INSPECTION AND REPAIR REFERENCE DATA

OBSS JOINT ANGLES VS POR COORDINATES (TBS)
AUTO SEQUENCES (TBS)
COORDINATE SYSTEM – PL ID 1 OBSS UNBERTH/BERTH......................... FS 6-2
2 OBSS BOOM MNVRS ................................................. FS 6-3
3 LDRI SURVEYS.......................................................... FS 6-4
4 LCS SURVEYS.......................................................... FS 6-5

GO/NO-GO CRITERIA (TBS)
ATTITUDE CONTROL CONSTRAINTS (TBS)
SRMS EE CAM JOINT ANGLES VS POR COORDINATES (TBS)
AUTO SEQUENCE (TBS)
COORDINATE SYSTEM – PL ID 5 (TBS)
EVA SUPPORT JOINT ANGLES VS POR COORDINATES (TBS)
COORDINATE SYSTEM – PL ID 5A (UPLINK) (TBS)
ORM JOINT ANGLES VS POR COORDINATES......................................................... FS 6-6
AUTO SEQUENCES........................................................................................... FS 6-7
COORDINATE SYSTEM – PL ID 4B (UPLINK) (TBS)
5B (UPLINK) (TBS)
GO/NO-GO CRITERIA (TBS)
ATTITUDE CONTROL CONSTRAINTS (TBS)
OBSS COORDINATE SYSTEM – PL ID 1 OBSS UNBERTH/BERTH

GF: FWD

POR: Located at Fwd striker bar

PURPOSE: OBSS berthing and unberthing operations

RATES: COARSE VERN

<table>
<thead>
<tr>
<th></th>
<th>COARSE</th>
<th>VERN</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRAN LIM ft/sec</td>
<td>tbd</td>
<td>tbd</td>
</tr>
<tr>
<td>ROT LIM deg/sec</td>
<td>tbd</td>
<td>tbd</td>
</tr>
</tbody>
</table>
OBSS COORDINATE SYSTEM – PL ID 2 OBSS BOOM MNVRS

GF: FWD

POR: Located at OBSS midpoint

PURPOSE: OBSS maneuvering

RATES: COARSE VERN

<table>
<thead>
<tr>
<th>TRAN LIM ft/sec</th>
<th>tbd</th>
<th>tbd</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROT LIM deg/sec</td>
<td>tbd</td>
<td>tbd</td>
</tr>
</tbody>
</table>
OBSS COORDINATE SYSTEM – PL ID 3 LDRI SURVEYS

GF: FWD

POR: Located ITVC/LDRI Pan/Tilt unit

PURPOSE: LDRI Surveys

RATES: COARSE VERN

<table>
<thead>
<tr>
<th>TRAN LIM ft/sec</th>
<th>tbd</th>
<th>tbd</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROT LIM deg/sec</td>
<td>tbd</td>
<td>tbd</td>
</tr>
</tbody>
</table>
OBSS COORDINATE SYSTEM – PL ID 4 LCS SURVEYS

GF: FWD
POR: Located LCS Eyepoint
PURPOSE: LCS Surveys
RATES: COARSE VERN
TRAN LIM ft/sec tbd tbd
ROT LIM deg/sec tbd tbd
ORM JOINT ANGLES VS POR COORDINATES

PMA2 PRE-GRAPPLE posn

<table>
<thead>
<tr>
<th>X</th>
<th>Y</th>
<th>Z</th>
<th>PITCH</th>
<th>YAW</th>
<th>ROLL</th>
<th>PL ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>-724</td>
<td>-71</td>
<td>-562</td>
<td>214</td>
<td>330</td>
<td>291</td>
<td>0</td>
</tr>
<tr>
<td>-692</td>
<td>-30</td>
<td>-504</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>-724</td>
<td>-71</td>
<td>-562</td>
<td>214</td>
<td>330</td>
<td>291</td>
<td>5</td>
</tr>
<tr>
<td>SY</td>
<td>SP</td>
<td>EP</td>
<td>WP</td>
<td>WY</td>
<td>WR</td>
<td></td>
</tr>
<tr>
<td>-33.9</td>
<td>+131.6</td>
<td>-141.8</td>
<td>-114.0</td>
<td>-41.0</td>
<td>-4.1</td>
<td></td>
</tr>
</tbody>
</table>

PMA2 GRAPPLED posn (Expected Values)

<table>
<thead>
<tr>
<th>X</th>
<th>Y</th>
<th>Z</th>
<th>PITCH</th>
<th>YAW</th>
<th>ROLL</th>
<th>PL ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>-681</td>
<td>-41</td>
<td>-533</td>
<td>214</td>
<td>330</td>
<td>290</td>
<td>0</td>
</tr>
<tr>
<td>-649</td>
<td>0</td>
<td>-475</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>-681</td>
<td>-41</td>
<td>-533</td>
<td>214</td>
<td>330</td>
<td>290</td>
<td>5</td>
</tr>
<tr>
<td>SY</td>
<td>SP</td>
<td>EP</td>
<td>WP</td>
<td>WY</td>
<td>WR</td>
<td></td>
</tr>
<tr>
<td>-61.0</td>
<td>+138.3</td>
<td>-151.5</td>
<td>-84.0</td>
<td>-51.0</td>
<td>+32.7</td>
<td></td>
</tr>
</tbody>
</table>

UNDOCKED posn

<table>
<thead>
<tr>
<th>X</th>
<th>Y</th>
<th>Z</th>
<th>PITCH</th>
<th>YAW</th>
<th>ROLL</th>
<th>PL ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>-679</td>
<td>-42</td>
<td>-729</td>
<td>215</td>
<td>330</td>
<td>290</td>
<td>0</td>
</tr>
<tr>
<td>-648</td>
<td>0</td>
<td>-671</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>-679</td>
<td>-42</td>
<td>-729</td>
<td>215</td>
<td>330</td>
<td>290</td>
<td>5</td>
</tr>
<tr>
<td>SY</td>
<td>SP</td>
<td>EP</td>
<td>WP</td>
<td>WY</td>
<td>WR</td>
<td></td>
</tr>
<tr>
<td>-76.4</td>
<td>+120.9</td>
<td>-105.1</td>
<td>-96.0</td>
<td>-49.7</td>
<td>+53.7</td>
<td></td>
</tr>
</tbody>
</table>

REPAIR posn

<table>
<thead>
<tr>
<th>X</th>
<th>Y</th>
<th>Z</th>
<th>PITCH</th>
<th>YAW</th>
<th>ROLL</th>
<th>PL ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>-852</td>
<td>-165</td>
<td>-158</td>
<td>341</td>
<td>330</td>
<td>290</td>
<td>0</td>
</tr>
<tr>
<td>-917</td>
<td>-124</td>
<td>-167</td>
<td>127</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>-852</td>
<td>-165</td>
<td>-158</td>
<td>341</td>
<td>330</td>
<td>290</td>
<td>5</td>
</tr>
<tr>
<td>SY</td>
<td>SP</td>
<td>EP</td>
<td>WP</td>
<td>WY</td>
<td>WR</td>
<td></td>
</tr>
<tr>
<td>+53.4</td>
<td>+16.3</td>
<td>-115.4</td>
<td>+32.4</td>
<td>-61.6</td>
<td>+237.4</td>
<td></td>
</tr>
</tbody>
</table>

CAPTURE posn

<table>
<thead>
<tr>
<th>X</th>
<th>Y</th>
<th>Z</th>
<th>PITCH</th>
<th>YAW</th>
<th>ROLL</th>
<th>PL ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>-681</td>
<td>-41</td>
<td>-529</td>
<td>214</td>
<td>330</td>
<td>290</td>
<td>0</td>
</tr>
<tr>
<td>-649</td>
<td>0</td>
<td>-471</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>-681</td>
<td>-41</td>
<td>-529</td>
<td>214</td>
<td>330</td>
<td>290</td>
<td>5</td>
</tr>
<tr>
<td>SY</td>
<td>SP</td>
<td>EP</td>
<td>WP</td>
<td>WY</td>
<td>WR</td>
<td></td>
</tr>
<tr>
<td>-60.7</td>
<td>+138.3</td>
<td>-152.3</td>
<td>-83.8</td>
<td>-51.0</td>
<td>+32.0</td>
<td></td>
</tr>
</tbody>
</table>
**ORM AUTO SEQUENCES**

Maneuver to REPAIR posn (PL ID 5)

<table>
<thead>
<tr>
<th>Auto Seq ID</th>
<th>Auto posn</th>
<th>X/SY</th>
<th>Y/SP</th>
<th>Z/EP</th>
<th>PITCH/WP</th>
<th>YAW/WY</th>
<th>ROLL/WR</th>
<th>Pause</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>-679</td>
<td>-42</td>
<td>-729</td>
<td>215</td>
<td>330</td>
<td>290</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-74.6</td>
<td>+120.9</td>
<td>-105.1</td>
<td>-96.0</td>
<td>-49.7</td>
<td>+53.7</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>-783</td>
<td>15</td>
<td>-732</td>
<td>236</td>
<td>291</td>
<td>327</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-55.6</td>
<td>+110.6</td>
<td>-103.8</td>
<td>-55.3</td>
<td>-37.5</td>
<td>+83.7</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>3</td>
<td>-1082</td>
<td>-104</td>
<td>-722</td>
<td>324</td>
<td>293</td>
<td>66</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-7.7</td>
<td>+65.3</td>
<td>-50.2</td>
<td>-66.0</td>
<td>-47.7</td>
<td>+69.5</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>4</td>
<td>-1017</td>
<td>-394</td>
<td>-694</td>
<td>354</td>
<td>331</td>
<td>107</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>+36.0</td>
<td>+70.4</td>
<td>-46.3</td>
<td>-52.7</td>
<td>-58.4</td>
<td>+87.9</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>5</td>
<td>-1003</td>
<td>-394</td>
<td>-637</td>
<td>347</td>
<td>356</td>
<td>124</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>+37.3</td>
<td>+80.5</td>
<td>-71.7</td>
<td>-25.7</td>
<td>-35.8</td>
<td>+115.0</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>6</td>
<td>-605</td>
<td>-340</td>
<td>-548</td>
<td>318</td>
<td>23</td>
<td>193</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>+126.4</td>
<td>+112.5</td>
<td>-117.1</td>
<td>-78.5</td>
<td>-63.1</td>
<td>+92.9</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>7</td>
<td>-364</td>
<td>-340</td>
<td>-489</td>
<td>280</td>
<td>10</td>
<td>257</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>+151.5</td>
<td>+69.4</td>
<td>-80.5</td>
<td>-73.4</td>
<td>-30.7</td>
<td>+126.6</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>8</td>
<td>-375</td>
<td>-194</td>
<td>-589</td>
<td>215</td>
<td>338</td>
<td>284</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>+170.6</td>
<td>+96.7</td>
<td>-105.9</td>
<td>-31.7</td>
<td>+17.6</td>
<td>+146.4</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>9</td>
<td>-158</td>
<td>-151</td>
<td>-381</td>
<td>206</td>
<td>345</td>
<td>273</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>+171.9</td>
<td>+31.0</td>
<td>-61.0</td>
<td>+0.1</td>
<td>+13.0</td>
<td>+134.6</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>10</td>
<td>-158</td>
<td>-151</td>
<td>-248</td>
<td>248</td>
<td>345</td>
<td>273</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>+168.4</td>
<td>+3.5</td>
<td>-28.3</td>
<td>-44.2</td>
<td>+1.0</td>
<td>+130.9</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>11</td>
<td>-340</td>
<td>-151</td>
<td>-109</td>
<td>279</td>
<td>345</td>
<td>273</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>+156.9</td>
<td>+5.2</td>
<td>-68.6</td>
<td>-32.9</td>
<td>-7.3</td>
<td>+133.0</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>12</td>
<td>-498</td>
<td>-120</td>
<td>-97</td>
<td>315</td>
<td>315</td>
<td>287</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>+143.4</td>
<td>+2.7</td>
<td>-89.4</td>
<td>-47.7</td>
<td>+6.0</td>
<td>+140.8</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>13</td>
<td>-852</td>
<td>-165</td>
<td>-158</td>
<td>341</td>
<td>330</td>
<td>290</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>+53.4</td>
<td>+16.3</td>
<td>-115.4</td>
<td>+32.4</td>
<td>-61.6</td>
<td>+237.4</td>
<td></td>
</tr>
</tbody>
</table>
Maneuver to UNDOCK posn (PL ID 5)

<table>
<thead>
<tr>
<th>Auto Seq ID</th>
<th>Auto Seq posn</th>
<th>X/ SY</th>
<th>Y/ SP</th>
<th>Z/ EP</th>
<th>PITCH/ WP</th>
<th>YAW/ WY</th>
<th>ROLL/ WR</th>
<th>Pause</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1</td>
<td>-852</td>
<td>-165</td>
<td>-158</td>
<td>341</td>
<td>330</td>
<td>290</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>+53.4</td>
<td>+16.3</td>
<td>-115.4</td>
<td>+32.4</td>
<td>-61.6</td>
<td>+237.4</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>-498</td>
<td>-120</td>
<td>-97</td>
<td>315</td>
<td>315</td>
<td>287</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>+143.4</td>
<td>+2.7</td>
<td>-89.4</td>
<td>-47.7</td>
<td>+6.0</td>
<td>+140.8</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>-340</td>
<td>-151</td>
<td>-109</td>
<td>279</td>
<td>345</td>
<td>273</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>+156.9</td>
<td>+5.2</td>
<td>-68.6</td>
<td>-32.9</td>
<td>-7.3</td>
<td>+133.0</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>-158</td>
<td>-151</td>
<td>-248</td>
<td>248</td>
<td>345</td>
<td>273</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>+168.4</td>
<td>+3.5</td>
<td>-28.3</td>
<td>-44.2</td>
<td>+1.0</td>
<td>+130.9</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>-158</td>
<td>-151</td>
<td>-381</td>
<td>206</td>
<td>345</td>
<td>273</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>+171.9</td>
<td>+31.0</td>
<td>-61.0</td>
<td>+0.1</td>
<td>+13.0</td>
<td>+134.6</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>6</td>
<td>-375</td>
<td>-194</td>
<td>-589</td>
<td>215</td>
<td>338</td>
<td>284</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>+170.6</td>
<td>+96.7</td>
<td>-105.9</td>
<td>-31.7</td>
<td>+17.6</td>
<td>+146.4</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>7</td>
<td>-364</td>
<td>-340</td>
<td>-489</td>
<td>280</td>
<td>10</td>
<td>257</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>+151.5</td>
<td>+69.4</td>
<td>-80.5</td>
<td>-73.4</td>
<td>-30.7</td>
<td>+126.6</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>8</td>
<td>-605</td>
<td>-340</td>
<td>-548</td>
<td>318</td>
<td>23</td>
<td>193</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>+126.4</td>
<td>+112.5</td>
<td>-117.1</td>
<td>-78.5</td>
<td>-63.1</td>
<td>+92.9</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>9</td>
<td>-1003</td>
<td>-394</td>
<td>-637</td>
<td>347</td>
<td>356</td>
<td>124</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>+37.3</td>
<td>+80.5</td>
<td>-71.7</td>
<td>-25.7</td>
<td>-35.8</td>
<td>+115.0</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>10</td>
<td>-1017</td>
<td>-394</td>
<td>-694</td>
<td>354</td>
<td>331</td>
<td>107</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>+36.0</td>
<td>+70.4</td>
<td>-46.3</td>
<td>-52.7</td>
<td>-58.4</td>
<td>+87.9</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>11</td>
<td>-1082</td>
<td>-104</td>
<td>-722</td>
<td>324</td>
<td>293</td>
<td>66</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-7.7</td>
<td>+65.3</td>
<td>-50.2</td>
<td>-66.0</td>
<td>-47.7</td>
<td>+69.5</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>12</td>
<td>-783</td>
<td>15</td>
<td>-732</td>
<td>236</td>
<td>291</td>
<td>327</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-55.6</td>
<td>+110.6</td>
<td>-103.8</td>
<td>-55.3</td>
<td>-37.5</td>
<td>+83.7</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>13</td>
<td>-679</td>
<td>-42</td>
<td>-729</td>
<td>215</td>
<td>330</td>
<td>290</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-74.6</td>
<td>+120.9</td>
<td>-105.1</td>
<td>-96.0</td>
<td>-49.7</td>
<td>+53.7</td>
<td>P</td>
</tr>
</tbody>
</table>