HALLE RSD FLEX SERIES PUMP
GEARBOX POSITION - VERTICAL, DISCHARGE POSITION - 1
ENGINE ROTATION AND OPTIONAL GEARBOX COOLER SHOWN

NOTES:
1. PRIMING SYSTEM, DISCHARGE & Suction values, pressure relief valves & controllers and thermal relief valves are available.
2. USE SAE 60-LONG LIFE SYNTHETIC MANUAL TRANSMISSION FLUID MEETING API J5-77
3. FILL GEARBOX UNTIL OIL LEVEL INDICATOR WINDOW IS 1/2 TO 3/4 FULL
4. APPROXIMATE OIL CAPACITY IS 1.5 QUARTS [1.4 LITERS]
5. SEE NOTES 4 & 5
6. PUMP ASSEMBLY MOUNTING
   1. MOUNTING SHOULD BE FROM BOTH VOLUTE AND GEARBOX
   2. PUMP MOUNTING SUPPORT SHOULD BE VIA THE PUMP VOLUTE MOUNTING HOLES
   3. PUMP MOUNTING SUPPORT SHOULD BE FROM THE STUDS PROVIDED (3 MIN.
   4. CONSIDERATION MUST BE TAKEN NOT TO TRANSFER LOADS OR TWISTING MOMENTS TO OR THROUGH PUMP ASSEMBLY FROM CHASSIS, FRAME, BODY, WORK, SUCTION AND DISCHARGE PIPING CONNECTIONS.
7. REFER TO "MAXIMUM TORQUE VALUES AND "THREAD LOCKS & SEALANTS" TABLES WHEN INSTALLING THREADED COMPONENTS.

INSTALLATION

4 INCH ASA CLASS 150 DISCHARGE FLANGE (8) .600 (17.0) HOLES ON 7.50 [191.0] B.C.

INPUT SHAFT - INERTIA WITH PUMPED WATER

GUSH TYPE RSD/GB PUMP MODEL IDENTIFICATION

THE HALE TYPE RSD/RSD-GB PUMP IS AVAILABLE WITH MULTIPLE DRIVE RATIOS TO ADAPT
OF GEAR DRIVE AS SHOWN IN DRAWING.

THE MODEL / SERIAL NUMBER PLATE IS LOCATED ON TOP
OF DRIVEN GEAR UNIT

THE MODEL NUMBER FOR AN RSD RATED AT
5000 (LPM) WITH A DRIVE RATIO OF 2.33 AND
INPUT RPM PUMP MODEL MAX GEARBOX

MAXIMUM ALLOWABLE HYDRODYNAMIC PRESSURE: 400 PSIG
MAXIMUM ALLOWABLE HYDROSTATIC PRESSURE: 500 PSIG

PUMP WEIGHT [DRY] 

ROW VERSION [20.5 (50 kg)]
BRONZE VERSION 220 [440 (100 kg)]

OPTIONS AND ACCESSORIES

1.31
E

GEAR RATIOS & PUMP MODELS

PUMP WEIGTH [DRY] 

ROW VERSION [20.5 (50 kg)]
BRONZE VERSION 220 [440 (100 kg)]

GEAR RATIOS & PUMP MODELS

PUMP MODEL MAX GEARBOX INPUT RPM

PUMP MODEL MAX GEARBOX INPUT RPM

RECOMMENDATIONS OUTLINED ON THIS DRAWING COULD DAMAGE
THE PUMP AND RESULT IN PERSONAL INJURY.

FACTOR TO BE REPRODUCED OR USED TO
MAKE OTHER DRAWINGS OR MACHINER

SCALE

SIZE

DIMENSIONS ARE IN INCHES

CONNECTION

MATERIAL & GRADE / CLASS OF FASTENER.

REPRESENTS CENTER OF GRAVITY

THREAD LOCKS & SEALANTS

PRINCIPAL OF DRAWING

PATENTED IN INVENTORSHIP & COPYRIGHT ©

THE DRAWINGS ARE PROPERTY OF IDIX CORPORATION

THE PUMP MOUNTING SUPPORT SHOULD BE VIA THE PUMP VOLUTE MOUNTING HOLES.

INSTALLATION

4 INCH ASA CLASS 150 DISCHARGE FLANGE (8) .600 (17.0) HOLES ON 7.50 [191.0] B.C.

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REPRESENTS CENTER OF GRAVITY

THREAD LOCKS & SEALANTS

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REPRESENTS CENTER OF GRAVITY

THREAD LOCKS & SEALANTS

PRINCIPAL OF DRAWING

PATENTED IN INVENTORSHIP & COPYRIGHT ©

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THE PUMP MOUNTING SUPPORT SHOULD BE VIA THE PUMP VOLUTE MOUNTING HOLES.
ENGINE ROTATION VOLUTE POSITION

THE CAST "I" ON PUMP HEAD TO POINT UP FOR INVERTED GEARBOX POSITION.

OPPOSITE ENGINE ROTATION VOLUTE POSITION

THE CAST "ARROW" ON PUMP HEAD TO POINT UP FOR ALL GEARBOX POSITIONS, EXCEPT INVERTED POSITION.

GEARBOX POSITIONS

THE CAST "I" ON PUMP HEAD TO POINT UP FOR INVERTED GEARBOX POSITION.

GEARBOX AND DISCHARGE POSITIONS

STANDARD OIL LEVEL INDICATOR LOCATION

*FOR SPECIFIC VOLUTE POSITIONS, OIL LEVEL INDICATOR TO BE LOCATED HERE

HORIZONTAL LH - 22.5°
(NOT AVAILABLE WITH ENGINE MOUNT)

HORIZONTAL LH

VERTICAL
(PUMP OVER INPUT)

INVERTED
(INPUT OVER PUMP)

HORIZONTAL RH

HORIZONTAL RH - 22.5°
(NOT AVAILABLE WITH ENGINE MOUNT)
NOTES:
1. LEVEL 1 REPAIR KIT PROVIDES EVERYTHING NEEDED TO CHANGE SEALS.
2. LEVEL 2 REPAIR KIT PROVIDES LEVEL 1 AND ITEMS NEEDED FOR BEARINGS.
3. LEVEL 3 REPAIR KIT PROVIDES LEVEL 1 & 2 AND ITEMS TO REPLACE GEARS.
4. IMPELLER RENEW KIT PROVIDES LEVEL 1 REPAIR KIT AND ITEMS TO REPLACE IMPELLER.
5. REFER TO TECHNICAL MANUAL (FSG-MNL-00184) AND "MAXIMUM TORQUE VALUES" AND "THREAD LOCKS & SEALANTS" TABLES ON SHEET 1 WHEN INSTALLING THREADED COMPONENTS, OIL SEALS/CAPS, OR CLEARANCE RINGS.

**REPAIR PART KITS IDENTIFICATION**

<table>
<thead>
<tr>
<th>RATIO</th>
<th>GEAR RATIO</th>
<th>LEVEL 1 REPAIR KIT P/N</th>
<th>LEVEL 2 REPAIR KIT P/N</th>
<th>LEVEL 3 REPAIR KIT P/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>-29F</td>
<td>2.91</td>
<td>546-00068-329</td>
<td>546-00068-326</td>
<td>546-00068-323</td>
</tr>
<tr>
<td>-26F</td>
<td>2.60</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-23F</td>
<td>2.33</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-19F</td>
<td>1.90</td>
<td>546-00068-319</td>
<td>546-00068-316</td>
<td>546-00068-313</td>
</tr>
<tr>
<td>-16F</td>
<td>1.64</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-11F</td>
<td>1.14</td>
<td>546-00068-311</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**IMPELLER RENEW KIT PART NUMBERS**

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>PART NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>75-125 IMPELLER RENEW KIT (OER)</td>
<td>516-00028-010</td>
</tr>
<tr>
<td>75-125 IMPELLER RENEW KIT (ER)</td>
<td>516-00028-000</td>
</tr>
<tr>
<td>150 IMPELLER RENEW KIT (OER) - 6&quot; VIC</td>
<td>516-00029-010</td>
</tr>
<tr>
<td>150 IMPELLER RENEW KIT (ER) - 6&quot; VIC</td>
<td>516-00029-000</td>
</tr>
<tr>
<td>150 IMPELLER RENEW KIT (OER) - RAMHORN</td>
<td>516-00030-010</td>
</tr>
<tr>
<td>150 IMPELLER RENEW KIT (ER) - RAMHORN</td>
<td>516-00030-000</td>
</tr>
</tbody>
</table>
### PARTS IDENTIFICATION

#### PUMP HEAD GROUP

**NOTES:**
1. REFER TO TECHNICAL MANUAL (FSG-MNL-00184) AND "MAXIMUM TORQUE VALUES" AND "THREAD LOCKS & SEALANTS" TABLES ON SHEET 1 WHEN INSTALLING THREADED COMPONENTS, OIL SEALS, OR CLEARANCE RINGS.

---

**TABLE A** - 'K' PORT FLANGE OPTIONS

<table>
<thead>
<tr>
<th>TABLE &quot;A&quot; - 'K' PORT FLANGE OPTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>IRON BRONZE</td>
</tr>
<tr>
<td>FLANGE TYPE</td>
</tr>
<tr>
<td>1-1/4&quot; NPT</td>
</tr>
<tr>
<td>1-1/2&quot; NPT</td>
</tr>
<tr>
<td>2-1/2&quot; NPT</td>
</tr>
<tr>
<td>3&quot; NPT</td>
</tr>
<tr>
<td>TRV &amp; TRV-L (SEE PL729)</td>
</tr>
<tr>
<td>ALLOY OR MAGNESIUM ANODE (SEE NOTE 7)</td>
</tr>
</tbody>
</table>

**TABLE B** - SUCTION HEAD & CLEARANCE RING

<table>
<thead>
<tr>
<th>TABLE &quot;B&quot; - SUCTION HEAD &amp; CLEARANCE RING</th>
</tr>
</thead>
<tbody>
<tr>
<td>750 - 1250 GPM</td>
</tr>
<tr>
<td>6&quot; VIC SUCTION HEAD - IRON</td>
</tr>
<tr>
<td>6&quot; VIC SUCTION HEAD - BRONZE</td>
</tr>
<tr>
<td>CLEARANCE RING</td>
</tr>
</tbody>
</table>

**TABLE C** - IMPELLER, WRAP WEAR RING & INDUCER

<table>
<thead>
<tr>
<th>TABLE &quot;C&quot; - IMPELLER, WRAP WEAR RING &amp; INDUCER</th>
</tr>
</thead>
<tbody>
<tr>
<td>750 - 1250 GPM</td>
</tr>
<tr>
<td>IMPELLER (ER)</td>
</tr>
<tr>
<td>IMPELLER (OER)</td>
</tr>
<tr>
<td>RING, REAR, WRAP AROUND 321-00017-000</td>
</tr>
<tr>
<td>INDUCER (ER)</td>
</tr>
<tr>
<td>INDUCER (OER)</td>
</tr>
</tbody>
</table>

---

**ITEM NO.** | **PART NUMBER** | **DESCRIPTION** | **QTY.**
----------|----------------|----------------|------
1 | 018-1812-25-0 | SCREW, 7/16-14 X 1.25, GR8 | 200
2 | 018-1812-12-0 | SCREW, 7/16-14 X 1.25, SS, BRZ | 200
3 | 046-1640-00-0 | GASKET | 2
4 | SEE TABLE B | SUCTION HEAD 6IN VICT | 1
5 | 002-5181-00-0 | 002-5401-00-0 | 2
6 | 040-1580-00-0 | O-RING, AS568-158, NITRILE | 1
7 | 082-0303-02-0 | 018-1812-12-0 | N/A
8 | 032-0330-00-0 | 018-1812-12-0 | N/A
9 | 115-0070-00-0 | 018-1822-25-0 | N/A
10 | 115-0080-00-0 | 018-1824-25-0 | N/A
11 | 115-1260-00-0 | 018-1812-12-0 | N/A
12 | 115-1260-01-0 | 018-1812-12-0 | N/A
13 | 115-1260-00-0 | 018-1812-12-0 | N/A
14 | 115-1260-01-0 | 018-1812-12-0 | N/A
15 | 115-1260-00-0 | 018-1812-12-0 | N/A
16 | 115-1260-01-0 | 018-1812-12-0 | N/A
17 | 115-1260-00-0 | 018-1812-12-0 | N/A
18 | 115-1260-01-0 | 018-1812-12-0 | N/A
19 | 115-1260-00-0 | 018-1812-12-0 | N/A
20 | 115-1260-01-0 | 018-1812-12-0 | N/A
21 | 115-1260-00-0 | 018-1812-12-0 | N/A
22 | 115-1260-01-0 | 018-1812-12-0 | N/A
23 | 115-1260-00-0 | 018-1812-12-0 | N/A
24 | 115-1260-01-0 | 018-1812-12-0 | N/A
25 | 115-1260-00-0 | 018-1812-12-0 | N/A
26 | 115-1260-01-0 | 018-1812-12-0 | N/A
27 | 115-1260-00-0 | 018-1812-12-0 | N/A
28 | 115-1260-01-0 | 018-1812-12-0 | N/A
29 | 115-1260-00-0 | 018-1812-12-0 | N/A
30 | 115-1260-01-0 | 018-1812-12-0 | N/A
31 | 115-1260-00-0 | 018-1812-12-0 | N/A
32 | 115-1260-01-0 | 018-1812-12-0 | N/A
33 | 115-1260-00-0 | 018-1812-12-0 | N/A
34 | 115-1260-01-0 | 018-1812-12-0 | N/A
35 | 115-1260-00-0 | 018-1812-12-0 | N/A
36 | 115-1260-01-0 | 018-1812-12-0 | N/A

---

**SECTION A-A**

**SCALE 1 : 3**

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---

**PROJECT DLM**

**DATE**

**APPROVED**

**DRAWN**

**SIZE**

**DRAWING NUMBER**

**REV**

**SHEET**

**SCALE**

**FLANGE TYPE**

**FLANGE PN**

**SCREW, 7/16-14**

**SCREW, 7/16-14**

**NOTES:**

REFER TO TECHNICAL MANUAL (FSG-MNL-00184) AND "MAXIMUM TORQUE VALUES" AND "THREAD LOCKS & SEALANTS" TABLES ON SHEET 1 WHEN INSTALLING THREADED COMPONENTS, OIL SEALS, OR CLEARANCE RINGS.
HALE RSD FLEX SERIES PUMP

GEARBOX POSITION - INVERTED, DISCHARGE POSITION - 1
ENGINE ROTATION AND OPTIONAL GEARBOX COOLER SHOWN

NOTES:
1. REFER TO "MAXIMUM TORQUE VALUES" AND "THREAD LOCKS & SEALANTS" TABLES ON SHEET 1 WHEN INSTALLING THREADED COMPONENTS.