INTRODUCTION
The following instructions apply to assembling motor mounts to Mercury Mars Planetgear™ speed reducers. These motor mounts are drilled for standard T-frame motors. The T-frame motor sizes are as follows: 143T/145T, 182T/184T, 213T/215T, and 245T/256T.

Note: The motor mount plate is designed only for the motor frames sizes listed above. Consult Rexnord for any reducer/motor combination that is not listed.

All Mercury and Mars reducers need the installation of mounting feet prior to motor mount installation.

MOTOR MOUNT ORIENTATION
Motor mounts can be assembled to a reducer in the 9, 12, or 3 o’clock positions. Reference Figure 1.

ASSEMBLY OF MOTOR MOUNT
1. Assemble the oil drain plumbing. Reference Planetgear drawing number MMM.

Note: Pipe length changes with respect to the size of the reducer’s main case. Reference Planetgear drawing number MMM. Pipe length by maincase MR2400405, use item 2, MR2400402, use item 5, and 2400402X, use item 6.

Note: All plumbing connections require pipe sealant to avoid leakage during reducer operation.

- Attach street elbow (item 1) to reducer maincase. After completely tightened, the elbow should be pointing towards the input shaft.
- Attach 1-1/2" long pipe (item 3) to street elbow (item 1).
- Attach 45 degree elbow (item 4) to 1-1/2" long pipe (item 3).
- Attach pipe (item 6, 5, or 2) to 45 degree elbow.
- Attach pipe cap (item 12) to pipe (item 6, 5, or 2)

2. Position the motor mount frame to the reducer as shown in Planetgear drawing number 78860017 (Page 4). Attach to the reducer mounting feet as showing in Planetgear drawing number MMM (Page 3). Reference Table 1 (Page 2) for required bolt torque values.

3. Position the 4 taper socket head cap screws into the mounting plate and hold in place with 1 nut each. Tighten nuts. Reference Figure 2.

4. Attach a second nut onto each cap screw so that each nut is equal distance from the first nut on the cap screw. Reference Figure 2.

5. Place the mounting plate/cap screw assembly onto the mounting brackets on the reducer as shown in Planetgear drawing number 78860017.

6. Attach the third nut loosely onto each cap screw to hold the mounting plate/cap screw assembly onto mounting brackets.

7. Mount motor to mounting plate and tighten motor bolts. (Grade 5 bolts or equivalent are recommended.) Reference Table 1 for recommended bolt torque values.

8. Mount sheaves and install bells.

9. Adjust the belt tension by loosening or tightening the nuts located just above the mounting bracket. Refer to belt manufacturer for correct belt tensioning.

Note: Mount sheaves and belts as close to the reducer as possible to avoid undue overhung loading on the bearings.

10. When motor height is established, tighten the bottom nuts to secure mounting plate in place and replace or install guarding.

WARNING: All rotating equipment must be properly guarded in accordance with OSHA standards. Failure to do so may result in personal injury or property damage.

CAUTION: Make sure motor mounting plate is level and all bolts are tightened before reducer is put into service.
### TABLE 1 — Torque Requirements For:

#### DRY FASTENERS (INCH)

<table>
<thead>
<tr>
<th>SAE</th>
<th>DIAMETER</th>
<th>1/4</th>
<th>5/16</th>
<th>3/8</th>
<th>7/16</th>
<th>1/2</th>
<th>9/16</th>
<th>5/8</th>
<th>3/4</th>
<th>7/8</th>
<th>1</th>
<th>1 1/8</th>
<th>1 1/4</th>
<th>1 3/8</th>
<th>1 1/2</th>
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<tbody>
<tr>
<td>GENERAL PURPOSE GRADE 2</td>
<td>TORQUE (ft lb)</td>
<td>6</td>
<td>12</td>
<td>21</td>
<td>34</td>
<td>52</td>
<td>75</td>
<td>104</td>
<td>178</td>
<td>184</td>
<td>265</td>
<td>380</td>
<td>530</td>
<td>700</td>
<td>930</td>
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<tr>
<td>HIGH STRENGTH GRADE 5</td>
<td>TORQUE (ft lb)</td>
<td>9</td>
<td>18</td>
<td>33</td>
<td>53</td>
<td>80</td>
<td>116</td>
<td>160</td>
<td>285</td>
<td>460</td>
<td>690</td>
<td>850</td>
<td>1200</td>
<td>1570</td>
<td>2080</td>
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<tr>
<td>ALLOY STEEL GRADE 8</td>
<td>TORQUE (ft lb)</td>
<td>13</td>
<td>26</td>
<td>47</td>
<td>74</td>
<td>114</td>
<td>164</td>
<td>225</td>
<td>400</td>
<td>650</td>
<td>970</td>
<td>1370</td>
<td>1940</td>
<td>2540</td>
<td>3370</td>
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#### DRY FASTENERS (METRIC)

<table>
<thead>
<tr>
<th>GRADE</th>
<th>NOMINAL DIAMETER STANDARD PITCH</th>
<th>M5</th>
<th>M6</th>
<th>M7</th>
<th>M8</th>
<th>M10</th>
<th>M12</th>
<th>M14</th>
<th>M16</th>
<th>M18</th>
<th>M20</th>
<th>M22</th>
<th>M24</th>
<th>M27</th>
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<tbody>
<tr>
<td>8.8</td>
<td>TORQUE (Nm)</td>
<td>6.15</td>
<td>10.5</td>
<td>17.5</td>
<td>26</td>
<td>51</td>
<td>89</td>
<td>141</td>
<td>215</td>
<td>295</td>
<td>420</td>
<td>570</td>
<td>725</td>
<td>1070</td>
<td>1450</td>
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<tr>
<td>10.9</td>
<td>TORQUE (Nm)</td>
<td>8.65</td>
<td>15</td>
<td>25</td>
<td>36</td>
<td>72</td>
<td>125</td>
<td>198</td>
<td>305</td>
<td>420</td>
<td>590</td>
<td>800</td>
<td>1020</td>
<td>1510</td>
<td>2050</td>
</tr>
<tr>
<td>12.9</td>
<td>TORQUE (Nm)</td>
<td>10.4</td>
<td>18</td>
<td>29</td>
<td>43</td>
<td>87</td>
<td>150</td>
<td>240</td>
<td>365</td>
<td>500</td>
<td>710</td>
<td>960</td>
<td>1220</td>
<td>1810</td>
<td>2450</td>
</tr>
</tbody>
</table>

- The torques shown produce a clamp load of 80% of proof load. They assume clean, dry threads with a torque coefficient of 0.2 and a coefficient of friction of 0.14.
- Plated threads need only 3/4 torque shown.
- Well lubricated threads need only 1/2 torque shown.
- Source: Rexnord Engineering Specification: GES8-19, 04/10/79
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Sizes Mercury/Mars

MOUNTING HOLE LOCATIONS FOR 213T/215T FRAME MOTORS

MOUNTING HOLE LOCATIONS FOR 254T/256T FRAME MOTORS
NOTE: MOTOR MOUNT PLATE IS ROTATED 180° FOR 254T/256T FRAME MOTORS ONLY

ADDED ACCESS HOLES

<table>
<thead>
<tr>
<th>ITEM</th>
<th>QTY.</th>
<th>PART NO.</th>
<th>DESCRIPTION</th>
</tr>
</thead>
</table>

NOTE: MOTOR MOUNT PLATE IS ROTATED 180° FOR 254T/256T FRAME MOTORS ONLY
OVERALL DIMENSION AND HOUSING CONFIGURATIONS
MOTOR MOUNTING HOLE CONFIGURATIONS

OVERALL DIMENSION AND HOUSING CONFIGURATIONS

<table>
<thead>
<tr>
<th>ADDED ACCESS HOLES</th>
<th>ALL DIMENSIONS IN MILLIMETERS</th>
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</thead>
<tbody>
<tr>
<td>ITEM</td>
<td>QTY.</td>
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</table>
| 11-12-02 68-11313 JSP JAK | 88-10975 JDM | 78860025 | REXNORD INDUSTRIES, LLC
| 05-19-98 | 88-10975 JDM | 78860025 |

NOTE: MOTOR MOUNT PLATE IS ROTATED 180° FOR 160M/160L FRAME MOTORS ONLY

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Rexnord Industries, LLC, 3001 W. Canal St., Zip 53208-4200, Milwaukee, WI
Telephone: 414-342-3131 Fax: 414-937-4359
e-mail: falkinfo@falkcorp.com web: www.falkcorp.com

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