excessive noise.**

This can often be a concern even if there is not a reduction in performance. The most common causes of noise are:

1. *Cavitation*: The jet unit is starved for water, and usually sounds like a rattle or a can of loose bolts in the back of the boat. Most likely a blocked intake grate.
2. *Moan or whine*: The jet unit can exhibit some "turbine whine" not unlike a turbocharger noise but you will know what is usual with your boat. However, if you have a new more obvious moan/whine, especially if it is a very low frequency grumble at idle, that increases with engine RPM's then it is likely to be a rough/worn/water damaged thrust bearing. If water has gotten into the bearing, it is usually as a result of a flooded bilge at some time on a warm bearing, then water can be sucked in as it cools.
3. *Periodic vibration*: Often at specific RPM's and disappearing at other throttle openings is probably a torsional vibration emanating most likely from the universal joints on the drive shaft. Check them for worn/slack joint needle rollers, or if they have been installed incorrectly after an overhaul.

# AMERICAN TURBINE

## INSTALLATION AND INSPECTION

**IMPORTANT:** No modifications are to be made to the Jet-Drive without prior written permission from American Turbine, Inc. American Turbine jets are designed to propel watercrafts up to 50 mph without special modifications and safety equipment. For watercraft speeds above 50 mph the dealer or boat manufacturer must include the proper equipment and insure the operator has the proper instruction.

### PRE-DELIVERY INSPECTION

The following inspection should be performed prior to jet drive operation. The same inspection should be performed by the user or selling dealer after the first 10- 20 hours of use and regularly thereafter every three months. If any items of the inspection list do not meet inspection guidelines, they should be corrected before using the jet drive.

1. **Hand Hole Cover.** Check to make sure that the hand hole cover is tightly fastened.
2. **Steering.** Check the steering by rotating the wheel right and left with the engine off and verify that the nozzle turns completely against the housing to which it is attached. Check all steering cable connections. These include the transom housing steering nut, the tiller arm-to steering tube connection, the tiller shaft set screw and the lower nozzle pin cap screw.
3. **Reverse Shift Control.** With the control in full reverse, the reverse bucket should be camped down tight against the nozzle and completely cover the nozzle's discharge opening. In full forward, the reverse bucket should clear the entire nozzle discharge opening. In neutral, the reverse bucket should cover about 3/4ths of the discharge opening. The reverse bucket controller should have a provision to lock it in the forward position so that the bucket cannot fall into the water stream.
4. **Throttle.** Check to see that the throttle is operating smoothly. On boats with a single lever control, the shift must be complete before the engine RPM 's increase.
5. **Transom Seals.** There should be no leaks at the housing seal to the boat or the housing seal to the bowl.
6. **AT-309 & TJ-309 Packing Gland Inspection.** The packing gland should be inspected and adjusted if necessary. With the boat in the water and the engine running, tighten the packing gland nuts equally. Excessive tightening of the gland will result in heat damage to the shaft. Excessive leakage of the gland can result in poor low speed acceleration and possible water damage to the boat engine.
7. **SD-309 & FW-309 Weep Hole Inspection.** A weep hole is provided to indicate the condition of the mechanical seal. Water running out the hole is an indication of a failed seal or that there is a foreign debris between the seal faces i.e. fishing line. A blast of compressed air in the weep hole will sometimes clear the obstruction. If it continues to leak, consult the manufacturer.
8. **Engine Cooling Connections.** Check to make sure all hose connections are tight.

### BOLT and NUT TORQUE SPECIFICATIONS

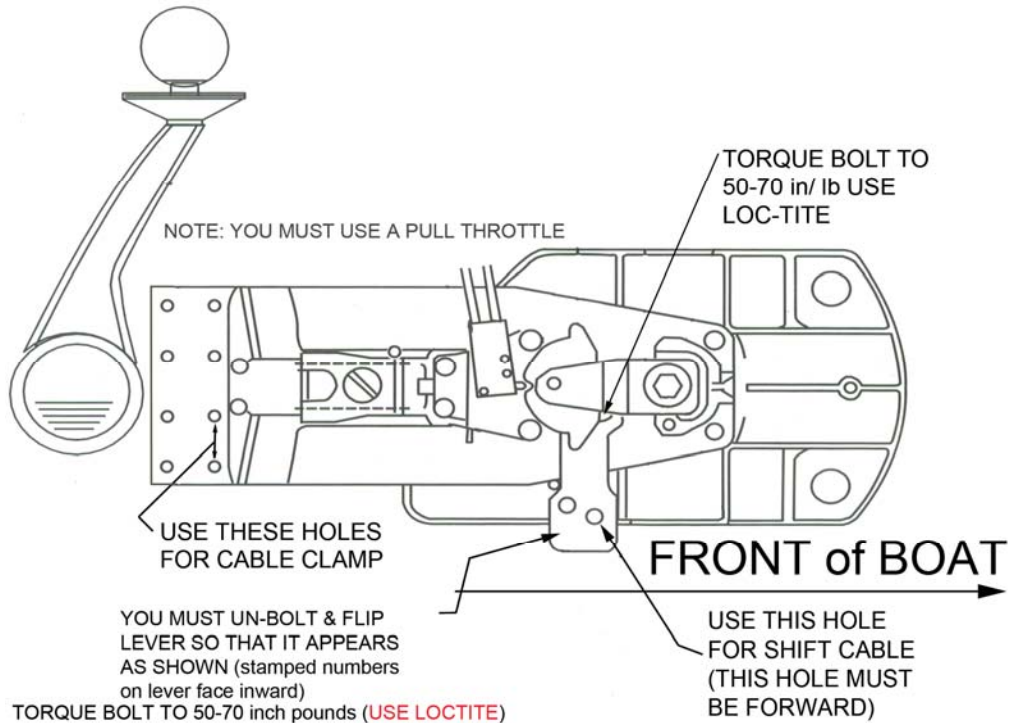
CHECK ALL FASTENERS BEFORE TESTING OR DELIVERLY

1/4" BOLTS	10 ft/LB
5/16" BOLTS	20 ft/LB
3/8" BOLTS	25 ft/LB
1/2" BOLTS	70 ft/LB
5/8" BOLTS	70 ft/LB
5/16" WINGNUT	FINGER TIGHT PLUS ½ TURN
3/8" WINGNUT	FINGER TIGHT PLUS ½ TURN



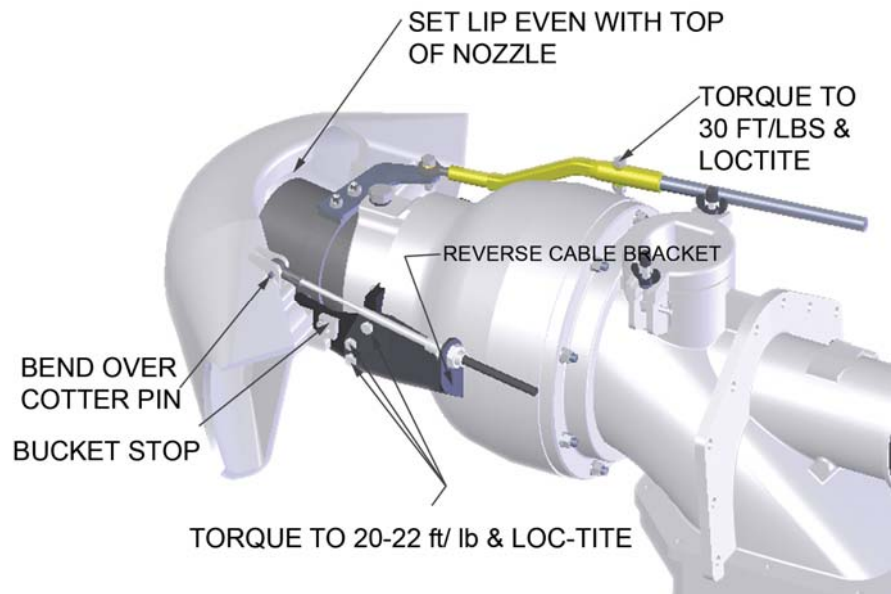
# AMERICAN TURBINE

## SDR INSTALL INSTRUCTIONS FOR TELEFLEX SPORTJET SHIFTER - MODEL # 311508



### PROCEDURE:

1. BOLT ON STEERING ASSEMBLY SO IT APPEARS AS SHOWN INCLUDING THE REVERSE CABLE BRACKET.
2. MAKE CHANGES TO SHIFTER AS SHOWN ABOVE.
3. PLACE SHIFTER IN REVERSE.
4. RUN REVERSE CABLE THRU CABLE BRACKET.
5. SCREW ON ROD END, FASTEN TO REVERSE BUCKET WITH CLEVIS THEN USE COTTER PIN TO RETAIN.
6. PLACE SHIFTER IN REVERSE. ADJUST JAMB NUTS ON CABLE CONDUIT SO THAT BUCKET IS TIGHT AGAINST THE BUCKET STOP.
7. CONNECT STEERING EXTENSION AND CENTER STEERING WHEEL BY ROTATING THE WHITE PLASTIC BALL ON THE STEERING TUBE (LOOSEN BALL BEZEL FOUR SCREWS).



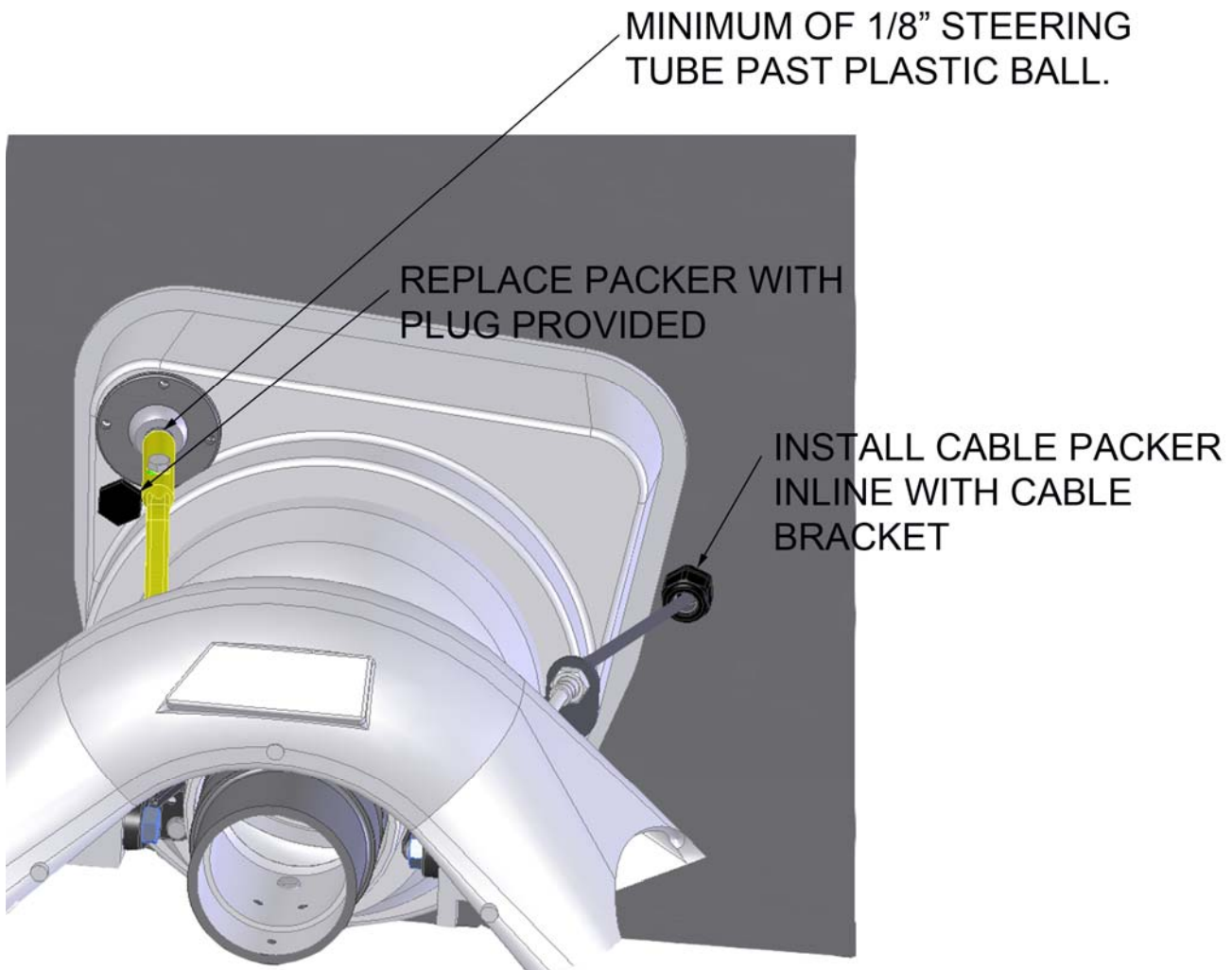
# AMERICAN TURBINE

## SDR INSTALL INSTRUCTIONS

### FOR TRANSOM HOUSING

#### PROCEDURE

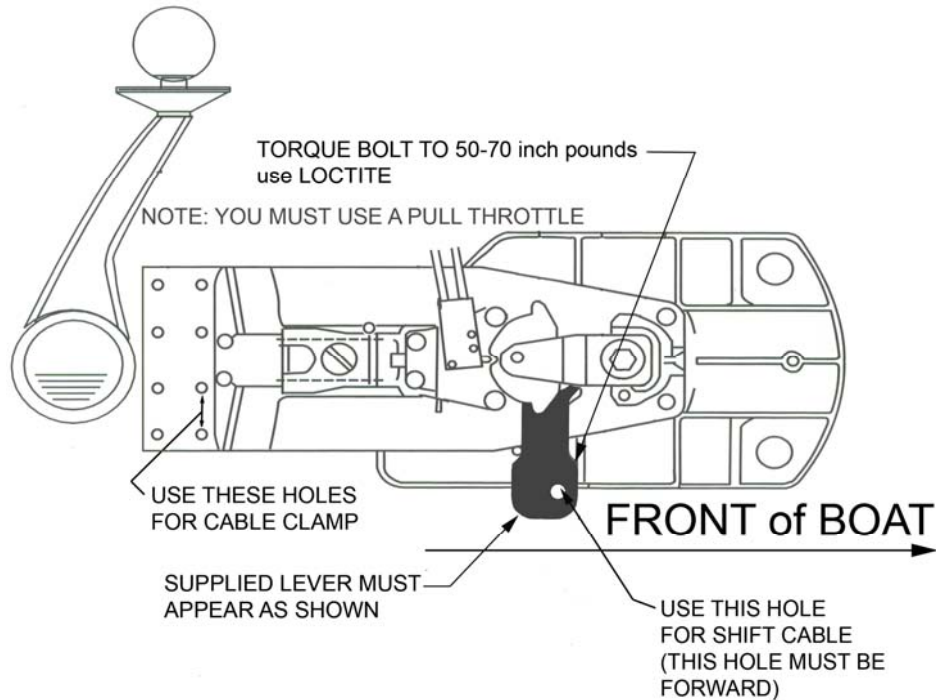
1. Install studs into bowl approx. 5/8". Bolt on assembly with nuts and lock washers.
2. Un-screw steering tube from plastic ball. Screw the long threaded end of the tube into the ball.
3. Connect the steering cable to the short threaded end of the steering tube.
4. To center the steering wheel screw the plastic ball in or out. The steering tube must come through the ball at 1/8".
5. You must change to a pull throttle.



# AMERICAN TURBINE

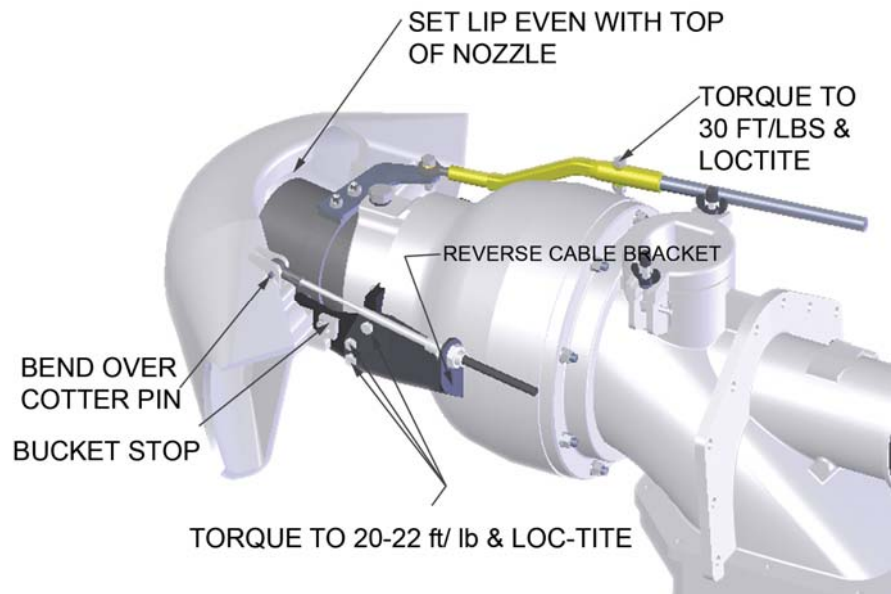
## SDR INSTALL INSTRUCTIONS

FOR OTHER THAN TELEFLEX SPORTJET SHIFTER - MODEL # 311508



### PROCEDURE:

1. BOLT ON STEERING ASSEMBLY SO IT APPEARS AS SHOWN INCLUDING THE REVERSE CABLE BRACKET.
2. MAKE CHANGES TO SHIFTER AS SHOWN ABOVE.
3. PLACE SHIFTER IN REVERSE.
4. RUN REVERSE CABLE THRU CABLE BRACKET.
5. SCREW ON ROD END, FASTEN TO REVERSE BUCKET WITH CLEVIS THEN USE COTTER PIN TO RETAIN.
6. PLACE SHIFTER IN REVERSE. ADJUST JAMB NUTS ON CABLE CONDUIT SO THAT BUCKET IS TIGHT AGAINST THE BUCKET STOP.
7. CONNECT STEERING EXTENSION AND CENTER STEERING WHEEL BY ROTATING THE WHITE PLASTIC BALL ON THE STEERING TUBE (LOOSEN BALL BEZEL FOUR SCREWS).



# AMERICAN TURBINE

## UPGRADING SD-309 & SD-312 STANDARD STEERING TO HTR II

1. Remove steering nozzle assembly.
2. Remove steering cable bezel (optional)
3. Remove original shift cable.
4. Remove original throttle / shifter.
5. Drill holes in transom as shown in (Exhibit I). Existing steering cable bezel may not have to be removed.
6. Bolt steering assembly to bowl using bottom two bolts.
7. Bolt port side pivot bracket (41) and starboard side pivot bracket (33) to steering assembly as shown in the (Exploded View AA).
8. Finish installing fasteners into steering assembly torque all to 20-25 ft/lbs.
9. Install reverse bucket (60). Slide washer (73) and sleeve (37) over bolt (35) use high strength loc-tite. Thread into pivot brackets torque to 50-55 ft/lbs.
10. Bolt shift shaft bezel assembly (Exhibit J) to transom (plastic ball has no threads) use sealant.
11. Bolt steering cable bezel assembly (Exhibit K) to transom (plastic ball has threads) use sealant. (You may retain the original if the location does not interfere).
12. Insert shift shaft (48) into bezel. Machined flat on shaft is outside the transom.
13. Slide white plastic collar onto shift shaft.
14. Slide reverse lever arm (50) onto shift shaft. Orient as shown in (Exhibit L)
15. Insert shift shaft into pivot bracket (33)
16. On the inside of the transom remove the top two nuts on the suction piece flange (Exhibit M).
17. Install rod brake assembly as shown in (Exhibit N).
18. Connect lock housing (13) to shift lever arm (22). Insert lock hub (12) into lever use high strength loc-tite. Use sparingly as excessive amounts will foul proper operation. Torque to 20 ft/lbs. (Exploded View AA)
19. Insert steering cable into steering cable bezel assembly (Exhibit K).
20. Tighten cable nut onto steering tube (45) make sure cable housing is tight against steering tube.
21. Slide steering extension (71) onto cable. Fasten w / bolt & locknut provided. Torque to 25 ft/lbs.
22. Insert steering extension (71) into clevis (70). Fasten w / bolt & locknut provided. Torque to 20 ft/lbs.
23. To center steering wheel remove ball flange (31). Adjust steering tube ball (46) to center steering wheel. Replace ball flange (31). Torque bolts to 6-7 ft/lbs. (Exhibit K).
24. Connect the push-pull rod (55) to the reverse bucket (60) by inserting bolt (56) into male rod end (57), tapered sleeve (58) and then into hole in reverse bucket. Fasten w / locknut (59) and torque to 20 ft/lbs. (Exhibit L)
25. Slide reverse lever arm (50) along shift shaft (48) so that it is parallel with push-pull rod (55). Tighten taper pin (51) 15 ft/lbs. (Exhibit L)

# **AMERICAN TURBINE**

## **UPGRADING SD-309 & SD-312**

### **STANDARD STEERING TO HTR II (CONT.)**

26. Install shifter / throttle per manufacturer directions.
27. Connect shift cable to shifter per manufacturer directions.
28. Connect shift cable to rod brake assembly using 64 series cable clamp (4) and fasteners provided. Attach cable to control rod bracket (3). Use holes closest to center of boat. (Exhibit M)
29. Adjusting reverse bucket. Move lock housing as far to the left as possible (make sure reverse bucket is not contacting the steering nozzle (63). With one nut threaded all the way up on the end of the shift cable, insert the shift cable into the lock housing (13). Pull the shift lever all the way into reverse. Place nut onto end of shift cable. Use removable loc-tite. Tighten both nuts against lock housing (13). Adjust reverse bucket to "just" clear steering nozzle (63). Disconnect the push-pull rod (55) from reverse lever arm (50). Turn push-pull rod in and out so that reverse bucket "just" clears steering nozzle when turned lock to lock. Push shift lever full forward. Check if reverse bucket completely clears steering nozzle. Pull shift lever into full reverse. Check that push-pull rod (55) is resting against shift shaft (48).

#### **Operation of HTR II steering**

This system is known as reverse sense steering i.e. backing of a boat with this system will be opposite of backing an automobile.

The easiest way to learn how to back is to turn the steering wheel in the same direction as you want the bow to go.

Once you have a little "seat time" you will be able to do things with your boat that no other system can do.

You can make counter clockwise or clockwise turns without advancing the boat.

Note: Never increase the throttle without bucket in full reverse. These boats are not equipped with a neutral lockout. Always make sure the throttle is in the idle position and the shifter is in the neutral position before starting.

Always hold the shifter in the neutral position when starting.

# AMERICAN TURBINE

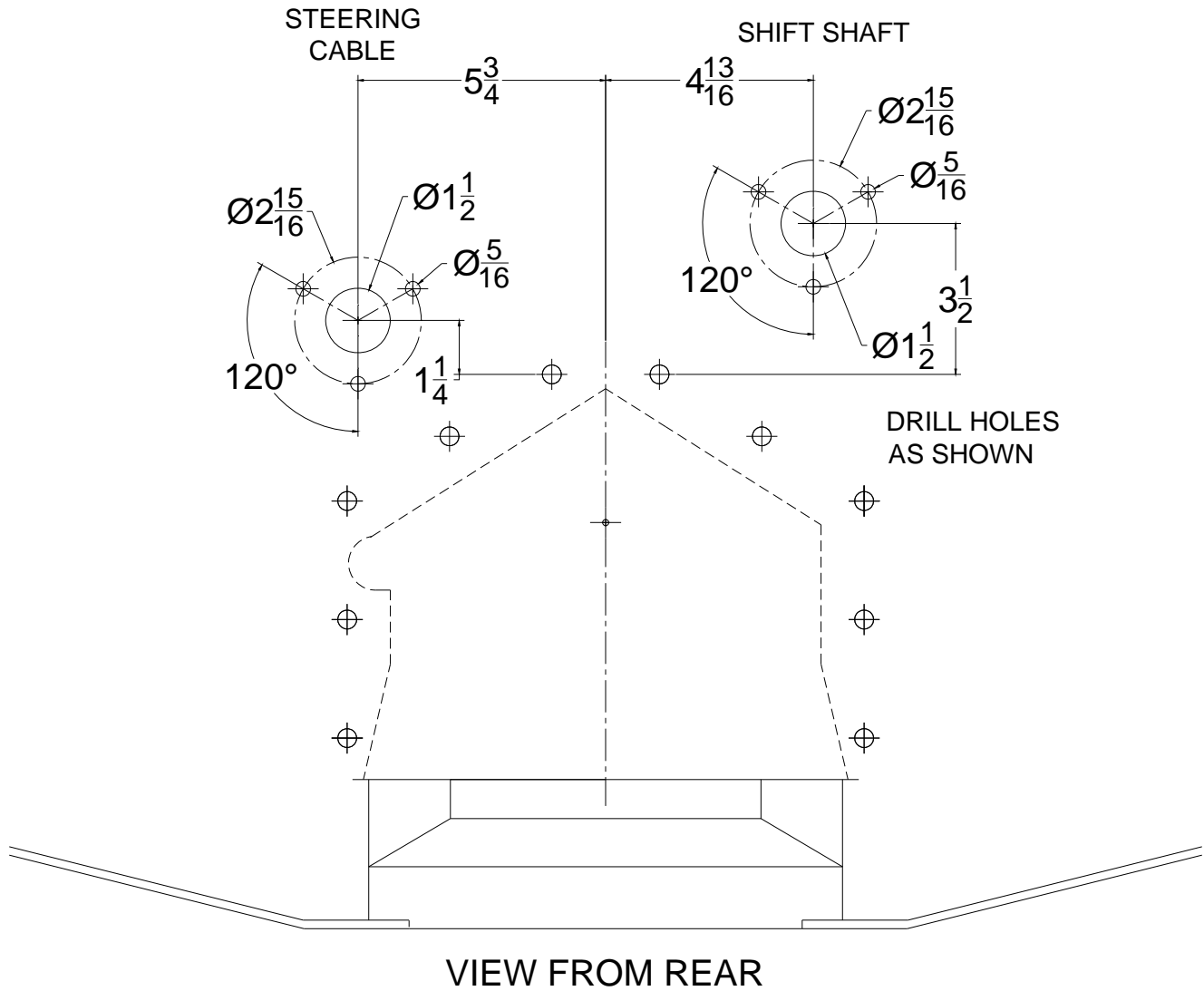


EXHIBIT I

# AMERICAN TURBINE

## SHIFT SHAFT BEZEL ASSEMBLY

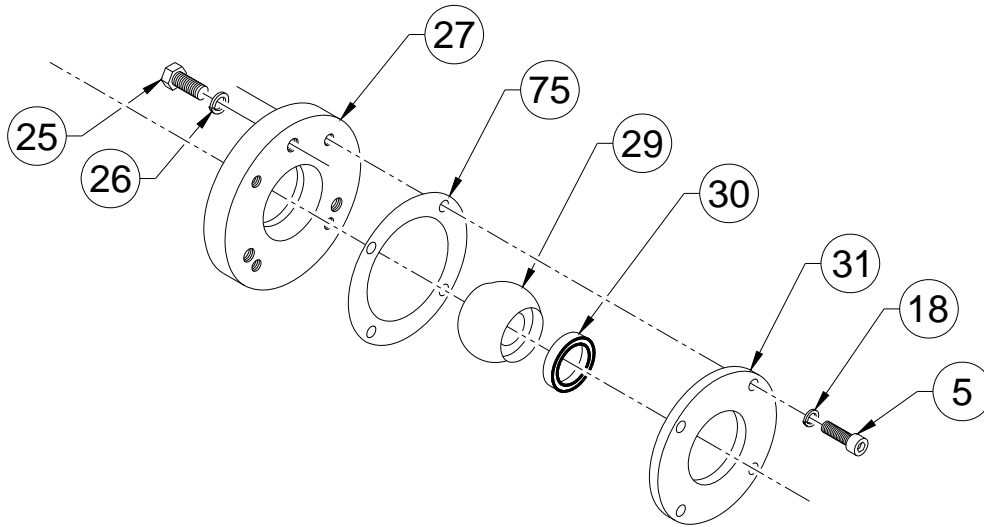


EXHIBIT J

## STEERING CABLE BEZEL ASSEMBLY

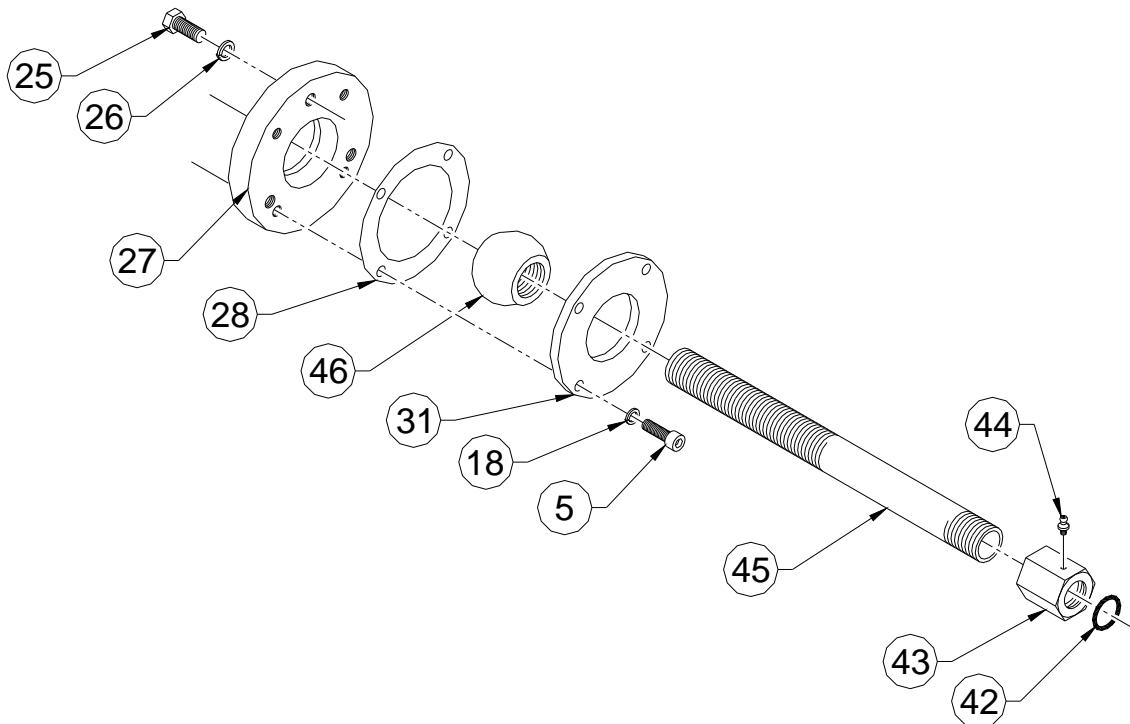


EXHIBIT K

# AMERICAN TURBINE

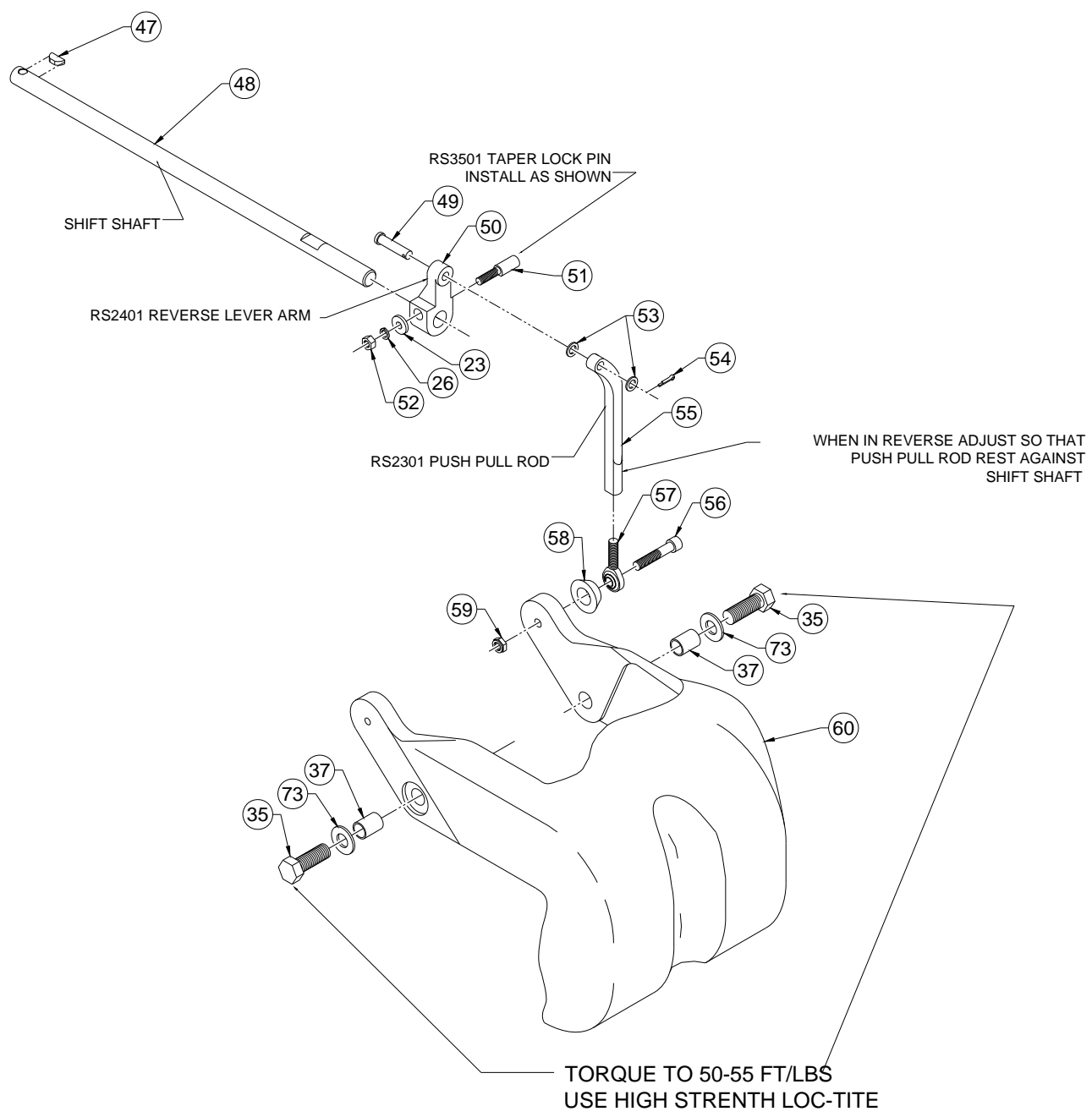


EXHIBIT L



# AMERICAN TURBINE

## BRAKE ROD ADJUSTMENTS

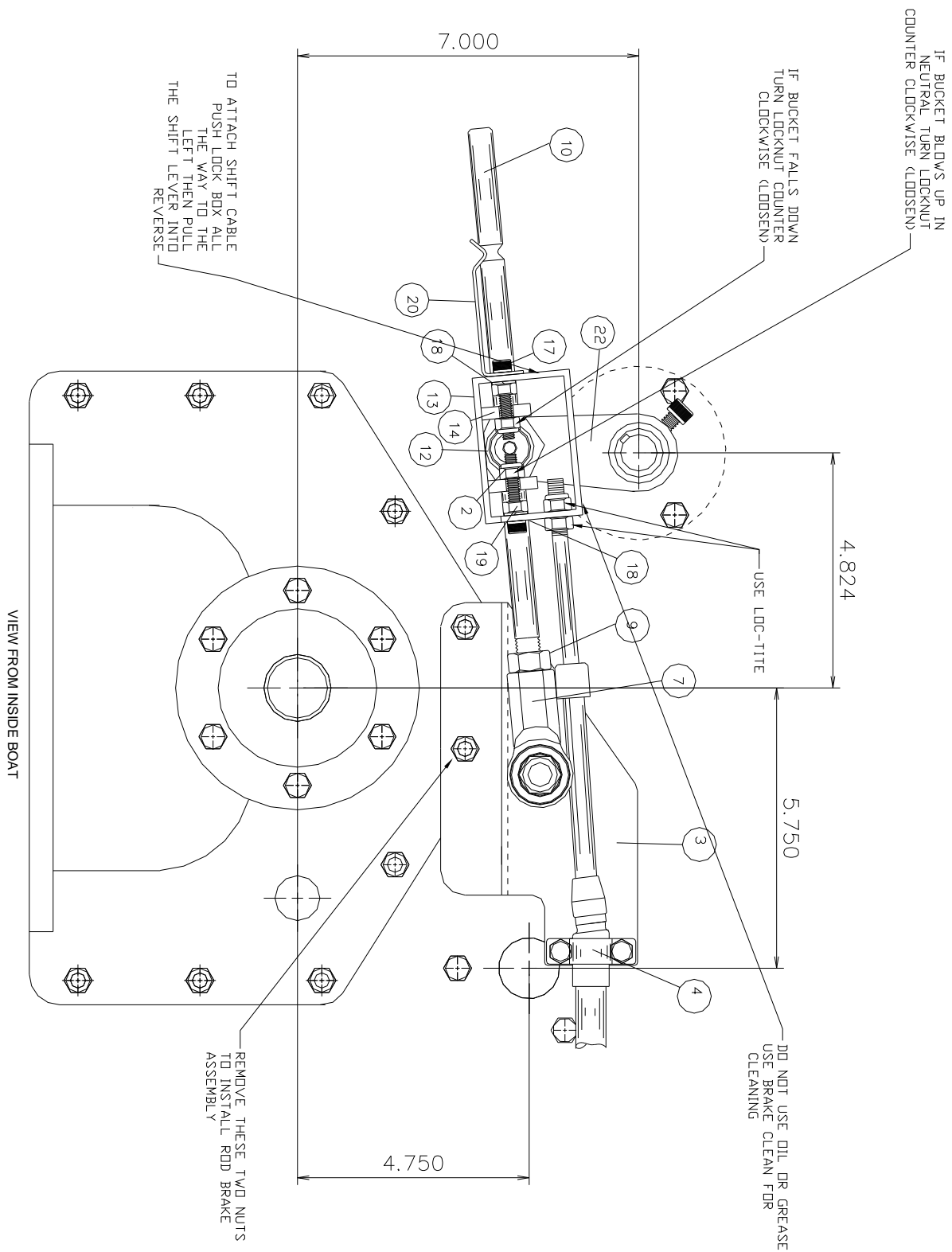
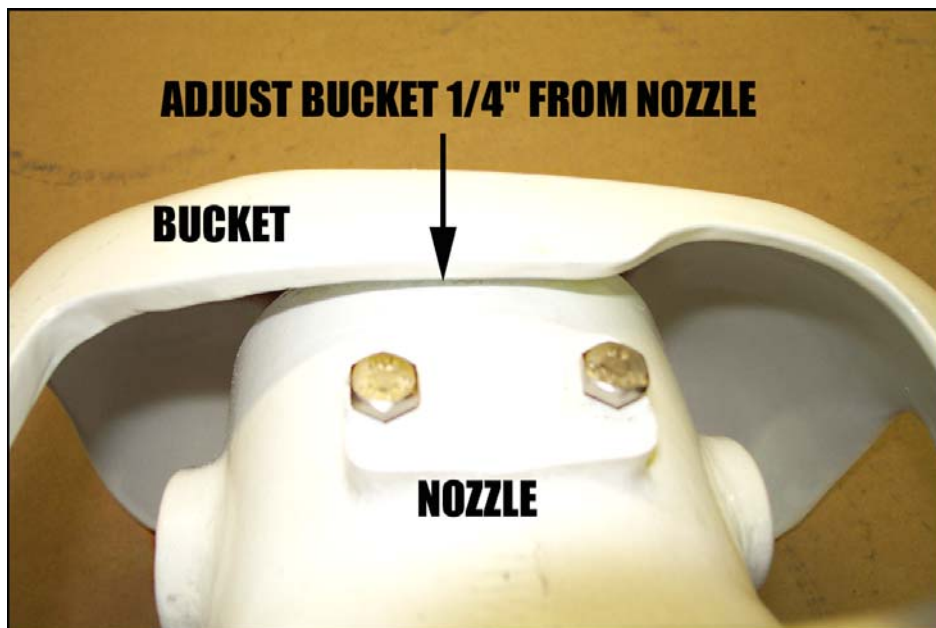
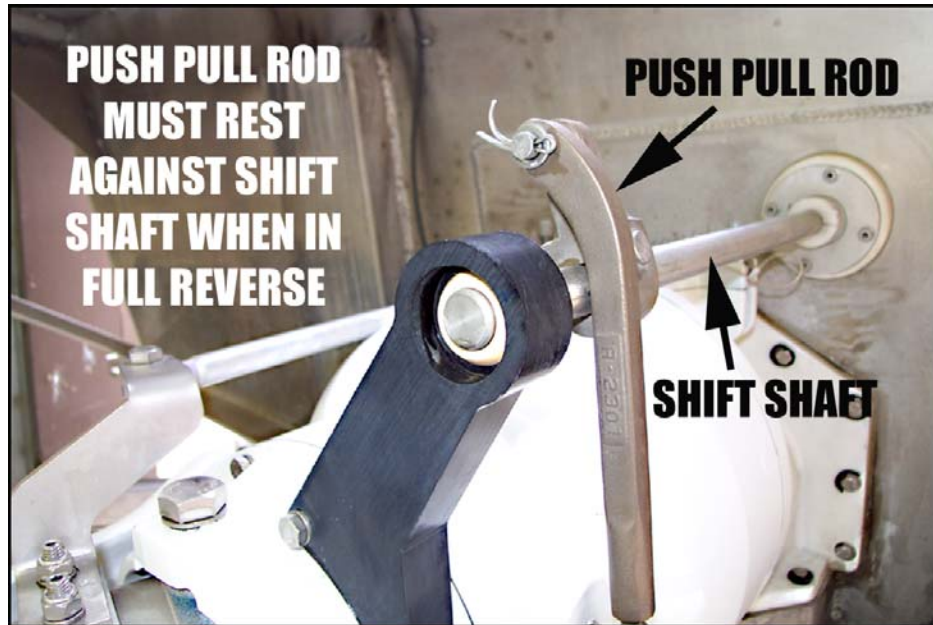


EXHIBIT M

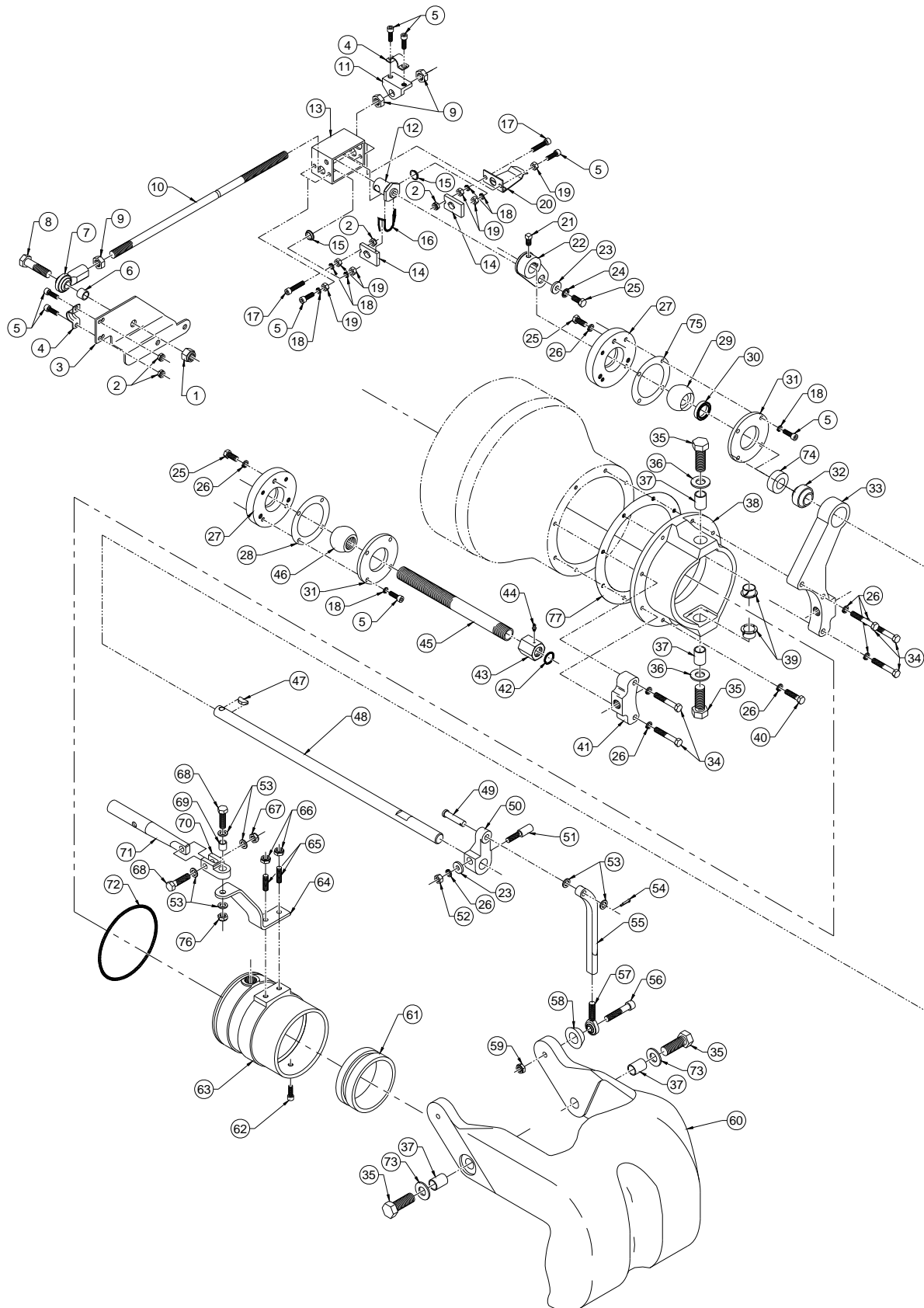
# AMERICAN TURBINE

## HTR II ADJUSTMENTS



# AMERICAN TURBINE

## EXPLODED VIEW AA



# AMERICAN TURBINE

## HTR II STEERING (W / R1007)

PART # RSK2101

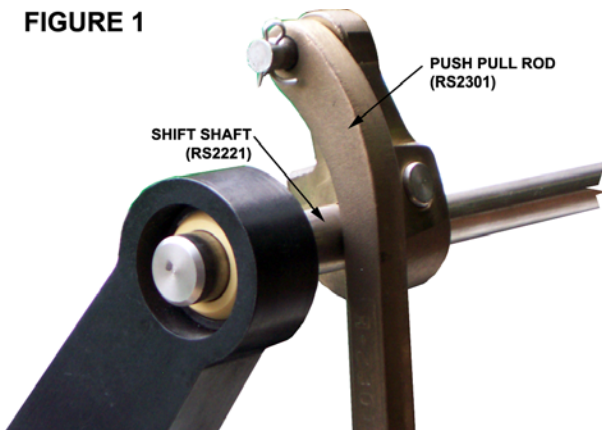
### LEGEND

SYM.	DESCRIPTION	QTY.	PART NO.	SYM.	DESCRIPTION	QTY.	PART NO.
1	LOCK NUT, 1/2-13	1	F08 13 LN	40	HHCS, 5/16-18 X 1-1/4	3	F05 18 10 HH
2	LOCK NUT, 1/4-20	4	F04 20 LN	41	PIVOT BRACKET (PORT)	1	RS2501
3	CONTROL ROD BRACKET	1	RS1001	42	O-RING, STEERING CABLE SEAL	1	O3501
4	64 SERIES CABLE CLAMP	1	RS5801	43	STEERING TUBE SEAL	1	T3107
5	SHCS, 1/4-20 X 7/8	12	F04 20 07 SH	44	GREASE ZERK	1	M4801
6	PLASTIC BUSHING	1	BN2010	45	STEERING TUBE	1	T3007
7	FEMALE ROD END, 1/2-20	1	F08 20 FRE	46	STEERING TUBE BALL	1	T2601
8	HHCS, 1/2-13 X 1-3/4	1	F08 13 14 HH	47	WOODRUFF KEY	1	R5507
9	JAMB NUT, 1/2-20	3	F08 20 JN	48	SHIFT SHAFT	1	RS5221
10	BRAKE ROD	1	RS5101	49	CLEVIS PIN, 3/8	1	F06 CL
11	CABLE BRACKET	1	RS6101	50	REVERSE LEVER ARM	1	RS2401
12	LOCK HUB	1	RS3101	51	TAPER PIN	1	RS3501
13	LOCK HOUSING	1	RS2901	52	HEX NUT, 5/16-18	1	F05 18 HN
14	LOCK PLATE	2	RS3001	53	AN FLAT WASHER, 3/8	6	F06 AN
15	NYLINER BEARING	2	RS3201	54	COTTER PIN, 1/8 X 1/2	1	F02 04 CP
16	LOCK BLOCK SPRING	1	RS2802	55	PUSH PULL ROD	1	RS2301
17	SHCS, 1/4-20 X 1-3/8	2	F04 20 11 SH	56	SHCS, 3/8-24 X 2	1	F06 24 16 SH
18	LOCK WASHER, 1/4	13	F04 LW	57	MALE ROD END, 3/8-24	1	F06 24 MRE
19	HEX NUT, 1/4-20	6	F04 20 HN	58	TAPERED SLEEVE	1	RS2621
20	DETENT SPRING	1	RS2701	59	THIN LOCK NUT, 3/8-24	1	F06 24 TL
21	SHCS, 5/16-18 X 1/2	1	F05 18 04 SH	60	REVERSE BUCKET	1	RS2101
22	LEVER ARM (SHIFT SHAFT)	1	RS5201	61	NOZZLE INSERT	1	R7370
23	THICK WASHER, 5/16	1	F05 TW	62	SHCS, 5/16-18 X 1	1	F05 18 08 SH
24	STAR LOCK WASHER, 5/16	1	F05 SW	63	NOZZLE, STEERING	1	R2001
25	HHCS, 5/16-18 X 3/4	7	F05 18 06 HH	64	TILLER ARM	1	RS2911
26	LOCK WASHER, 5/16	15	F05 LW	65	SET SCREW, 5/16-18 X 1-1/2	2	F05 18 12 SS
27	BEZEL (SHIFT ROD / STEERING)	2	RS5001	66	LOCK NUT, 5/16-18	2	F05 18 LN
28	GASKET	1	G4001	67	THIN LOCK NUT, 3/8-24	1	F06 24 TL
29	SHIFT ROD BALL	1	RS5621	68	HHCS, 3/8-24 X 1-1/2	2	F06 24 12 HH
30	SHIFT ROD SEAL	1	RS5601	69	BRONZE BUSHING 3/8 X 1/2	1	RS2623
31	BALL FLANGE	2	T2701	70	CLEVIS	1	R8007
32	SPERICAL BEARING	1	RS5351	71	STEERING EXTENSION	1	R9601
33	PIVOT BRACKET (STARBOARD)	1	RS2201	72	O-RING, STEERING NOZZLE	1	O1505
34	HHCS, 5/16-18 X 2-1/4	5	F05 18 18 HH	73	THICK WASHER, 5/8	2	F10 TW
35	HHCS, 5/8-11 X 1-3/4	4	F10 11 14 HH	74	PLASTIC COLLAR	1	RS6201
36	THICK WASHER, 5/8	2	F10 TW	75	GASKET, SHIFT SHAFT	1	G4001
37	BUSHING (BUCKET PIVOT)	4	RS2131	76	LOCK NUT, 3/8-24	1	F06 24 LN
38	NOZZLE HOUSING	1	R1007	77	NOZZLE HOUSING GASKET	1	G2507
39	NYLINER BEARING	2	B2007				

# AMERICAN TURBINE

## HTR II REVERSE BUCKET ADJUSTMENT

**FIGURE 1**

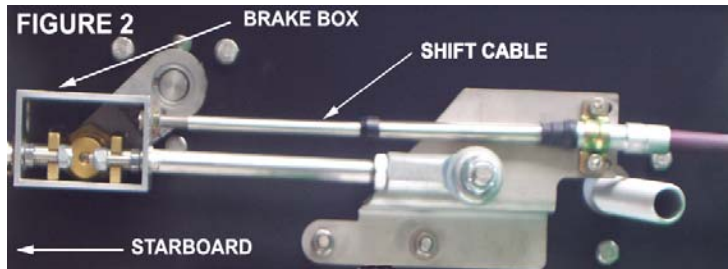
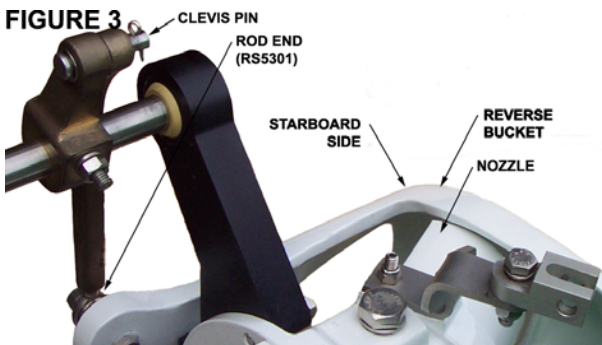


1. Shift the forward reverse lever into reverse.
2. Observe that the push-pull rod is resting against the shift shaft. If it is not; disconnect the shift cable from the brake box, push the brake box to the starboard side until the push-pull rod is resting against the shift shaft. Without moving the brake box extend the shift cable (see note) then re-connect to the brake box (use loc-tite). If the cable does not reach re-adjust the cable at the shifter. Check adjustment by shifting into reverse, grab reverse bucket by hand and try to move into forward.

**NOTE:** If the shift lever is hard to operate you have a shifter cable problem.

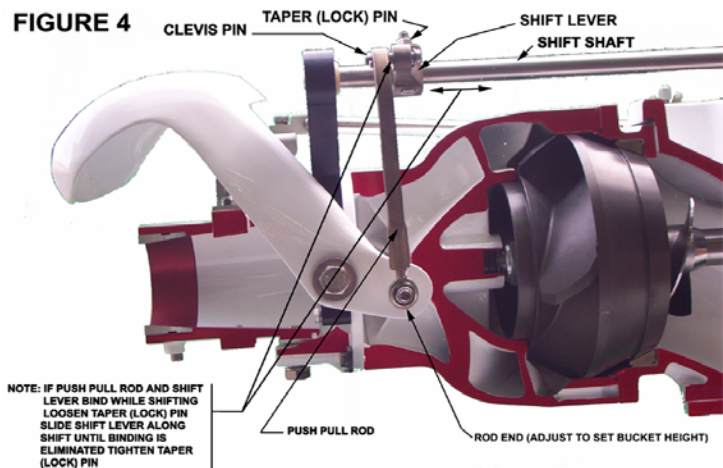
3. Check the reverse bucket height. Shift into reverse steer to full starboard, the bucket should just touch the nozzle. If it does not; remove the clevis pin that connects the lever and the push-pull rod. Rotate CW to lower, CCW to raise.

**FIGURE 3**



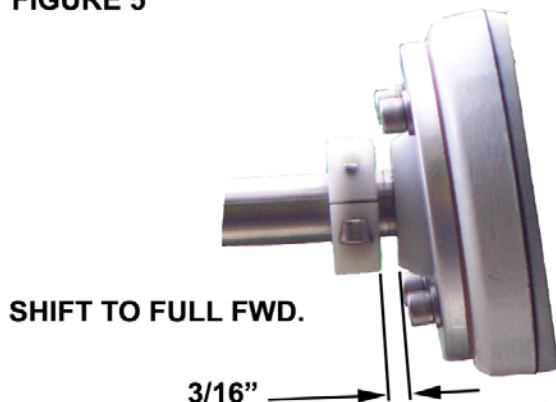
4. Observe that the push-pull rod and shift lever are not binding during the shift. If they are; loosen the taper (lock) pin, slide the shift lever along the shaft until the two do not bind. Tighten the taper (lock) pin and re-test.

**FIGURE 4**



5. Observe that the shaft lock collar is 3/16" from the plastic ball when the bucket is in the full forward position.

**FIGURE 5**



# AMERICAN TURBINE

## TROUBLE SHOOTING HTR II HARD SHIFTING INTO REVERSE

### ENGINE RUNNING

Engine must be warmed up and not idling above 750 RPM  
Adjust idle

If shifting continues to be difficult make sure that in the process of shifting the engine rpm does not increase.

NOTE: Some shifters have been imparting movement into the throttle linkage causing the engine rpm to increase.

### ENGINE NOT RUNNING SEE FIGURES 4 & 5

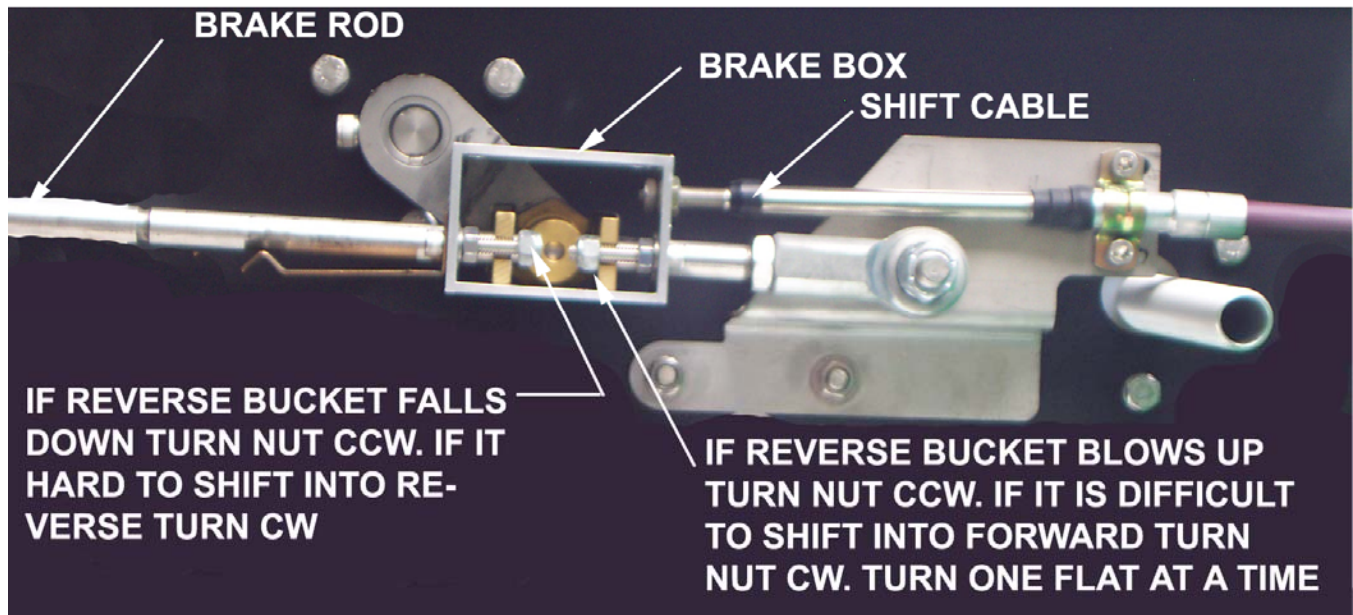
If hard shifting continues remove clevis pin from push-pull rod and shift lever. Lift reverse bucket it must move freely, if not; pivot bolts may have been over tightened and swelled in the hole, if so replace bushings and torque to 45 ft/lb and use loctite.

Check for corrosion, clean and lubricate if needed.

Before re-connecting shift lever operate shift lever at helm. Does it shift without much effort? If not loosen the (4) socket head fasteners figure (5). If that eases the shifting add a gasket (G4001) and tighten bolts.

FIGURE 6

See figure 6 for brake box adjustments.



NOTE: Brake boxes are set at the factory. Perform all other adjustments first

Clean with brake clean, do not use oil or grease.



# AMERICAN TURBINE

## HYDRAULIC TRIM PUMP DIAGRAM

NOTE: Plastic fittings are included to seal hydraulic as they pass through the transom.  
 Drill the transom w/ 7/16" & tap 1/2-20.  
 Use automatic transom fluid. Cycle up and down several times then bleed all lines

