GEARBOX POSITIONS

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)

ENGINE ROTATION (ER)

DISCHARGE POSITIONS

1 2 3 4 5 6 7 8

OPPOSITE ENGINE ROTATION (OER)

1 2 3 4 5 6 7 8

DISCHARGE AND GEARBOX POSITIONS

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

IF IN DOUBT ASK
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.

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REPAIR PART KITS IDENTIFICATION

PUMP ASSEMBLY
3.74 RATIOS

IMPELLER RENEW KIT PART NUMBERS

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>PART NUMBER</th>
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</thead>
<tbody>
<tr>
<td>IMPELLER RENEW KIT (OER)</td>
<td>516-00026-023</td>
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<tr>
<td>IMPELLER RENEW KIT (ER)</td>
<td>516-00026-024</td>
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PUMP ASSEMBLY
ALL RATIOS EXCEPT 3.74

---

REPAIR KIT PART NUMBERS

<table>
<thead>
<tr>
<th>RATIO NAME</th>
<th>GEAR RATIO</th>
<th>LEVEL 2 REPAIR KIT P/N</th>
<th>LEVEL 3 REPAIR KIT P/N</th>
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<tbody>
<tr>
<td>-37F</td>
<td>3.74</td>
<td>546-00067-100</td>
<td>546-00067-200</td>
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<td>-29F</td>
<td>2.91</td>
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<td>546-00067-337</td>
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<td>-23F</td>
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<td>546-00067-326</td>
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<td>-16F</td>
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<td>-13F</td>
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<td>546-00067-313</td>
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<td>-11F</td>
<td>1.14</td>
<td>546-00067-260</td>
<td>546-00067-311</td>
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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.
PARTS IDENTIFICATION
PUMP SHAFT GROUP

ITEM 7 TABLE
PUMP GEAR PART NUMBER

<table>
<thead>
<tr>
<th>RATIO</th>
<th>GEAR NAME</th>
<th>RATIO</th>
<th>PUMP GEAR PIN (GEAR TEETH)</th>
<th>MATING GEAR PIN (GEAR TEETH)</th>
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</thead>
<tbody>
<tr>
<td>-37F</td>
<td>3.74</td>
<td>031-1980-00-0 (19T)</td>
<td>031-00017-00-0 (11T)</td>
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<tr>
<td>-35F</td>
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<td>031-2180-00-0 (23T)</td>
<td>031-02018-00-0 (15T)</td>
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<td>-32F</td>
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<tr>
<td>-29F</td>
<td>2.33</td>
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<td>031-04025-00-0 (20T)</td>
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<tr>
<td>-26F</td>
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</tr>
</tbody>
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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 OR OIL SEALS/CAPS.
HALE FLEX SERIES CBPM PUMP
GEARBOX POSITION - INVERTED, DISCHARGE POSITION - 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.

WARNING
EXCEEDING THESE LIMITS OR FAILURE TO FOLLOW THE RECOMMENDATIONS OUTLINED ON THIS DRAWING COULD DAMAGE THE PUMP AND RESULT IN PERSONAL INJURY.

MAXIMUM ALLOWABLE ENGINE SPEED: 4000 RPM (DRIVE CPLNG)
MAXIMUM ALLOWABLE HYDRODYNAMIC PRESSURE: 400 PSIG
MAXIMUM ALLOWABLE HYDROSTATIC PRESSURE: 500 PSIG

ENGINE MOUNT (M) INSTALLATION

SERIAL NUMBER
4x 3/8 NPT PRIMING CONNECTION
DISCHARGE 2 NPT or HALE 115 FLANGE

FACE TO FACE OF MTG BOSSES
9.79 [248.0]
4.51 [114.5]
3.50 [88.9]

OIL FILL & BREATHER SEE NOTES 2 & 3 ON SHEET 1

3x 1/2 NPT PRESSURE GAUGE CONNECTION

OIL LEVEL INDICATOR SEE NOTES 2 & 3 ON SHEET 1

PUMP MODEL & SERIAL NUMBER
SEE NOTES 2 & 3 ON SHEET 1

4x 3/8 NPT DRAIN CONNECTION

PUMP MODEL & SERIAL NUMBER
SEE NOTES 2 & 3 ON SHEET 1

1/2" NPT MAGNETIC DRAIN PLUG

SAE 3 HOUSING

SAE #3 HOUSING

SAE #4 HOUSING

SAE #10 FLYWHEEL

SAE #11.5 FLYWHEEL

MAXIMUM ENGINE RPM

WARNING
EXCEEDING THESE LIMITS OR FAILURE TO FOLLOW THE RECOMMENDATIONS OUTLINED ON THIS DRAWING COULD DAMAGE THE PUMP AND RESULT IN PERSONAL INJURY.

MAXIMUM ALLOWABLE ENGINE SPEED: 4000 RPM (DRIVE CPLNG)
MAXIMUM ALLOWABLE HYDRODYNAMIC PRESSURE: 400 PSIG
MAXIMUM ALLOWABLE HYDROSTATIC PRESSURE: 500 PSIG

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

NOTES:

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