

# CM<sup>®</sup> LODESTAR<sup>®</sup>

## DIMENSION DRAWINGS

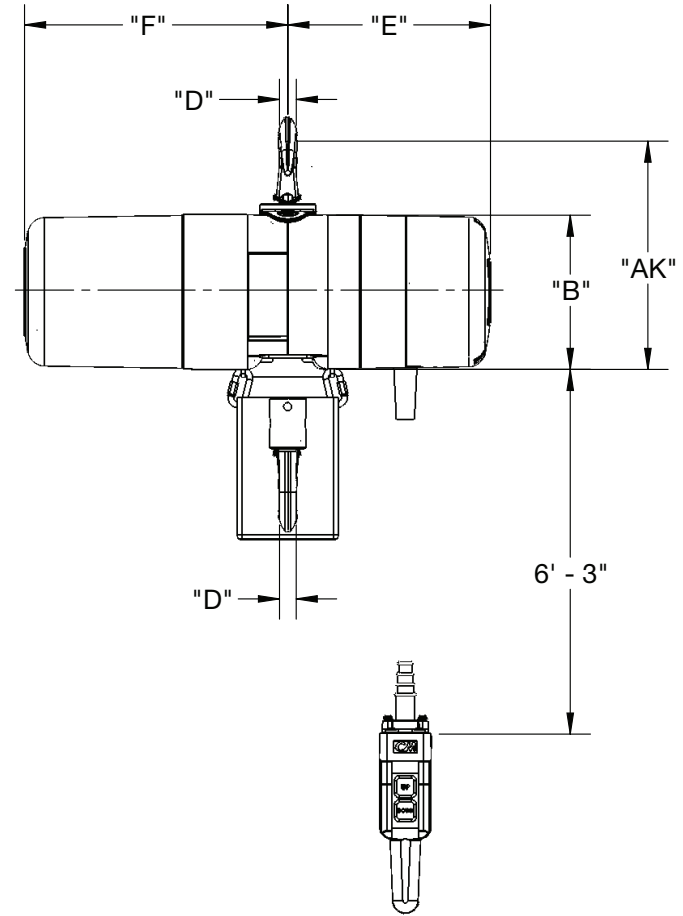
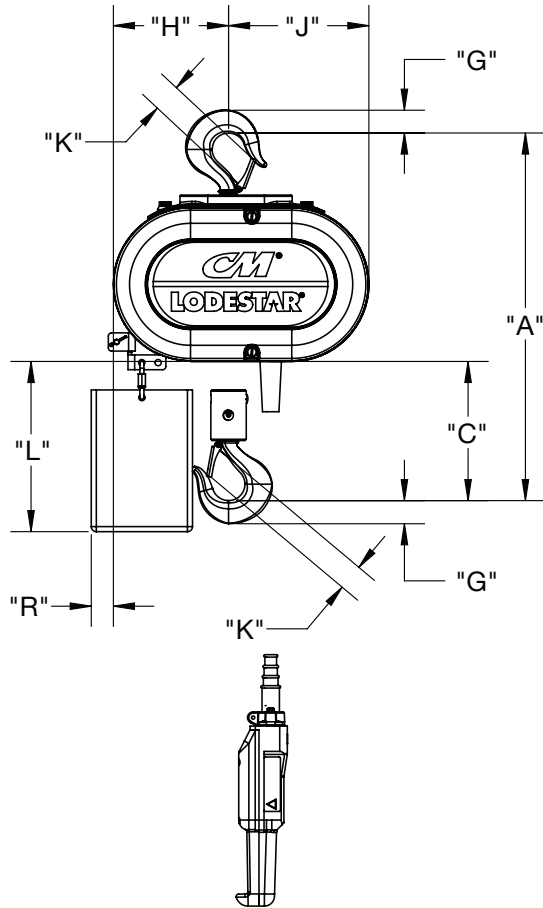


| PAGE # | DRAWING # | DESCRIPTION                                             | MODELS                                                                                                  |
|--------|-----------|---------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| 2      | NA        | Lodestar & Trolley Clearance Dimensions                 | These pages contain the dimensions for all Lodestar Models. See pages 6-33 for specific model drawings. |
| 3      | NA        | Lodestar - Hook Suspension                              |                                                                                                         |
| 4      | NA        | Lodestar - Series 635 Low Headroom Trolley              |                                                                                                         |
| 5      | NA        | Lodestar - Series 635 Motor Driven Trolley              |                                                                                                         |
| 6      | 00001462  | V2 Lodestar - Single Reeved w/Low Headroom Trolley Lug  |                                                                                                         |
| 7      | 00001463  | V2 Lodestar - Single Reeved w/ Motor Driven Trolley Lug | J, J2, JJ, JJ2, L, L2, LL, LL2                                                                          |
| 8      | 00001464  | V2 Lodestar - Single Reeved w/Rigid Hook Suspension     | J, J2, JJ, JJ2, L, L2, LL, LL2                                                                          |
| 9      | 00001465  | V2 Lodestar - Single Reeved w/Swivel Hook Suspension    | J, J2, JJ, JJ2, L, L2, LL, LL2                                                                          |
| 10     | 00001466  | V2 Lodestar - Single Reeved w/Low Headroom Trolley      | J, J2, JJ, JJ2, L, L2, LL, LL2                                                                          |
| 11     | 00001467  | V2 Lodestar - Single Reeved w/Motor Driven Trolley      | J, J2, JJ, JJ2, L, L2, LL, LL2                                                                          |
| 12     | 00001468  | V2 Lodestar - Double Reeved w/Trolley Lug               | R, R2, RR, RR2                                                                                          |
| 13     | 00001469  | V2 Lodestar - Double Reeved w/Rigid Hook Suspension     | R, R2, RR, RR2                                                                                          |
| 14     | 00001470  | V2 Lodestar - Double Reeved w/Swivel Hook Suspension    | R, R2, RR, RR2                                                                                          |
| 15     | 00001471  | V2 Lodestar - Double Reeved w/Low Headroom Trolley      | R, R2, RR, RR2                                                                                          |
| 16     | 00001472  | V2 Lodestar - Double Reeved w/Motor Driven Trolley      | R, R2, RR, RR2                                                                                          |
| 17     | 00001473  | V2 Lodestar - Triple Reeved w/Trolley Lug               | RT, RT2, RRT, RRT2                                                                                      |
| 18     | 00001474  | V2 Lodestar - Triple Reeved w/Rigid Hook Suspension     | RT, RT2, RRT, RRT2                                                                                      |
| 19     | 00001475  | V2 Lodestar - Triple Reeved w/Swivel Hook Suspension    | RT, RT2, RRT, RRT2                                                                                      |
| 20     | 00001476  | V2 Lodestar - Triple Reeved w/Low Headroom Trolley      | RT, RT2, RRT, RRT2                                                                                      |
| 21     | 00001477  | V2 Lodestar - Triple Reeved w/Motor Driven Trolley      | RT, RT2, RRT, RRT2                                                                                      |
| 22     | 00001479  | V1 Lodestar - Single Reeved w/Low Headroom Trolley Lug  | A, A2, AA, AA2, B, B2, C, C2, F, F2                                                                     |
| 23     | 00001480  | V1 Lodestar - Single Reeved w/ Motor Driven Trolley Lug | A, A2, AA, AA2, B, B2, C, C2, F, F2                                                                     |
| 24     | 00001481  | V1 Lodestar - Single Reeved w/Rigid Hook Suspension     | A, A2, AA, AA2, B, B2, C, C2, F, F2                                                                     |
| 25     | 00001482  | V1 Lodestar - Single Reeved w/Swivel Hook Suspension    | A, A2, AA, AA2, B, B2, C, C2, F, F2                                                                     |
| 26     | 00001483  | V1 Lodestar - Single Reeved w/Low Headroom Trolley      | A, A2, AA, AA2, B, B2, C, C2, F, F2                                                                     |
| 27     | 00001484  | V1 Lodestar - Single Reeved w/Motor Driven Trolley      | A, A2, AA, AA2, B, B2, C, C2, F, F2                                                                     |
| 28     | 00001485  | V1 Lodestar - Double Reeved w/Low Headroom Trolley Lug  | E, E2, H, H2                                                                                            |
| 29     | 00001486  | V1 Lodestar - Double Reeved w/ Motor Driven Trolley Lug | E, E2, H, H2                                                                                            |
| 30     | 00001487  | V1 Lodestar - Double Reeved w/Rigid Hook Suspension     | E, E2, H, H2                                                                                            |
| 31     | 00001488  | V1 Lodestar - Double Reeved w/Swivel Hook Suspension    | E, E2, H, H2                                                                                            |
| 32     | 00001489  | V1 Lodestar - Double Reeved w/Low Headroom Trolley      | E, E2, H, H2                                                                                            |
| 33     | 00001490  | V1 Lodestar - Double Reeved w/Motor Driven Trolley      | E, E2, H, H2                                                                                            |

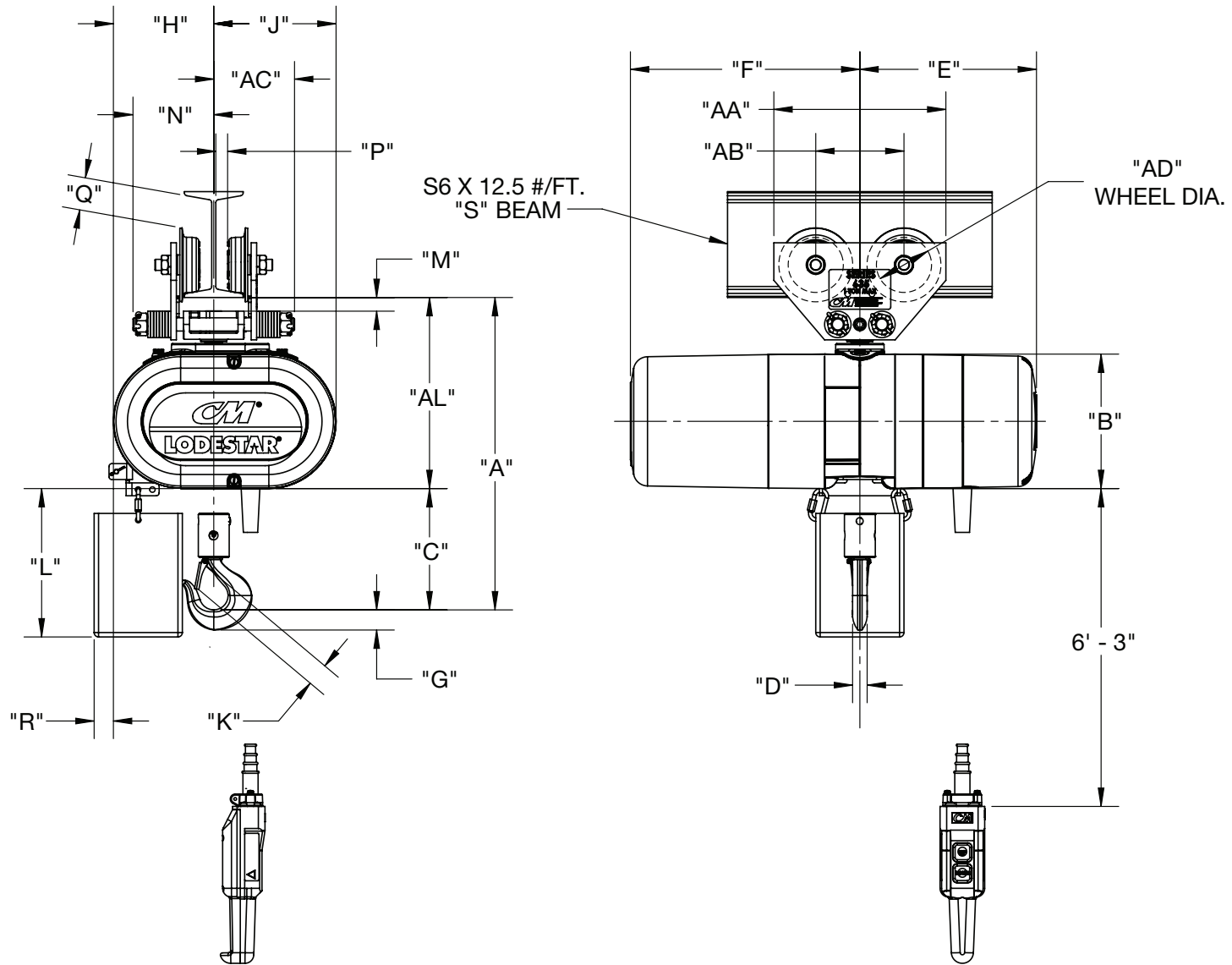
# LODESTAR & TROLLEY CLEARANCE DIMENSIONS

| MODELS         |                               |                  |                             |            |             |                        |        |
|----------------|-------------------------------|------------------|-----------------------------|------------|-------------|------------------------|--------|
| VARIABLE DIMS. | A, B, C, F<br>and AA<br>(in.) | E and H<br>(in.) | J, L, JJ<br>and LL<br>(in.) | R<br>(in.) | RR<br>(in.) | RT and<br>RRT<br>(in.) |        |
| <b>A</b>       | <b>Hook</b>                   | 16 15/16         | 21 9/16                     | 18 1/8     | 25 13/16    | 25 13/16               | 32 1/2 |
|                | <b>Tro. L.H.</b>              | 16 13/16         | 21 3/16                     | 17 3/4     | 25 13/16    | 25 13/16               | 33 5/8 |
|                | <b>Tro. M.D.</b>              | 17 1/4           | 21 5/8                      | 18 1/8     | 25 1/8      | 25 1/8                 | 33 1/2 |
| <b>B</b>       | 6 1/16                        | 6 1/16           | 7 5/8                       | 7 5/8      | 7 5/8       | 7 5/8                  |        |
| <b>C</b>       | 7 5/8                         | 12               | 6 7/8                       | 13 13/16   | 13 13/16    | 19 13/16               |        |
| <b>D</b>       | 11/16                         | 13/16            | 13/16                       | 1 1/8      | 1 1/8       | 1 1/8                  |        |
| <b>E</b>       | 11 13/16                      | 11 13/16         | 10                          | 10         | 10          | 10                     |        |
| <b>F</b>       | 8 15/16                       | 8 15/16          | 13                          | 13         | 13          | 13                     |        |
| <b>G</b>       | 15/16                         | 1 1/8            | 1 1/8                       | 1 1/2      | 1 1/2       | 1 1/2                  |        |
| <b>H</b>       | 4 7/16                        | 3 7/16           | 5 11/16                     | 7 1/16     | 7 1/16      | 7 5/16                 |        |
| <b>J</b>       | 4 1/4                         | 5 1/4            | 6 15/16                     | 5 9/16     | 5 9/16      | 5 5/16                 |        |
| <b>K</b>       | 1 1/8                         | 1 1/4            | 1 1/4                       | 1 1/2      | 1 1/2       | 1 1/2                  |        |
| <b>L</b>       | 9"                            | 12"              | 12 1/2                      | 18 1/2     | 18 1/2      | 24 1/2                 |        |
| <b>M</b>       | 13/16                         | 13/16            | 13/16                       | 7/8        | 7/8         | 7/8                    |        |
| <b>N</b>       | 4 9/16                        | 4 9/16           | 4 9/16                      | 5          | 5           | 6 9/16                 |        |
| <b>P</b>       | 3/8                           | 3/8              | 3/8                         | 9/16       | 9/16        | 1 7/16                 |        |
| <b>Q</b>       | 1 13/16                       | 1 13/16          | 1 13/16                     | 1 7/8      | 1 7/8       | 10 1/4                 |        |
| <b>R</b>       | 2 1/8                         | 2 1/8            | 11/16                       | 11/16      | 11/16       | 11/16                  |        |
| <b>AA</b>      | 9 3/4                         | 9 3/4            | 9 3/4                       | 13         | 13          | 12 1/2                 |        |
| <b>AB</b>      | 5                             | 5                | 5                           | 6          | 6           | 6                      |        |
| <b>AC</b>      | 4 9/16                        | 4 9/16           | 4 9/16                      | 5          | 5           | 6 9/16                 |        |
| <b>AD</b>      | 3 1/8                         | 3 1/8            | 3 1/8                       | 4 3/4      | 4 3/4       | 4                      |        |
| <b>AE</b>      | 4 7/16                        | 4 7/16           | 4 1/2                       | 4 7/16     | 4 7/16      | 4 1/2                  |        |
| <b>AF</b>      | 4 7/8                         | 4 7/8            | 4 7/8                       | 4 7/8      | 4 7/8       | 4 7/8                  |        |
| <b>AG</b>      | 15/16                         | 15/16            | 15/16                       | 15/16      | 15/16       | 1 7/16                 |        |
| <b>AH</b>      | 13/16                         | 13/16            | 13/16                       | 13/16      | 13/16       | 7/8                    |        |
| <b>AJ</b>      | 13/16                         | 13/16            | 13/16                       | 13/16      | 13/16       | 13/16                  |        |
| <b>AK</b>      | 9 5/16                        | 9 9/16           | 11 1/4                      | 12         | 12          | 12 11/16               |        |
| <b>AL</b>      | 9 3/16                        | 9 3/16           | 14 3/4                      | 11 3/8     | 11 3/8      | 13 13/16               |        |
| <b>AM</b>      | 9 5/8                         | 9 5/8            | 11 1/4                      | 11 5/16    | 11 5/16     | 13 11/16               |        |

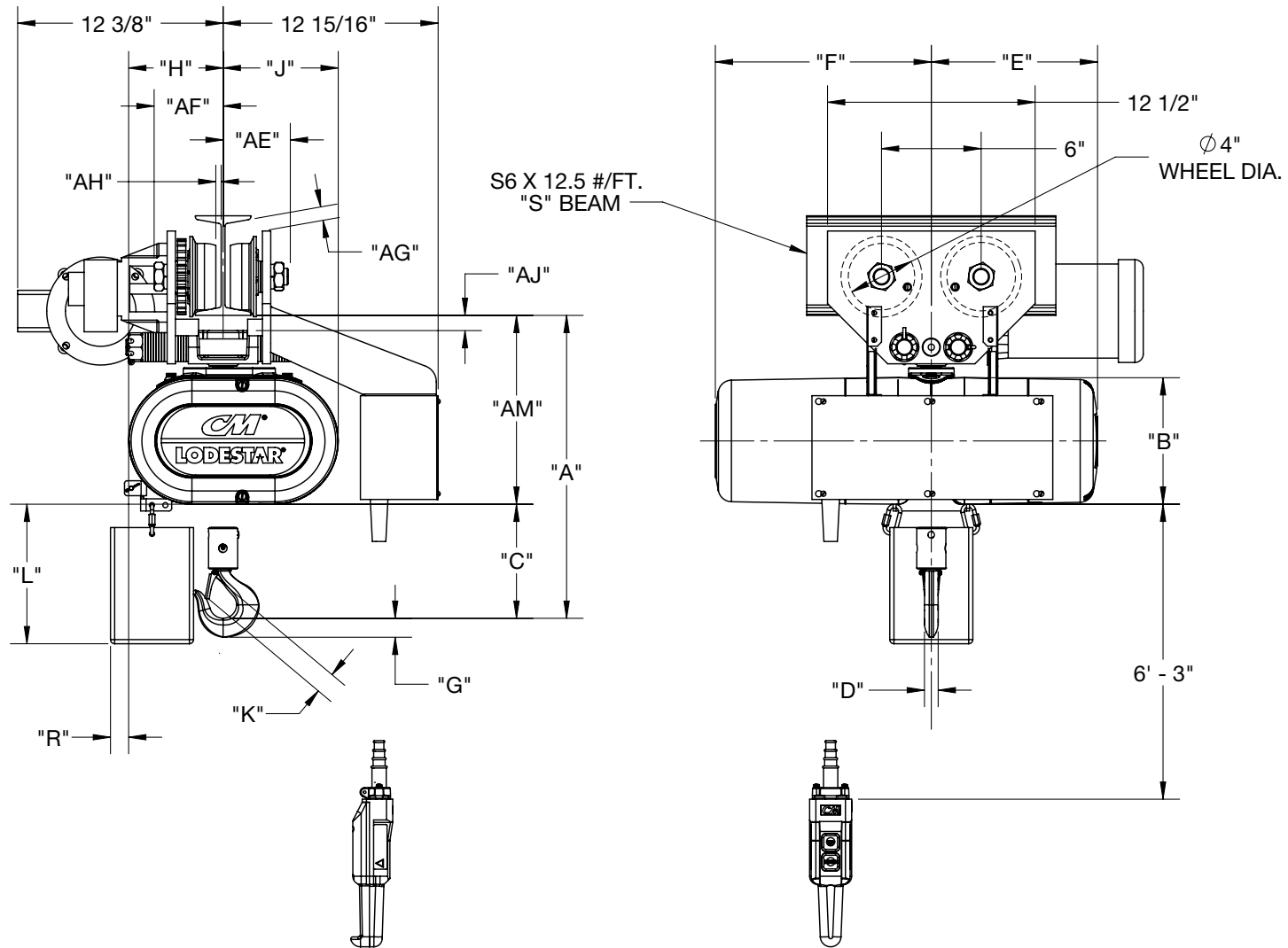
# HOOK SUSPENSION



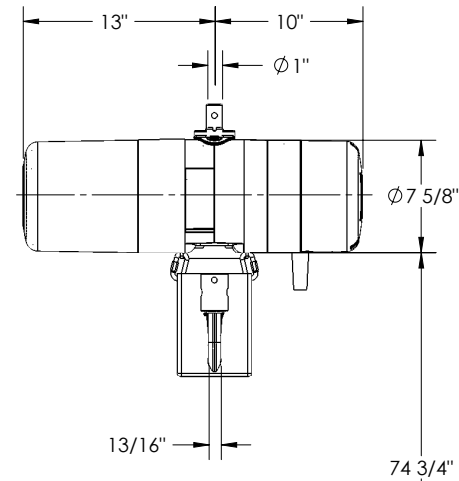
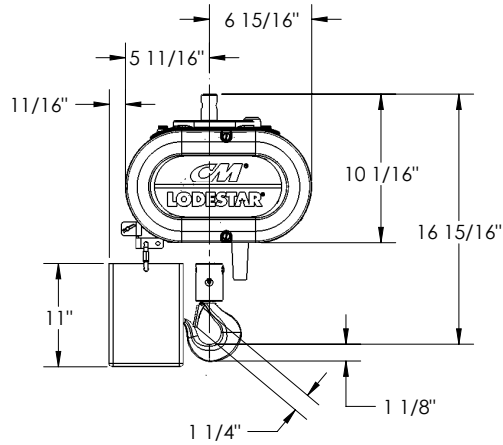
# SERIES 635 LOW HEADROOM TROLLEY



# SERIES 635 MOTOR DRIVEN TROLLEY



Columbus McKinnon Corporation  
Amherst, NY USA



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| Standard Dimensional Tolerances Unless Otherwise Specified |            | Dimensional Units INCH |                            |
|------------------------------------------------------------|------------|------------------------|----------------------------|
|                                                            | 0" to .60" | Over .60"              |                            |
| X                                                          | ± .020     | ± .025                 | <br>Third Angle Projection |
| XX                                                         | ± .010     | ± .015                 |                            |
| XXX                                                        | ± .005     | ± .010                 |                            |
| Ang                                                        | ± 0°30'    | ± 0°30'                |                            |

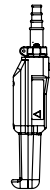
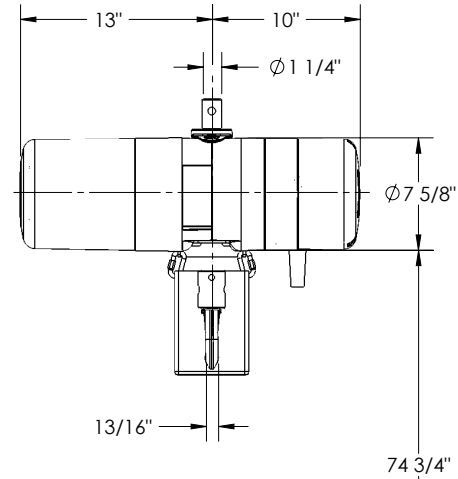
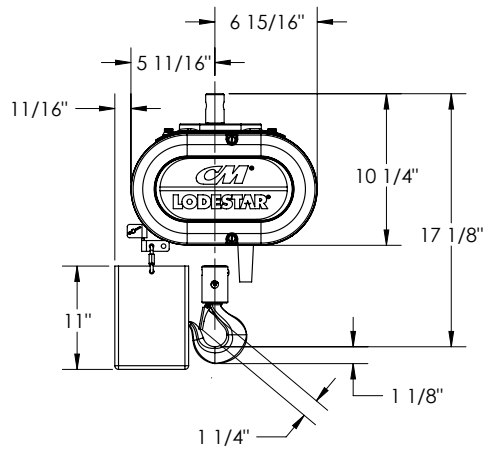
**Columbus McKinnon Corporation**  
 Hoist & Rigging - Americas  
 Amherst, NY USA  
 COLUMBUS MCKINNON CORPORATION

|                   |           |                                                                            |  |
|-------------------|-----------|----------------------------------------------------------------------------|--|
| Material:         |           | Description:                                                               |  |
| Standard:         |           | <b>V2 LODESTAR - SINGLE REEVED LUG SUSPENSION FOR LOW HEADROOM TROLLEY</b> |  |
| Material No:      |           |                                                                            |  |
| Modeled:          | 12/1/2010 | TACD                                                                       |  |
| Drawn:            | 12/1/2010 | TACD                                                                       |  |
| Approved:         | 12/1/2010 | TACD                                                                       |  |
| Design Authority: | Hoist PDE |                                                                            |  |
| Original project: | Hoist PDE |                                                                            |  |
| Original scale:   | 1:8       |                                                                            |  |

| ECN   | Rev. | Description of change | Date       | By   |
|-------|------|-----------------------|------------|------|
| 15323 | AA   | ADOPTED               | 11/29/2011 | TACD |
| 15323 | 01   |                       | 11/29/2011 | TACD |
| -     | -    | -                     | -          | -    |

Format: **B**    Number: **00001462**    Sheet: **1/6**

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| Standard Dimensional Tolerances Unless Otherwise Specified |           | Dimensional Units INCH |                            |
|------------------------------------------------------------|-----------|------------------------|----------------------------|
|                                                            | 0' to 60' | Over 60'               |                            |
| X                                                          | ± .020    | ± .025                 | <br>Third Angle Projection |
| XX                                                         | ± .010    | ± .015                 |                            |
| XXX                                                        | ± .005    | ± .010                 |                            |
| Ang                                                        | ± 0°30'   | ± 0°30'                |                            |

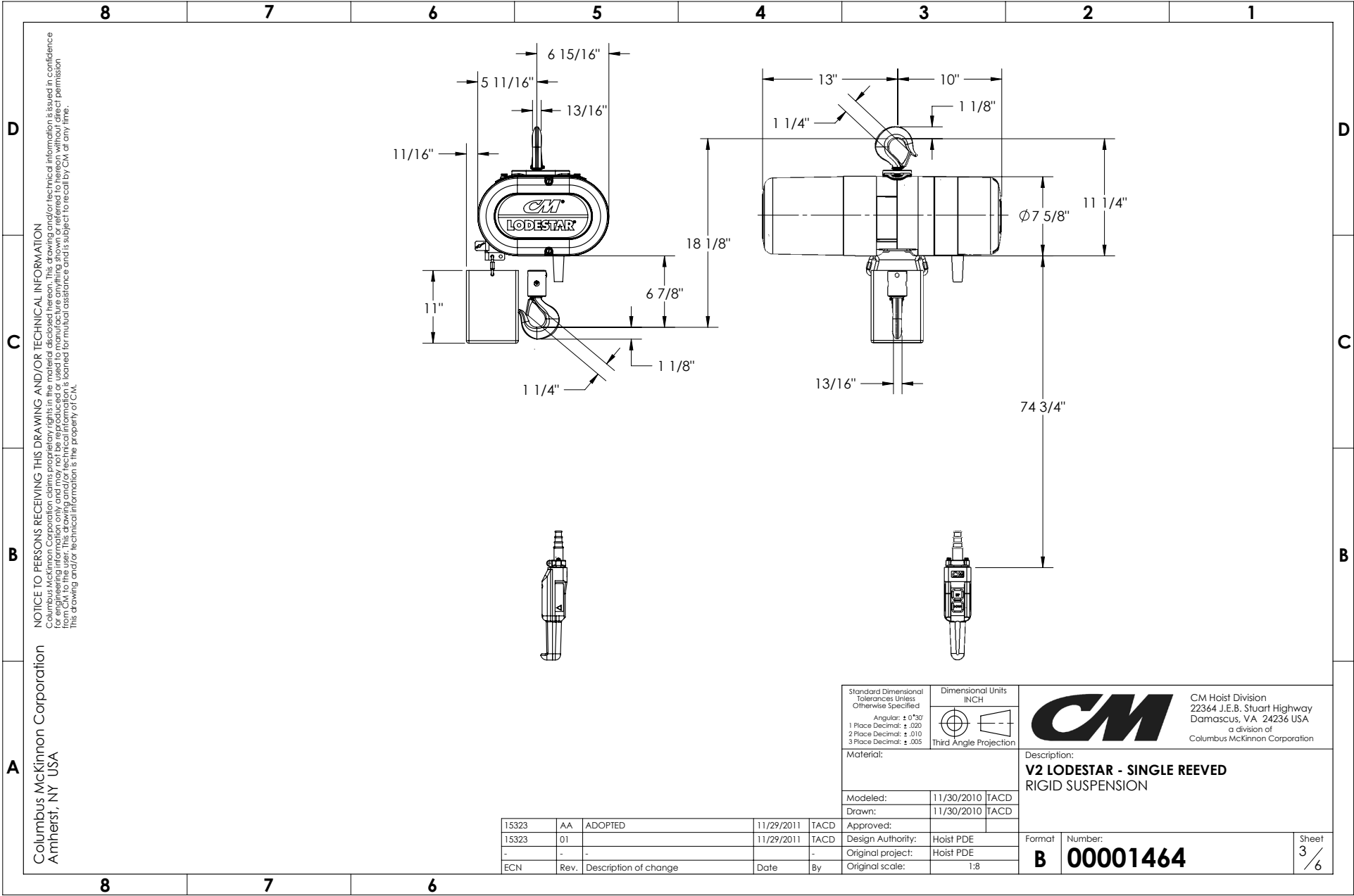
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 Hoist & Rigging - Americas  
 Amherst, NY USA  
 COLUMBUS MCKINNON CORPORATION

|                   |           |      |
|-------------------|-----------|------|
| Material:         |           |      |
| Standard:         |           |      |
| Material No:      |           |      |
| Modeled:          | 12/1/2010 | TACD |
| Drawn:            | 12/1/2010 | TACD |
| Approved:         | 12/1/2010 | TACD |
| Design Authority: | Hoist PDE |      |
| Original project: | Hoist PDE |      |
| Original scale:   | 1:8       |      |

Description:  
**V2 LODESTAR - SINGLE REEVED LUG SUSPENSION FOR MOTOR DRIVEN TROLLEY**

| ECN   | Rev. | Description of change | Date       | By   |
|-------|------|-----------------------|------------|------|
| 15323 | AA   | ADOPTED               | 11/29/2011 | TACD |
| 15323 | 01   |                       | 11/29/2011 | TACD |
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 Amherst, NY USA

Standard Dimensional Tolerances Unless Otherwise Specified  
 Angular: ± 0°30'  
 1 Place Decimal: ± .020  
 2 Place Decimal: ± .010  
 3 Place Decimal: ± .005

Dimensional Units INCH  
  
 Third Angle Projection


 CM Hoist Division  
 22364 J.E.B. Stuart Highway  
 Damascus, VA 24236 USA  
 a division of  
 Columbus McKinnon Corporation

Description:  
**V2 LODESTAR - SINGLE REEVED RIGID SUSPENSION**

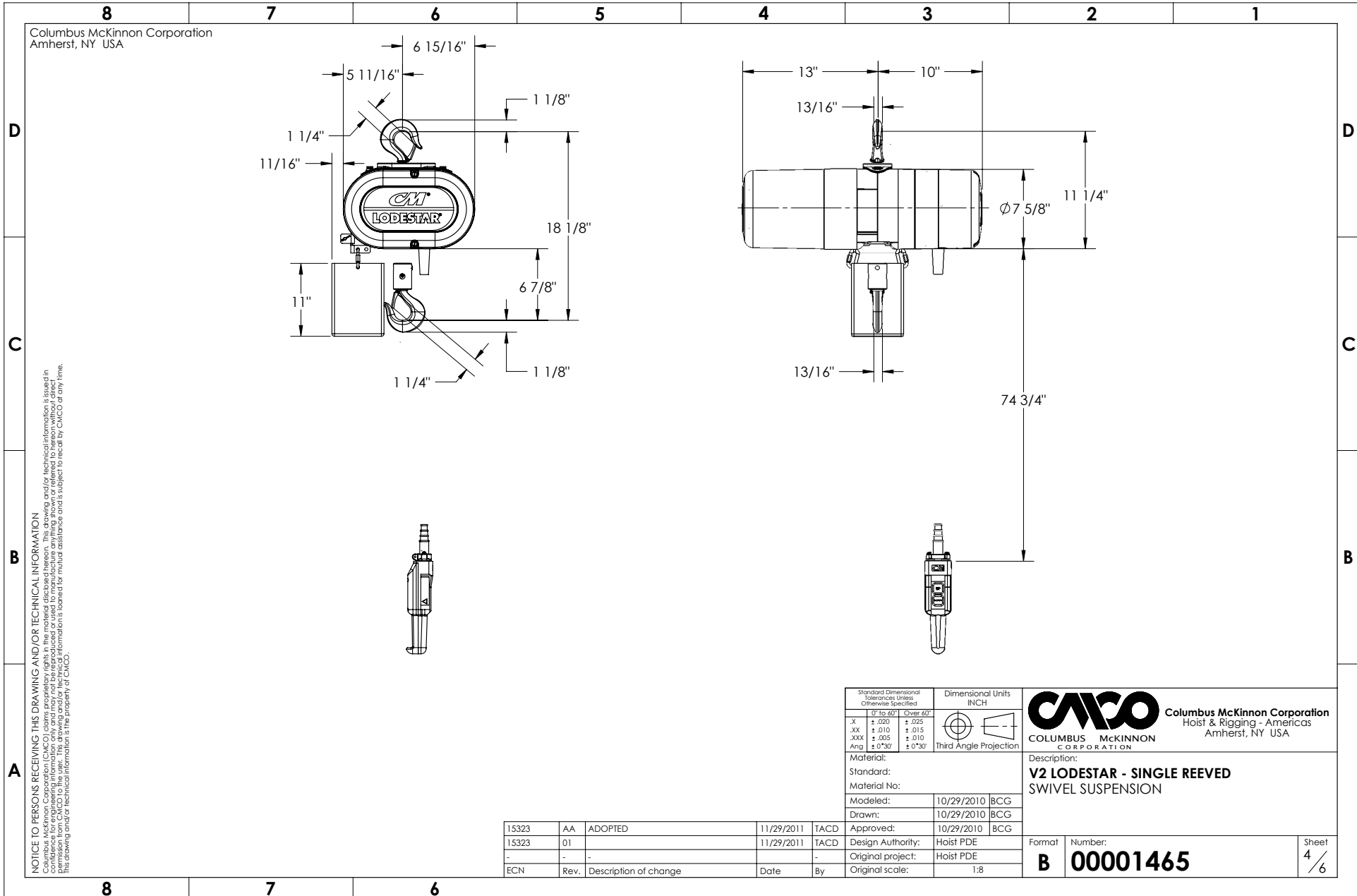
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|-------|------|-----------------------|------------|------|--|
| 15323 | AA   | ADOPTED               | 11/29/2011 | TACD |  |
| 15323 | 01   |                       | 11/29/2011 | TACD |  |
| -     | -    | -                     | -          | -    |  |
| ECN   | Rev. | Description of change | Date       | By   |  |

Material:  
 Modeled: 11/30/2010 TACD  
 Drawn: 11/30/2010 TACD  
 Approved:  
 Design Authority: Hoist PDE  
 Original project: Hoist PDE  
 Original scale: 1:8

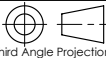
Format: **B** Number: **00001464**

Sheet 3/6





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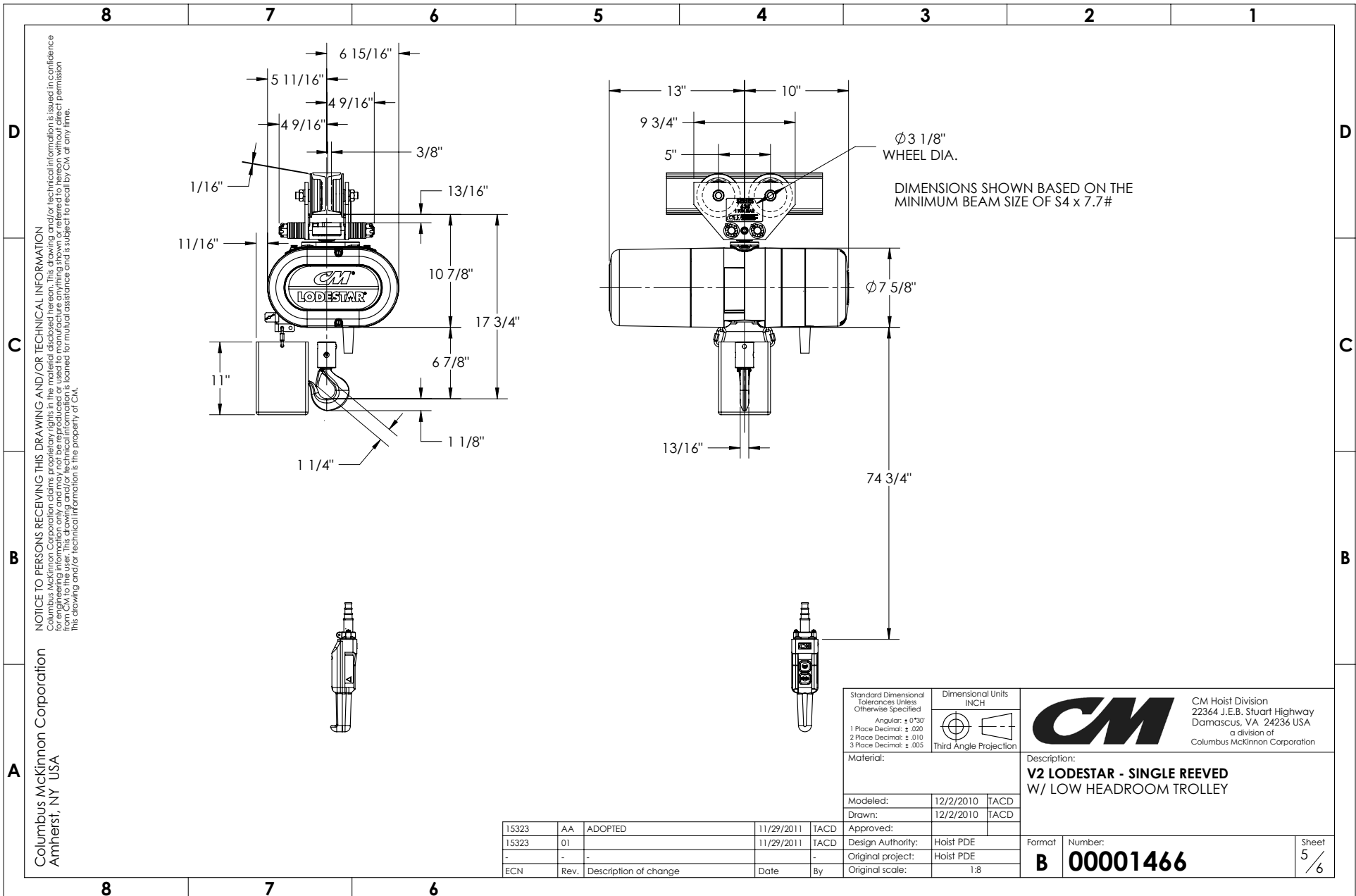
| Standard Dimensional Tolerances Unless Otherwise Specified |           | Dimensional Units INCH |                                                                                                                 |
|------------------------------------------------------------|-----------|------------------------|-----------------------------------------------------------------------------------------------------------------|
|                                                            | 0' to 60' | Over 60'               |                                                                                                                 |
| X                                                          | ± .020    | ± .025                 | <br>Third Angle Projection |
| XX                                                         | ± .010    | ± .015                 |                                                                                                                 |
| XXX                                                        | ± .005    | ± .010                 |                                                                                                                 |
| Ang                                                        | ± 0°30'   | ± 0°30'                |                                                                                                                 |


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 Hoist & Rigging - Americas  
 Amherst, NY USA  
 COLUMBUS MCKINNON CORPORATION

Material:  
 Standard:  
 Material No:  
 Modeled: 10/29/2010 BCG  
 Drawn: 10/29/2010 BCG  
 Approved: 10/29/2010 BCG  
 Design Authority: Hoist PDE  
 Original project: Hoist PDE  
 Original scale: 1:8

Description:  
**V2 LODESTAR - SINGLE REEVED SWIVEL SUSPENSION**  
 Format **B** Number: **00001465**  
 Sheet 4/6

| ECN   | Rev. | Description of change | Date       | By   |
|-------|------|-----------------------|------------|------|
| 15323 | AA   | ADOPTED               | 11/29/2011 | TACD |
| 15323 | 01   |                       | 11/29/2011 | TACD |
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Standard Dimensional Tolerances Unless Otherwise Specified

Angular: ± 0°30'

1 Place Decimal: ± .000

2 Place Decimal: ± .010

3 Place Decimal: ± .005

Dimensional Units INCH

Third Angle Projection



CM Hoist Division  
 22364 J.E.B. Stuart Highway  
 Damascus, VA 24236 USA  
 a division of  
 Columbus McKinnon Corporation

Material:

Description:  
**V2 LODESTAR - SINGLE REEVED  
 W/ LOW HEADROOM TROLLEY**

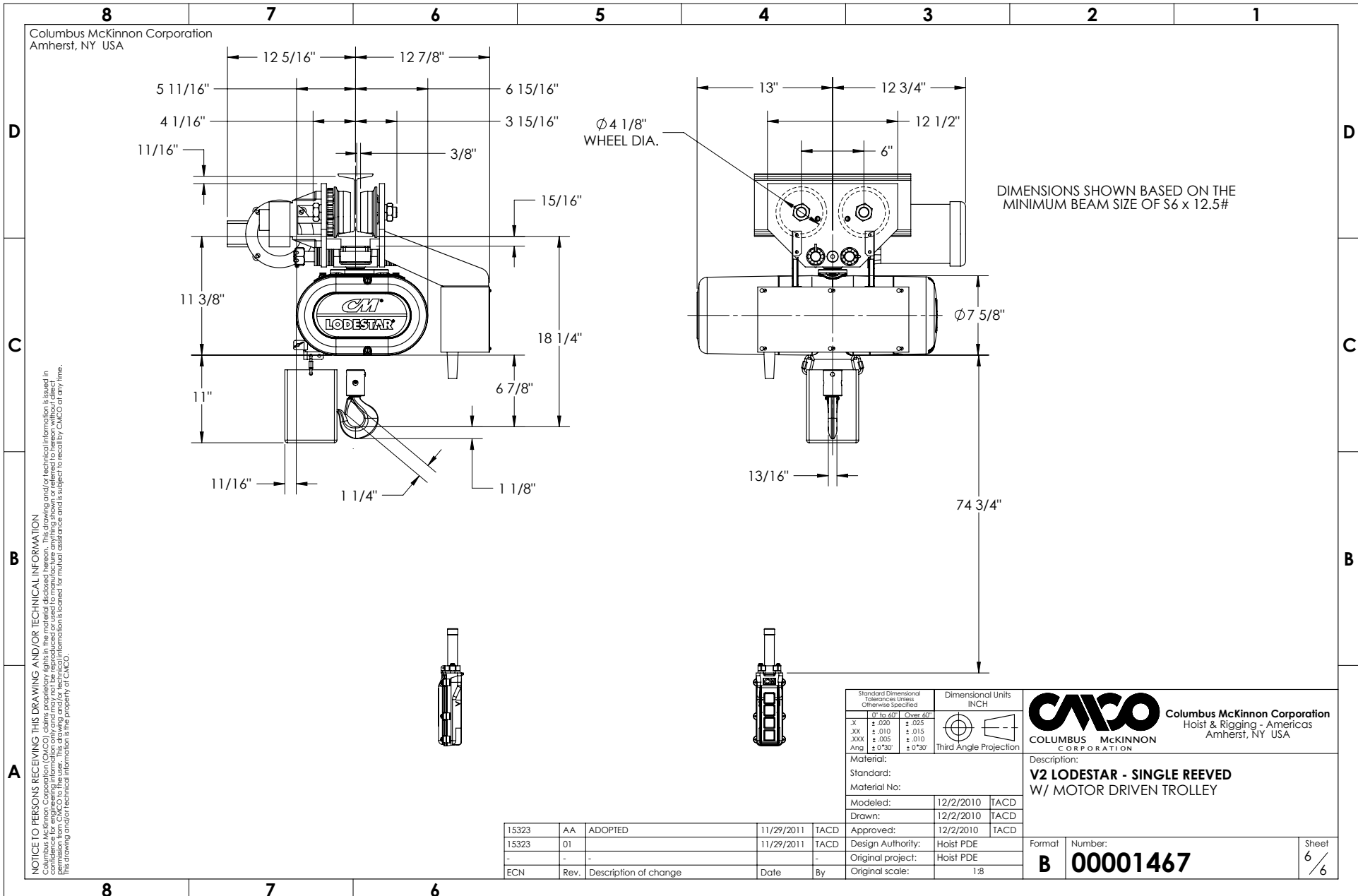
Modeled: 12/2/2010 TACD  
 Drawn: 12/2/2010 TACD

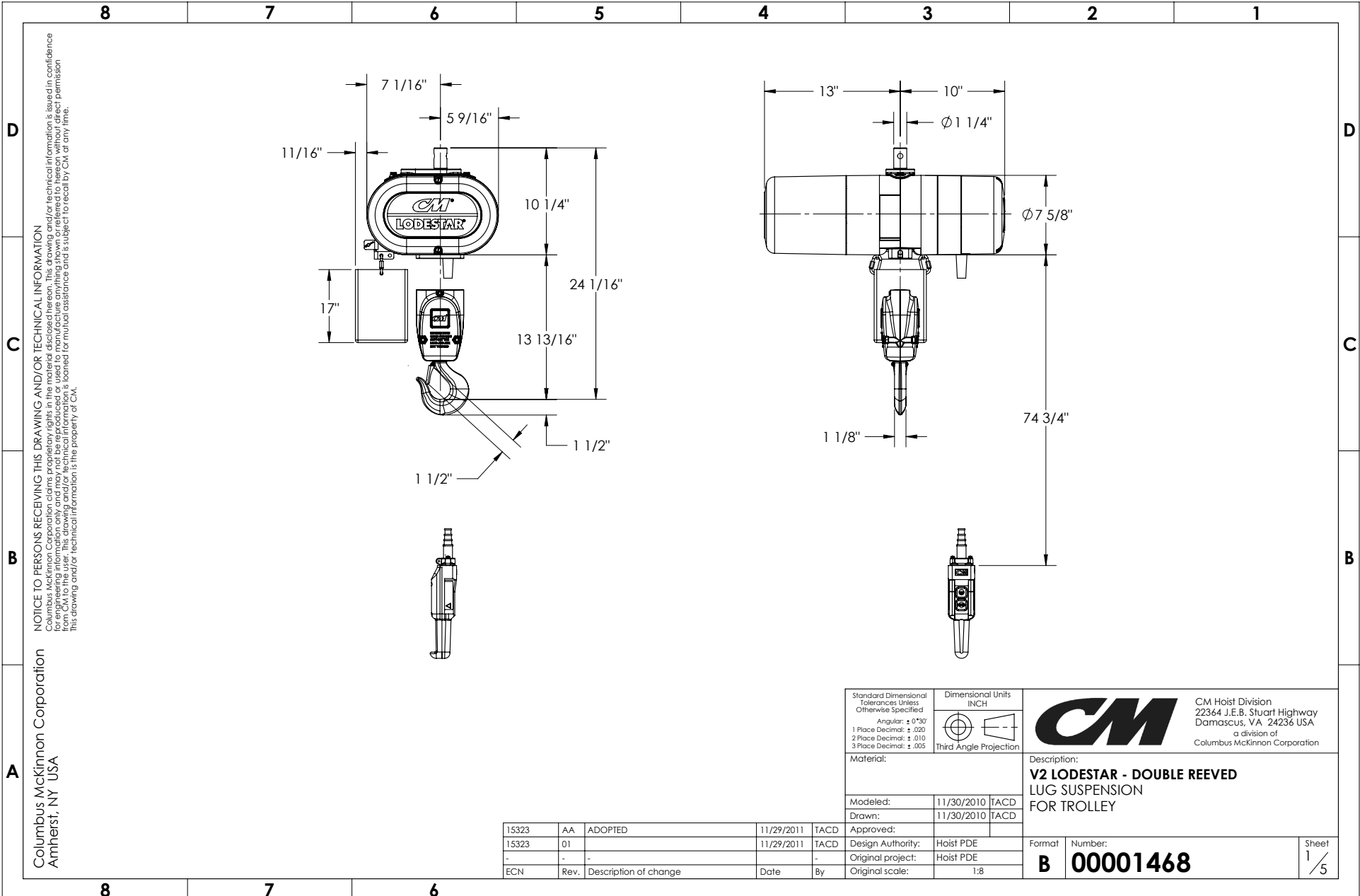
Approved:  
 Design Authority: Hoist PDE  
 Original project: Hoist PDE  
 Original scale: 1:8

Format Number:  
**B 00001466**

Sheet  
 5/6



| ECN   | Rev. | Description of change | Date       | By   |
|-------|------|-----------------------|------------|------|
| 15323 | AA   | ADOPTED               | 11/29/2011 | TACD |
| 15323 | 01   |                       | 11/29/2011 | TACD |
| -     | -    | -                     | -          | -    |



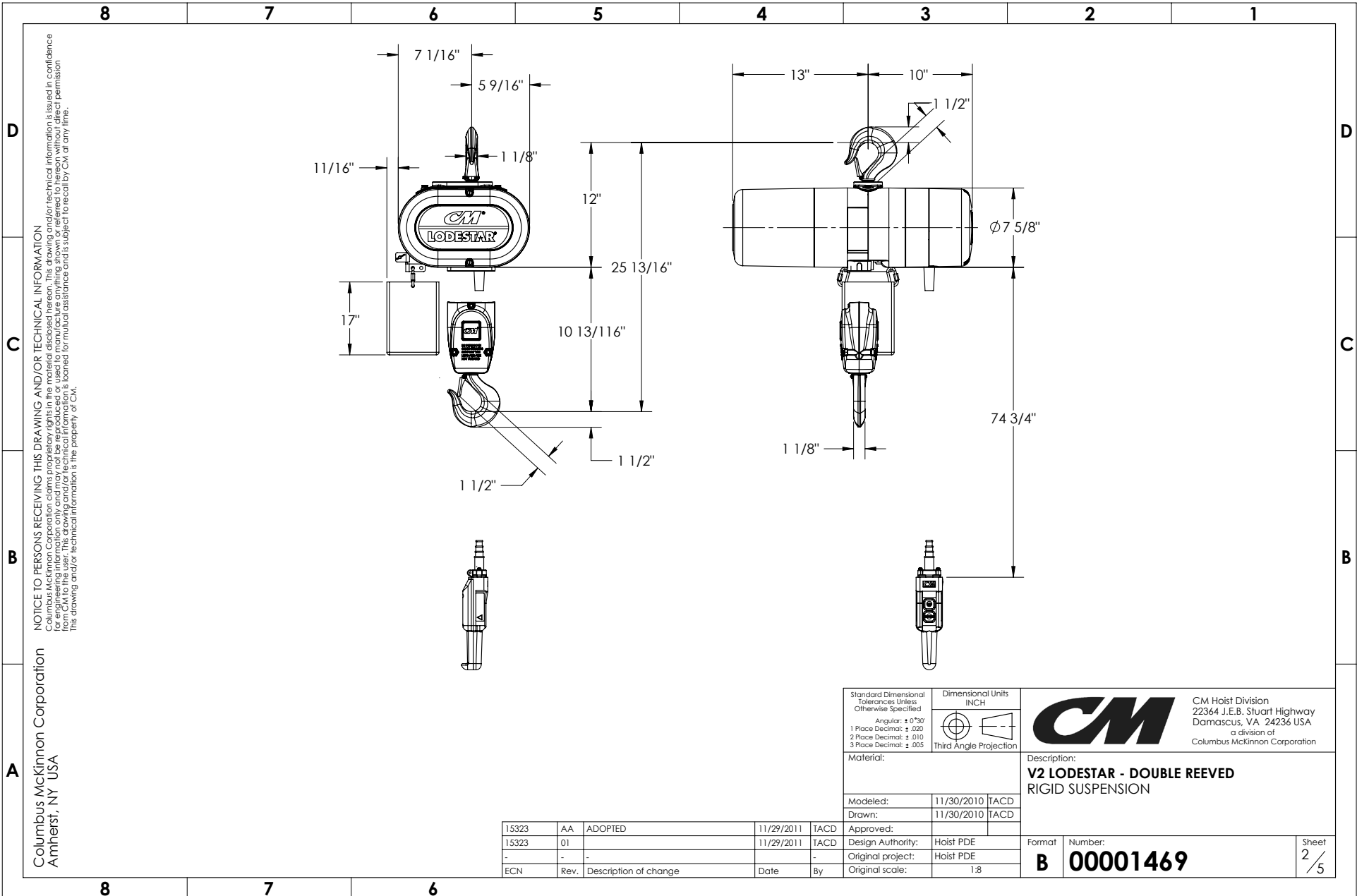


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|                                                                                |            |                                                                                                                 |          |                                                                                                                                                                                                                       |
|--------------------------------------------------------------------------------|------------|-----------------------------------------------------------------------------------------------------------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Standard Dimensional Tolerances Unless Otherwise Specified<br>Angular: ± 0°30' |            | Dimensional Units<br>INCH                                                                                       |          | <br>CM Hoist Division<br>22364 J.E.B. Stuart Highway<br>Damascus, VA 24236 USA<br>a division of<br>Columbus McKinnon Corporation |
| 1 Place Decimal: ± .020<br>2 Place Decimal: ± .010<br>3 Place Decimal: ± .005  |            | <br>Third Angle Projection |          |                                                                                                                                                                                                                       |
| Material:                                                                      |            |                                                                                                                 |          | Description:<br><b>V2 LODESTAR - DOUBLE REEVED LUG SUSPENSION FOR TROLLEY</b>                                                                                                                                         |
| Modeled:                                                                       | 11/30/2010 | TACD                                                                                                            |          |                                                                                                                                                                                                                       |
| Drawn:                                                                         | 11/30/2010 | TACD                                                                                                            |          |                                                                                                                                                                                                                       |
| Approved:                                                                      |            |                                                                                                                 |          |                                                                                                                                                                                                                       |
| Design Authority:                                                              | Hoist PDE  |                                                                                                                 | Format   | Number:                                                                                                                                                                                                               |
| Original project:                                                              | Hoist PDE  |                                                                                                                 | <b>B</b> | <b>00001468</b>                                                                                                                                                                                                       |
| Original scale:                                                                | 1:8        |                                                                                                                 |          | Sheet<br>1/5                                                                                                                                                                                                          |

| ECN   | Rev. | Description of change | Date       | By   |
|-------|------|-----------------------|------------|------|
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| 15323 | 01   |                       | 11/29/2011 | TACD |
| -     | -    | -                     | -          | -    |



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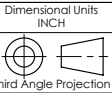
Standard Dimensional Tolerances Unless Otherwise Specified

Angular: ± 0°30'

1 Place Decimal: ± .000

2 Place Decimal: ± .010

3 Place Decimal: ± .005



CM Hoist Division  
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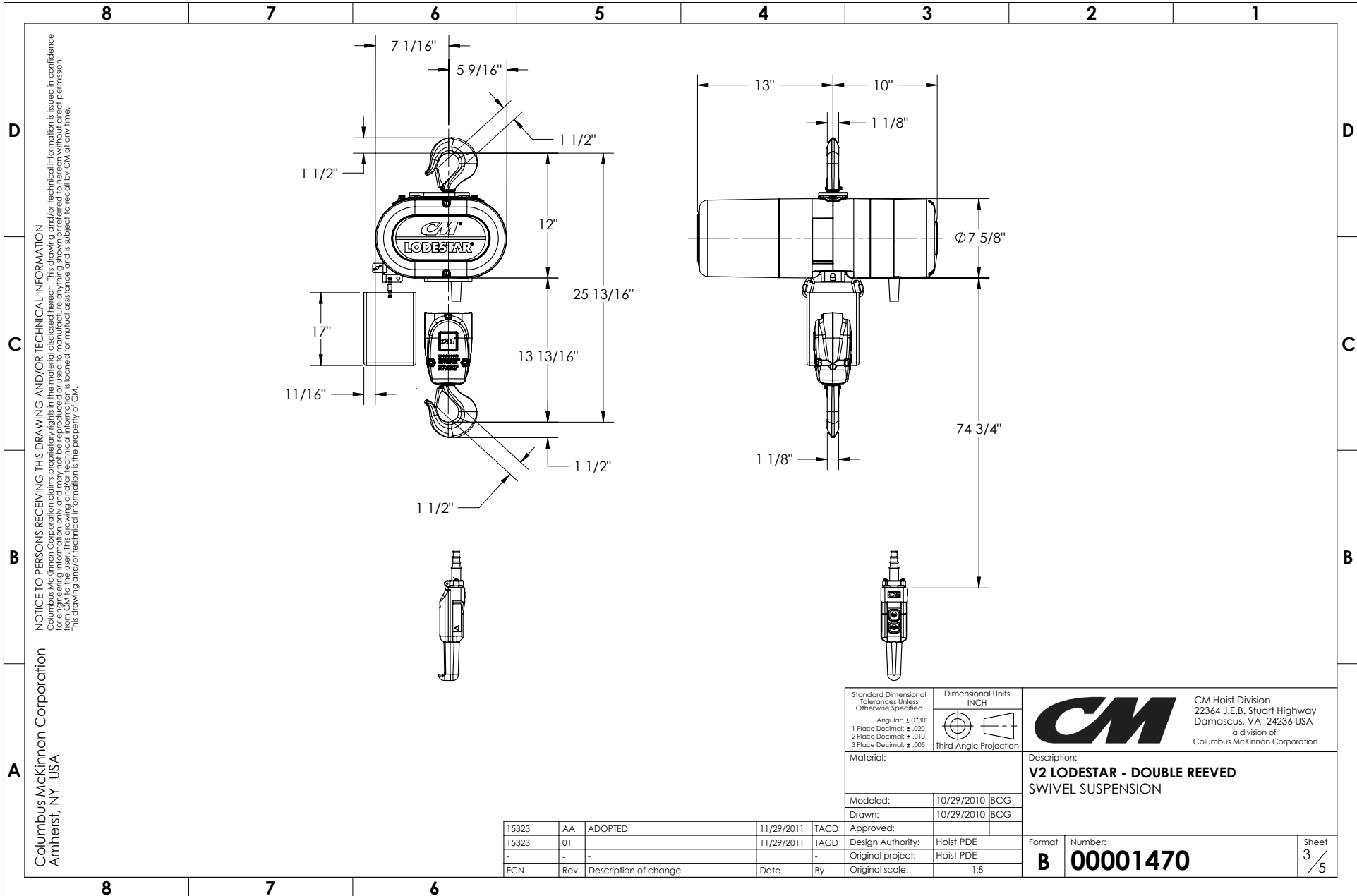
Description:  
**V2 LODESTAR - DOUBLE REEVED RIGID SUSPENSION**

|                   |            |      |
|-------------------|------------|------|
| Material:         |            |      |
| Modeled:          | 11/30/2010 | TACD |
| Drawn:            | 11/30/2010 | TACD |
| Approved:         |            |      |
| Design Authority: | Hoist PDE  |      |
| Original project: | Hoist PDE  |      |
| Original scale:   | 1:8        |      |

Format: **B** Number: **00001469**

Sheet **2/5**

| ECN   | Rev. | Description of change | Date       | By   |
|-------|------|-----------------------|------------|------|
| 15323 | AA   | ADOPTED               | 11/29/2011 | TACD |
| 15323 | 01   |                       | 11/29/2011 | TACD |
| -     | -    | -                     | -          | -    |



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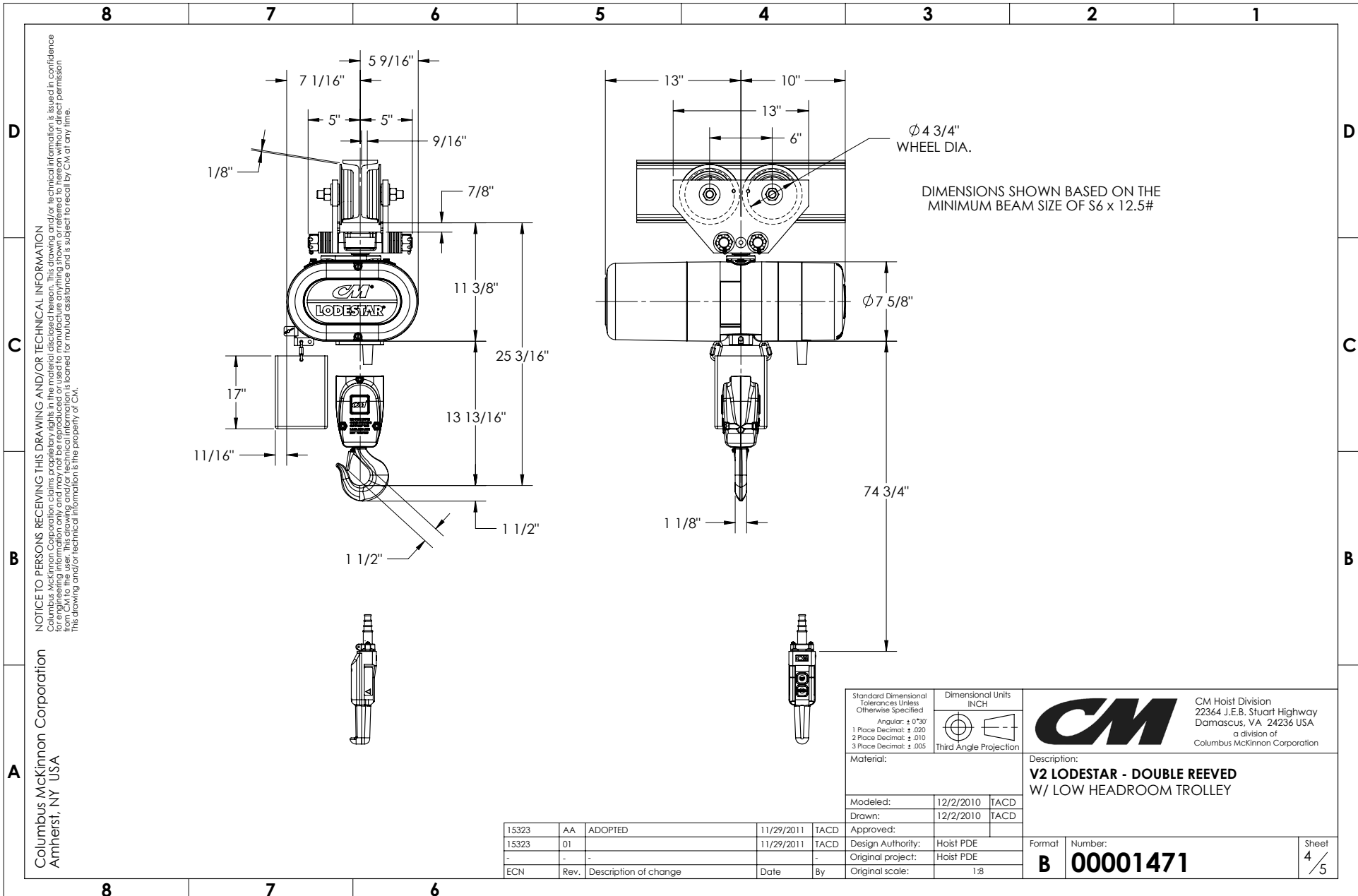
| ECN   | Rev. | Description of change | Date       | By   |
|-------|------|-----------------------|------------|------|
| 15323 | AA   | ADOPTED               | 11/29/2011 | TACD |
| 15323 | 01   |                       | 11/29/2011 | TACD |
| -     | -    | -                     | -          | -    |

|                                                            |            |                        |  |
|------------------------------------------------------------|------------|------------------------|--|
| Standard Dimensional Tolerances Unless Otherwise Specified |            | Dimensional Units INCH |  |
| Angular: ± 0°30'                                           |            | Third Angle Projection |  |
| 1 Place Decimal: ± .020                                    |            |                        |  |
| 2 Place Decimal: ± .010                                    |            |                        |  |
| 3 Place Decimal: ± .005                                    |            |                        |  |
| Material:                                                  |            |                        |  |
| Modeled:                                                   | 10/29/2010 | BCG                    |  |
| Drawn:                                                     | 10/29/2010 | BCG                    |  |
| Approved:                                                  |            |                        |  |
| Design Authority:                                          | Hoist PDE  |                        |  |
| Original project:                                          | Hoist PDE  |                        |  |
| Original scale:                                            | 1:8        |                        |  |

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Description:  
**V2 LODESTAR - DOUBLE REEVED SWIVEL SUSPENSION**

Format: **B**      Number: **00001470**      Sheet **3/5**



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|                                                            |                            |
|------------------------------------------------------------|----------------------------|
| Standard Dimensional Tolerances Unless Otherwise Specified | Dimensional Units<br>INCH  |
| Angular: ± 0°30'                                           | <br>Third Angle Projection |
| 1 Place Decimal: ± .020                                    |                            |
| 2 Place Decimal: ± .010                                    |                            |
| 3 Place Decimal: ± .005                                    |                            |

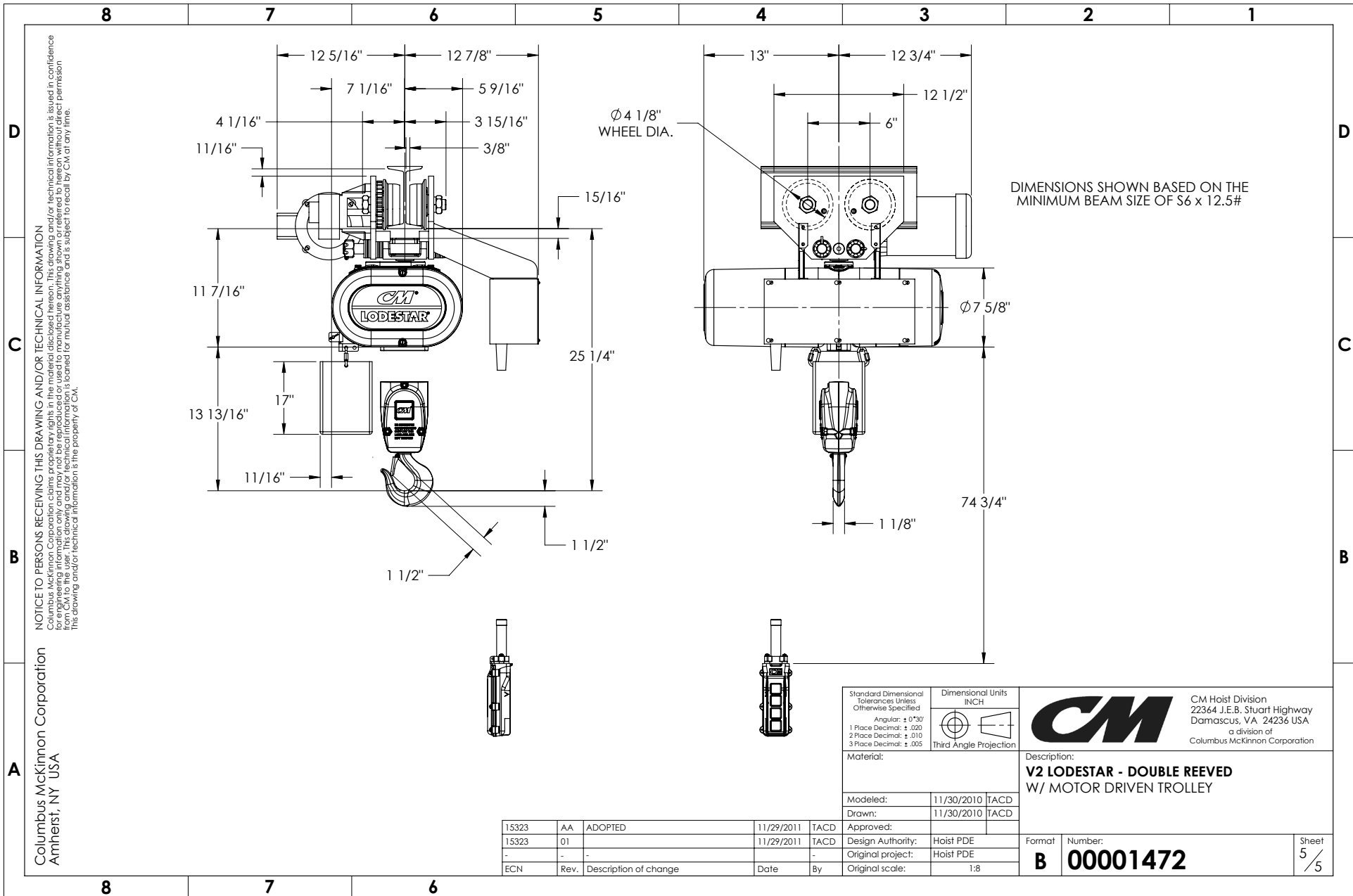
CM Hoist Division  
 22364 J.E.B. Stuart Highway  
 Damascus, VA 24236 USA  
 a division of  
 Columbus McKinnon Corporation

Description:  
**V2 LODESTAR - DOUBLE REEVED  
 W/ LOW HEADROOM TROLLEY**

|                   |                |
|-------------------|----------------|
| Material:         |                |
| Modeled:          | 12/2/2010 TACD |
| Drawn:            | 12/2/2010 TACD |
| Approved:         |                |
| Design Authority: | Hoist PDE      |
| Original project: | Hoist PDE      |
| Original scale:   | 1:8            |

|          |                 |            |
|----------|-----------------|------------|
| Format   | Number:         | Sheet      |
| <b>B</b> | <b>00001471</b> | <b>4/5</b> |

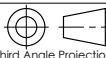
| ECN   | Rev. | Description of change | Date       | By   |
|-------|------|-----------------------|------------|------|
| 15323 | AA   | ADOPTED               | 11/29/2011 | TACD |
| 15323 | 01   |                       | 11/29/2011 | TACD |
| -     | -    | -                     | -          | -    |



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DIMENSIONS SHOWN BASED ON THE MINIMUM BEAM SIZE OF S6 x 12.5#

|                                                                                                                                                                  |                                                                                                                                              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Standard Dimensional Tolerances Unless Otherwise Specified:<br>Angular: ± 0°30'<br>1 Place Decimal: ± .020<br>2 Place Decimal: ± .010<br>3 Place Decimal: ± .005 | Dimensional Units<br>INCH<br><br>Third Angle Projection |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|

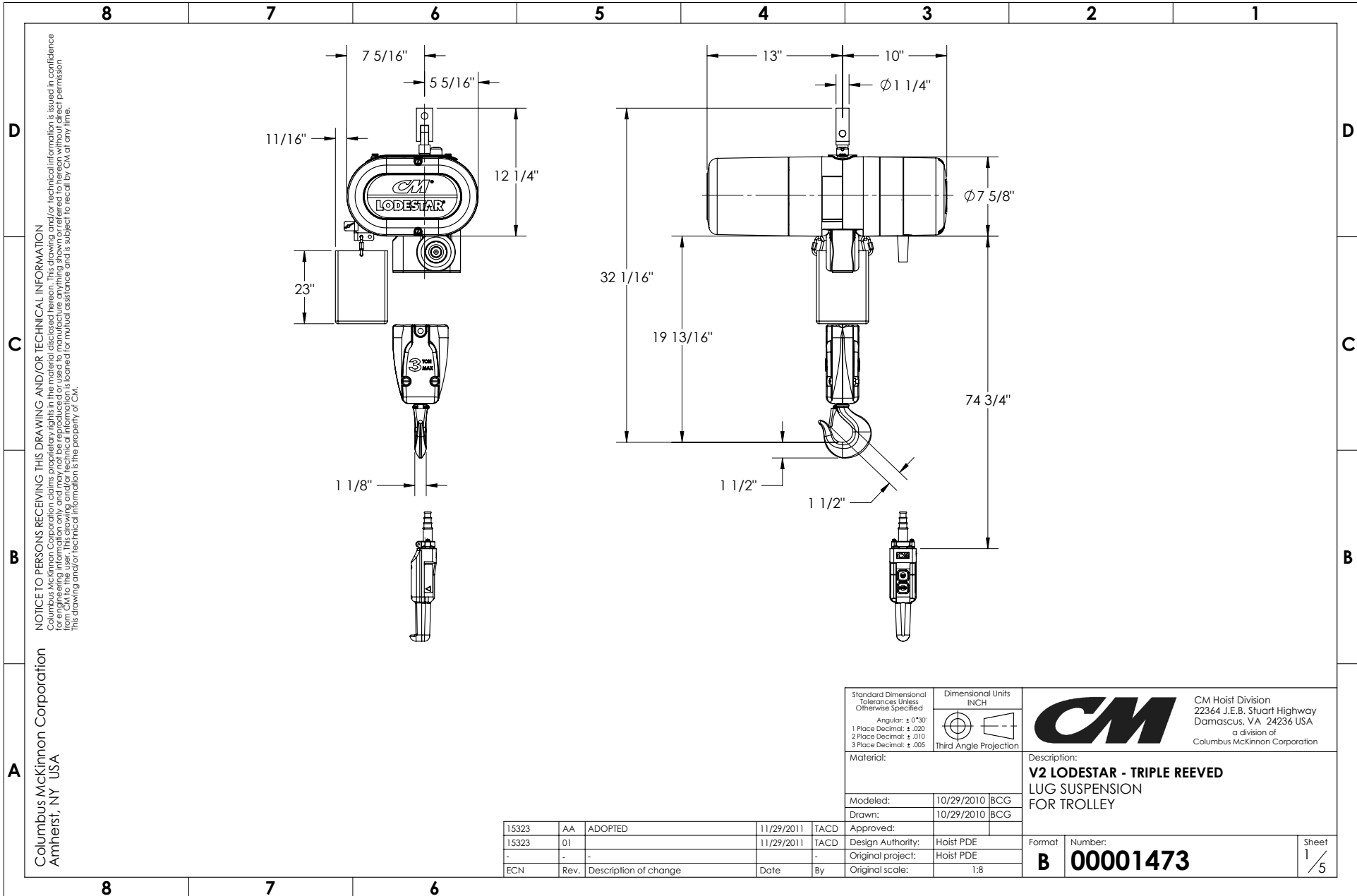
**CM** CM Hoist Division  
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 Damascus, VA 24236 USA  
 a division of  
 Columbus McKinnon Corporation

Description:  
**V2 LODESTAR - DOUBLE REEVED  
 W/ MOTOR DRIVEN TROLLEY**

|       |    |         |            |      |                   |            |      |
|-------|----|---------|------------|------|-------------------|------------|------|
| 15323 | AA | ADOPTED | 11/29/2011 | TACD | Modeled:          | 11/30/2010 | TACD |
| 15323 | 01 |         | 11/29/2011 | TACD | Drawn:            | 11/30/2010 | TACD |
| -     | -  | -       | -          | -    | Approved:         |            |      |
| -     | -  | -       | -          | -    | Design Authority: | Hoist PDE  |      |
| -     | -  | -       | -          | -    | Original project: | Hoist PDE  |      |
| -     | -  | -       | -          | -    | Original scale:   | 1:8        |      |

Format: **B** Number: **00001472** Sheet **5/5**

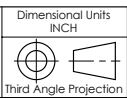




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 Angular: ± 0°30'  
 1 Place Decimal: ± .020  
 2 Place Decimal: ± .010  
 3 Place Decimal: ± .005



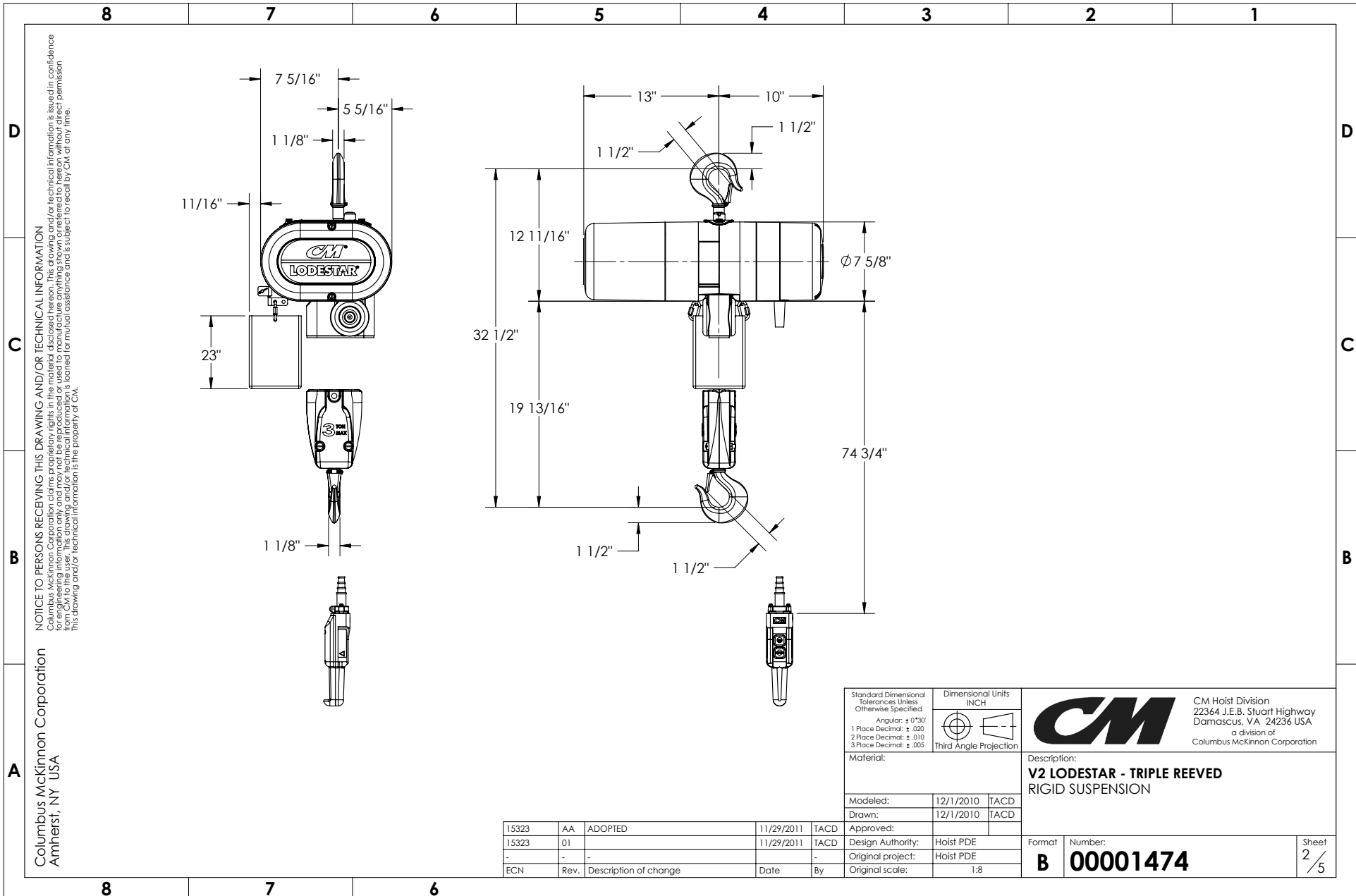
CM Hoist Division  
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 Damascus, VA 24236 USA  
 a division of  
 Columbus McKinnon Corporation

Description:  
**V2 LODESTAR - TRIPLE REEVED  
 LUG SUSPENSION  
 FOR TROLLEY**

|                   |            |     |
|-------------------|------------|-----|
| Material:         |            |     |
| Modeled:          | 10/29/2010 | BCG |
| Drawn:            | 10/29/2010 | BCG |
| Approved:         |            |     |
| Design Authority: | Hoist PDE  |     |
| Original project: | Hoist PDE  |     |
| Original scale:   | 1:8        |     |

|          |                 |            |
|----------|-----------------|------------|
| Format   | Number:         | Sheet      |
| <b>B</b> | <b>00001473</b> | <b>1/5</b> |

| ECN   | Rev. | Description of change | Date       | By   |
|-------|------|-----------------------|------------|------|
| 15323 | AA   | ADOPTED               | 11/29/2011 | TACD |
| 15323 | 01   |                       | 11/29/2011 | TACD |
| -     | -    | -                     | -          | -    |



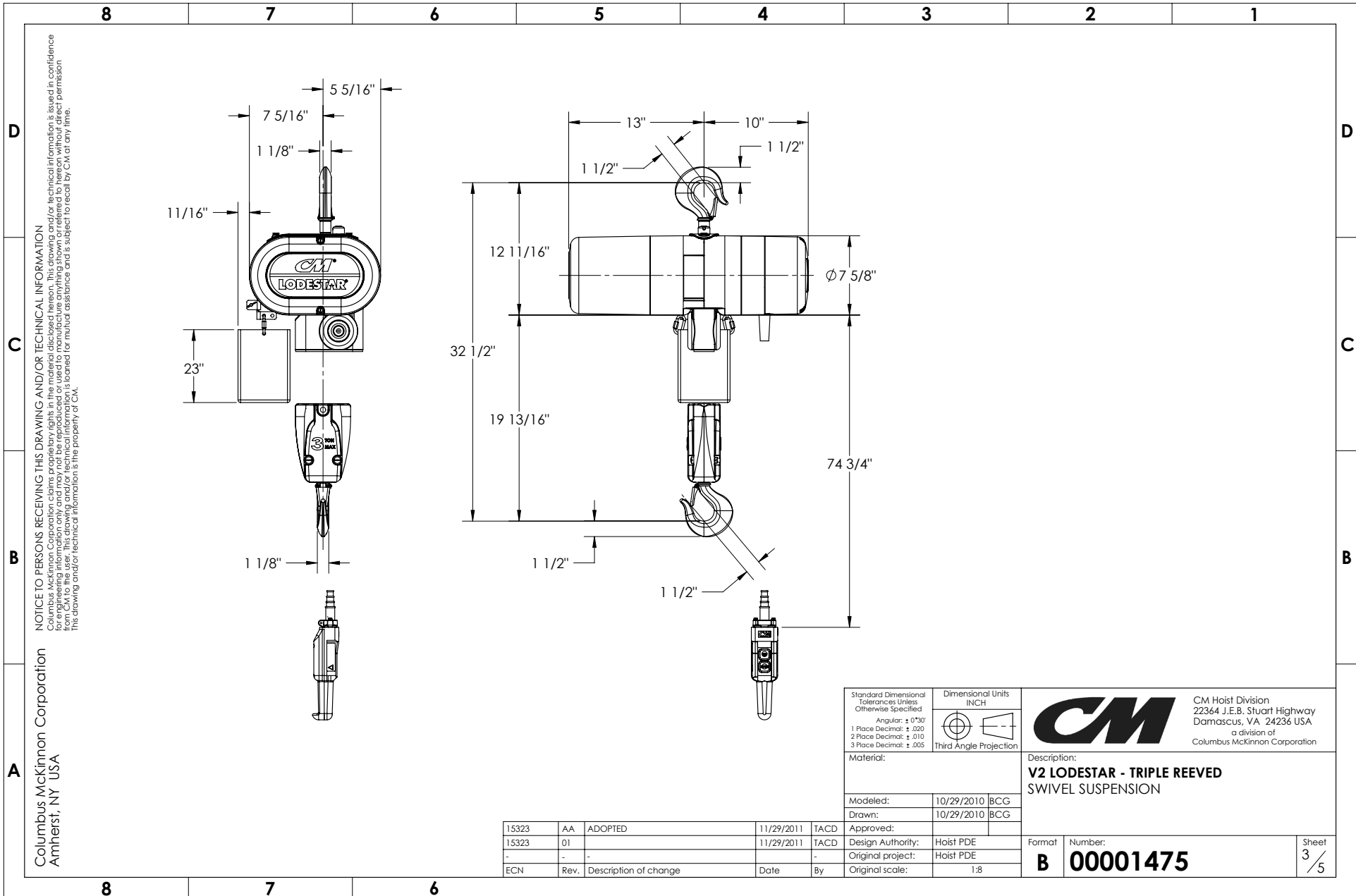
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|                                                                                                                                                                 |                           |      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|------|
| Standard Dimensional Tolerances Unless Otherwise Specified<br>Angular: ± 0°30'<br>1 Place Decimal: ± .020<br>2 Place Decimal: ± .010<br>3 Place Decimal: ± .005 | Dimensional Units<br>INCH |      |
| Material:                                                                                                                                                       |                           |      |
| Modeled:                                                                                                                                                        | 12/1/2010                 | TACD |
| Drawn:                                                                                                                                                          | 12/1/2010                 | TACD |
| Approved:                                                                                                                                                       |                           |      |
| Design Authority:                                                                                                                                               | Hoist PDE                 |      |
| Original project:                                                                                                                                               | Hoist PDE                 |      |
| Original scale:                                                                                                                                                 | 1:8                       |      |

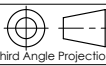

|          |                                                                                                                              |            |
|----------|------------------------------------------------------------------------------------------------------------------------------|------------|
|          | CM Hoist Division<br>22364 J.E.B. Stuart Highway<br>Damascus, VA 24236 USA<br>a division of<br>Columbus McKinnon Corporation |            |
|          | Description:<br><b>V2 LODESTAR - TRIPLE REEVED RIGID SUSPENSION</b>                                                          |            |
| Format   | Number:                                                                                                                      | Sheet      |
| <b>B</b> | <b>00001474</b>                                                                                                              | <b>2/5</b> |

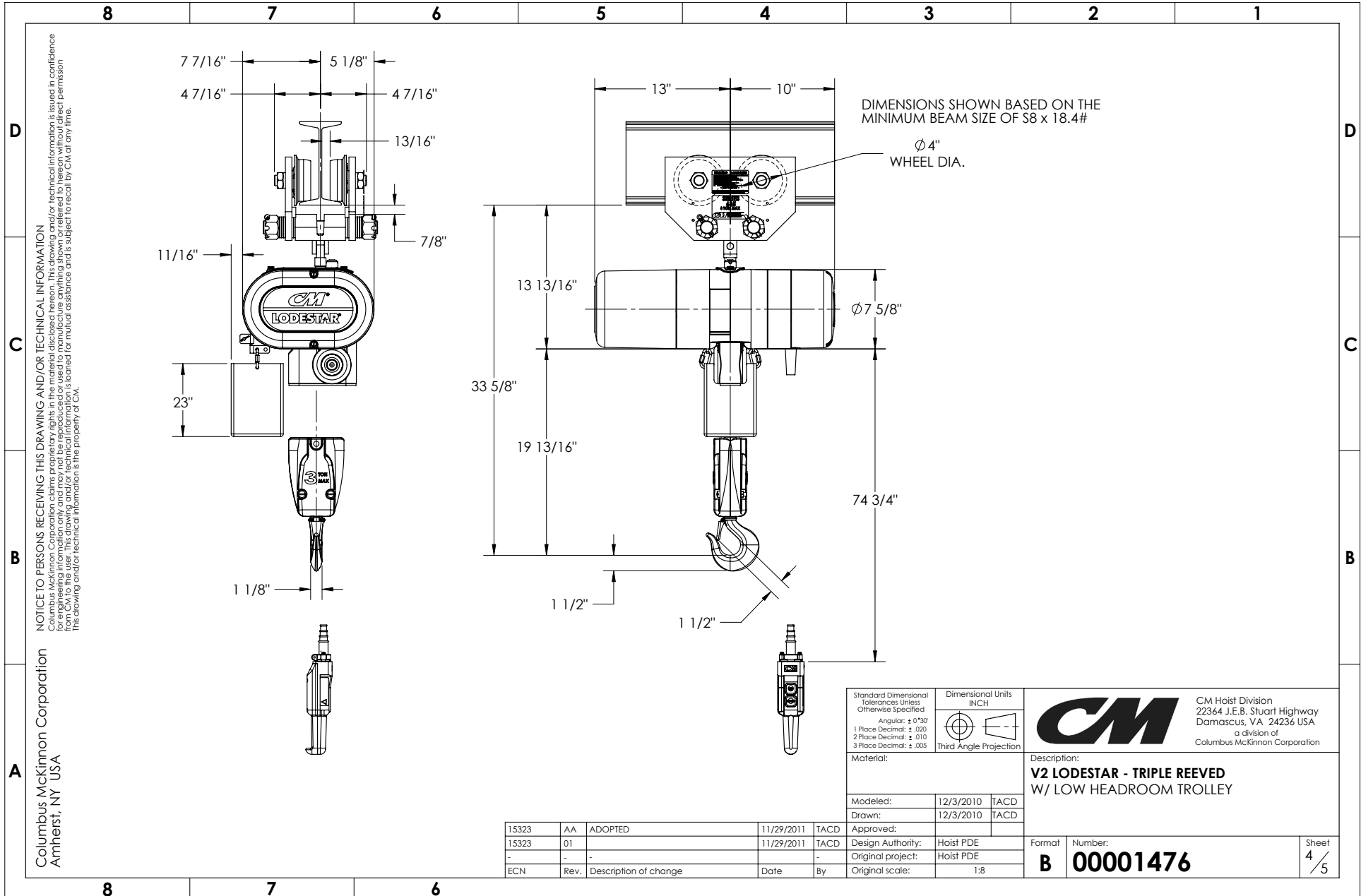
| ECN   | Rev. | Description of change | Date       | By   |
|-------|------|-----------------------|------------|------|
| 15323 | AA   | ADOPTED               | 11/29/2011 | TACD |
| 15323 | 01   |                       | 11/29/2011 | TACD |
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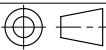
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 Amherst, NY USA

|                                                                                                                                                                 |  |                                                                                                                    |  |                                                                                       |                                                                                                                              |                            |  |    |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|----------------------------|--|----|--|
| Standard Dimensional Tolerances Unless Otherwise Specified<br>Angular: ± 0°30'<br>1 Place Decimal: ± .020<br>2 Place Decimal: ± .010<br>3 Place Decimal: ± .005 |  | Dimensional Units<br>INCH<br> |  |  | CM Hoist Division<br>22364 J.E.B. Stuart Highway<br>Damascus, VA 24236 USA<br>a division of<br>Columbus McKinnon Corporation |                            |  |    |  |
| Material:                                                                                                                                                       |  | Third Angle Projection                                                                                             |  |                                                                                       | Description:<br><b>V2 LODESTAR - TRIPLE REEVED SWIVEL SUSPENSION</b>                                                         |                            |  |    |  |
| Modeled: 10/29/2010                                                                                                                                             |  | BCG                                                                                                                |  | Format: B                                                                             |                                                                                                                              | Number:<br><b>00001475</b> |  |    |  |
| Drawn: 10/29/2010                                                                                                                                               |  | BCG                                                                                                                |  | Sheet<br>3/5                                                                          |                                                                                                                              |                            |  |    |  |
| Approved:                                                                                                                                                       |  | Design Authority: Hoist PDE                                                                                        |  | Original project: Hoist PDE                                                           |                                                                                                                              | Original scale: 1:8        |  |    |  |
| 15323 AA ADOPTED                                                                                                                                                |  | 11/29/2011 TACD                                                                                                    |  | 15323 01                                                                              |                                                                                                                              |                            |  |    |  |
| ECN                                                                                                                                                             |  | Rev.                                                                                                               |  | Description of change                                                                 |                                                                                                                              | Date                       |  | By |  |

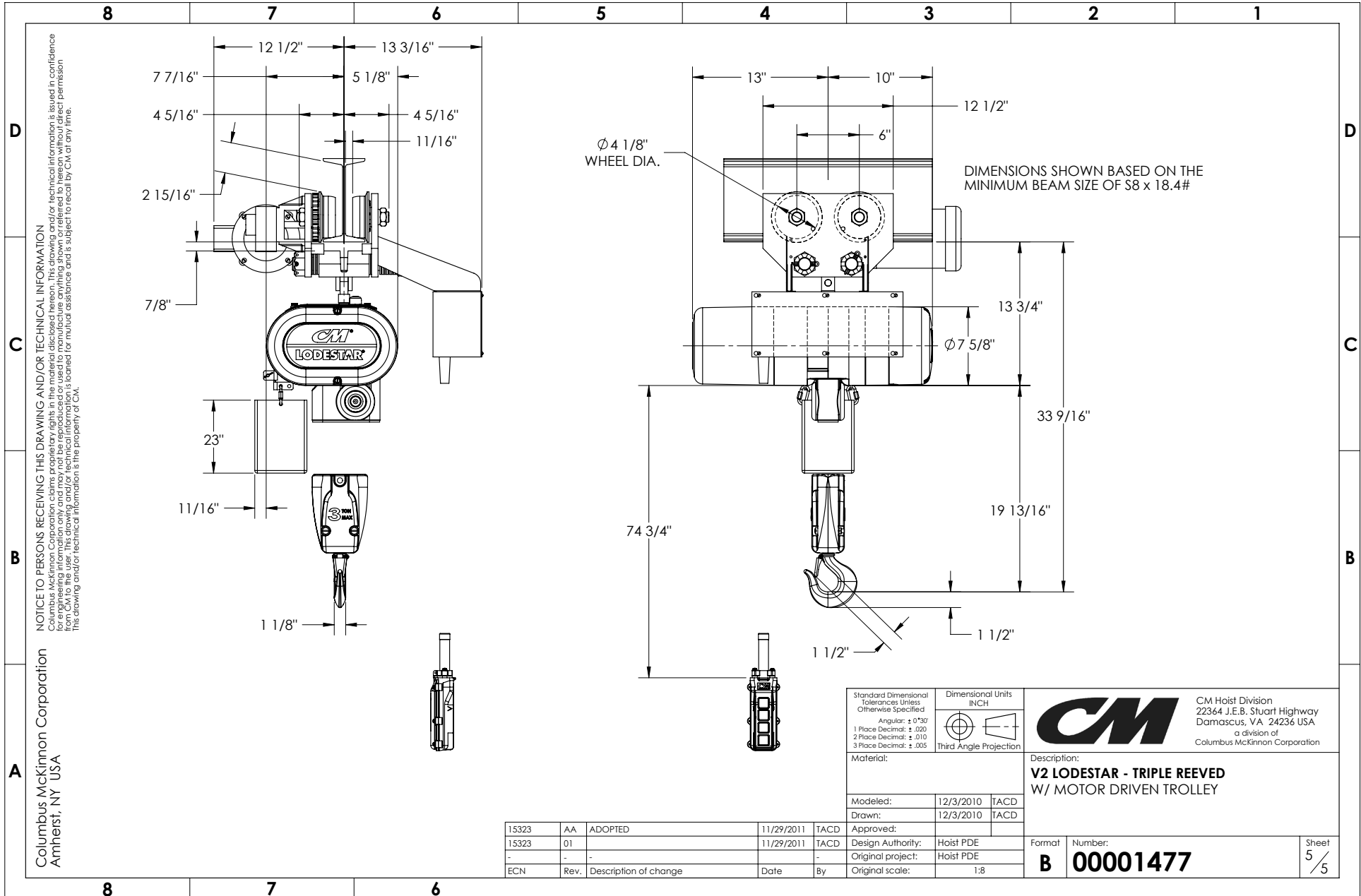


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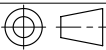

|                                                                                                   |           |                                                                                                                 |  |                                                                                                                                                                                                                    |
|---------------------------------------------------------------------------------------------------|-----------|-----------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Standard Dimensional Tolerances Unless Otherwise Specified                                        |           | Dimensional Units<br>INCH                                                                                       |  |  CM Hoist Division<br>22364 J.E.B. Stuart Highway<br>Damascus, VA 24236 USA<br>a division of<br>Columbus McKinnon Corporation |
| Angular: ± 0°30'<br>1 Place Decimal: ± .020<br>2 Place Decimal: ± .010<br>3 Place Decimal: ± .005 |           | <br>Third Angle Projection |  |                                                                                                                                                                                                                    |
| Material:                                                                                         |           |                                                                                                                 |  | Description:<br><b>V2 LODESTAR - TRIPLE REEVED<br/>W/ LOW HEADROOM TROLLEY</b>                                                                                                                                     |
| Madeled:                                                                                          | 12/3/2010 | TACD                                                                                                            |  | Format: <b>B</b> Number: <b>00001476</b>                                                                                                                                                                           |
| Drawn:                                                                                            | 12/3/2010 | TACD                                                                                                            |  |                                                                                                                                                                                                                    |
| Approved:                                                                                         |           |                                                                                                                 |  | Sheet<br><b>4</b> /<br><b>5</b>                                                                                                                                                                                    |
| Design Authority:                                                                                 | Hoist PDE |                                                                                                                 |  |                                                                                                                                                                                                                    |
| Original project:                                                                                 | Hoist PDE |                                                                                                                 |  |                                                                                                                                                                                                                    |
| Original scale:                                                                                   | 1:8       |                                                                                                                 |  |                                                                                                                                                                                                                    |

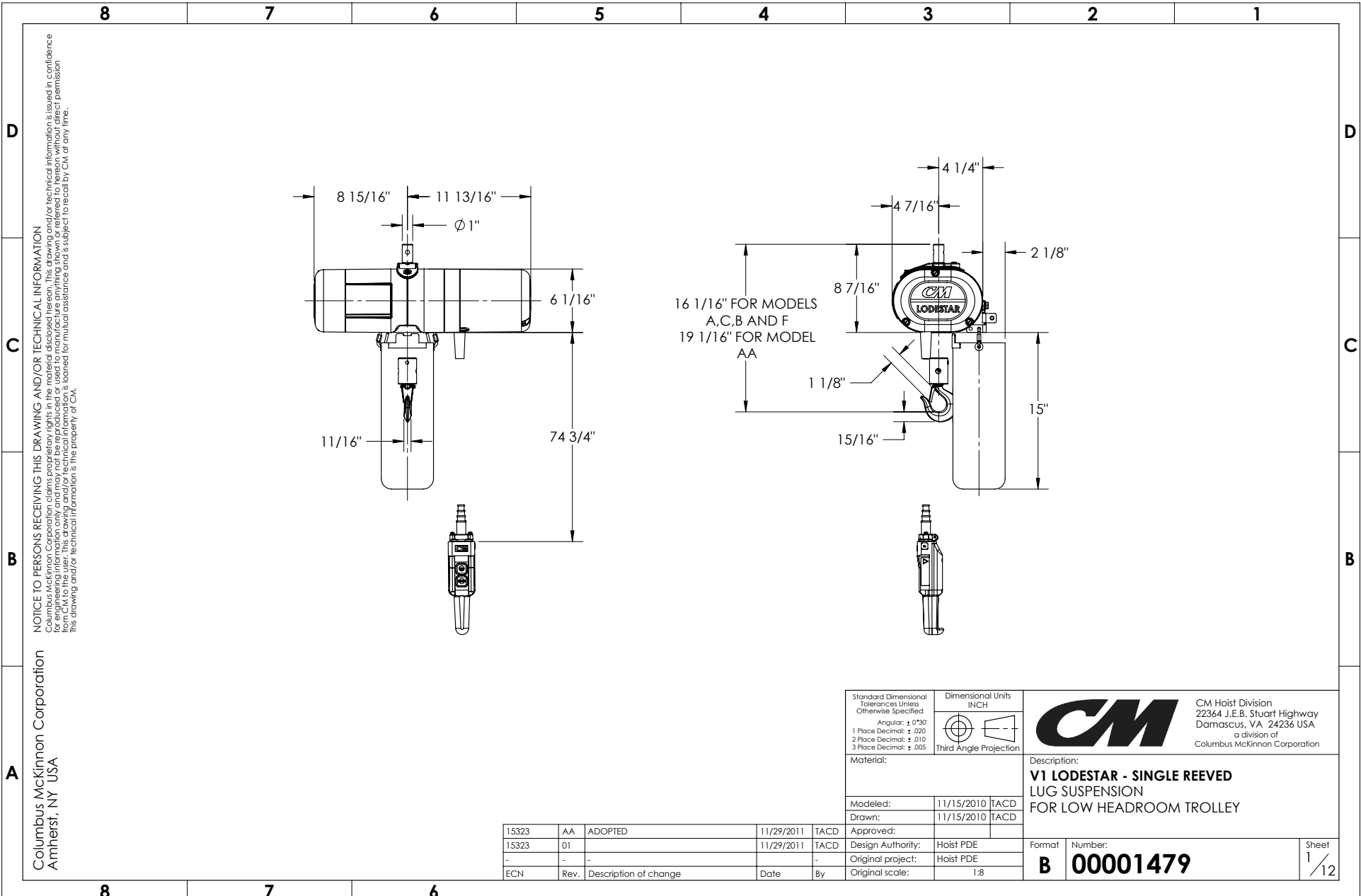
| ECN   | Rev. | Description of change | Date       | By   |
|-------|------|-----------------------|------------|------|
| 15323 | AA   | ADOPTED               | 11/29/2011 | TACD |
| 15323 | 01   |                       | 11/29/2011 | TACD |
| -     | -    | -                     | -          | -    |



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|-----------------------------------------------------------------------------------------------------|------|---------------------------|------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Standard Dimensional Tolerances Unless Otherwise Specified                                          |      | Dimensional Units<br>INCH |            | <br>Third Angle Projection | <br>CM Hoist Division<br>22364 J.E.B. Stuart Highway<br>Damascus, VA 24236 USA<br>a division of<br>Columbus McKinnon Corporation |
| - Angular: ± 0°30'<br>1 Place Decimal: ± .020<br>2 Place Decimal: ± .010<br>3 Place Decimal: ± .005 |      |                           |            |                                                                                                                 |                                                                                                                                                                                                                       |
| Material:                                                                                           |      |                           |            | Description:<br><b>V2 LODESTAR - TRIPLE REEVED<br/>W/ MOTOR DRIVEN TROLLEY</b>                                  |                                                                                                                                                                                                                       |
| Modeled:                                                                                            |      | 12/3/2010                 | TACD       |                                                                                                                 |                                                                                                                                                                                                                       |
| Drawn:                                                                                              |      | 12/3/2010                 | TACD       |                                                                                                                 |                                                                                                                                                                                                                       |
| Approved:                                                                                           |      |                           |            | Format                                                                                                          | Number:                                                                                                                                                                                                               |
| Design Authority:                                                                                   |      | Hoist PDE                 |            | <b>B</b>                                                                                                        | <b>00001477</b>                                                                                                                                                                                                       |
| Original project:                                                                                   |      | Hoist PDE                 |            |                                                                                                                 |                                                                                                                                                                                                                       |
| Original scale:                                                                                     |      | 1:8                       |            |                                                                                                                 |                                                                                                                                                                                                                       |
| 15323                                                                                               | AA   | ADOPTED                   | 11/29/2011 | TACD                                                                                                            |                                                                                                                                                                                                                       |
| 15323                                                                                               | 01   | -                         | 11/29/2011 | TACD                                                                                                            |                                                                                                                                                                                                                       |
| -                                                                                                   | -    | -                         | -          | -                                                                                                               |                                                                                                                                                                                                                       |
| ECN                                                                                                 | Rev. | Description of change     | Date       | By                                                                                                              |                                                                                                                                                                                                                       |

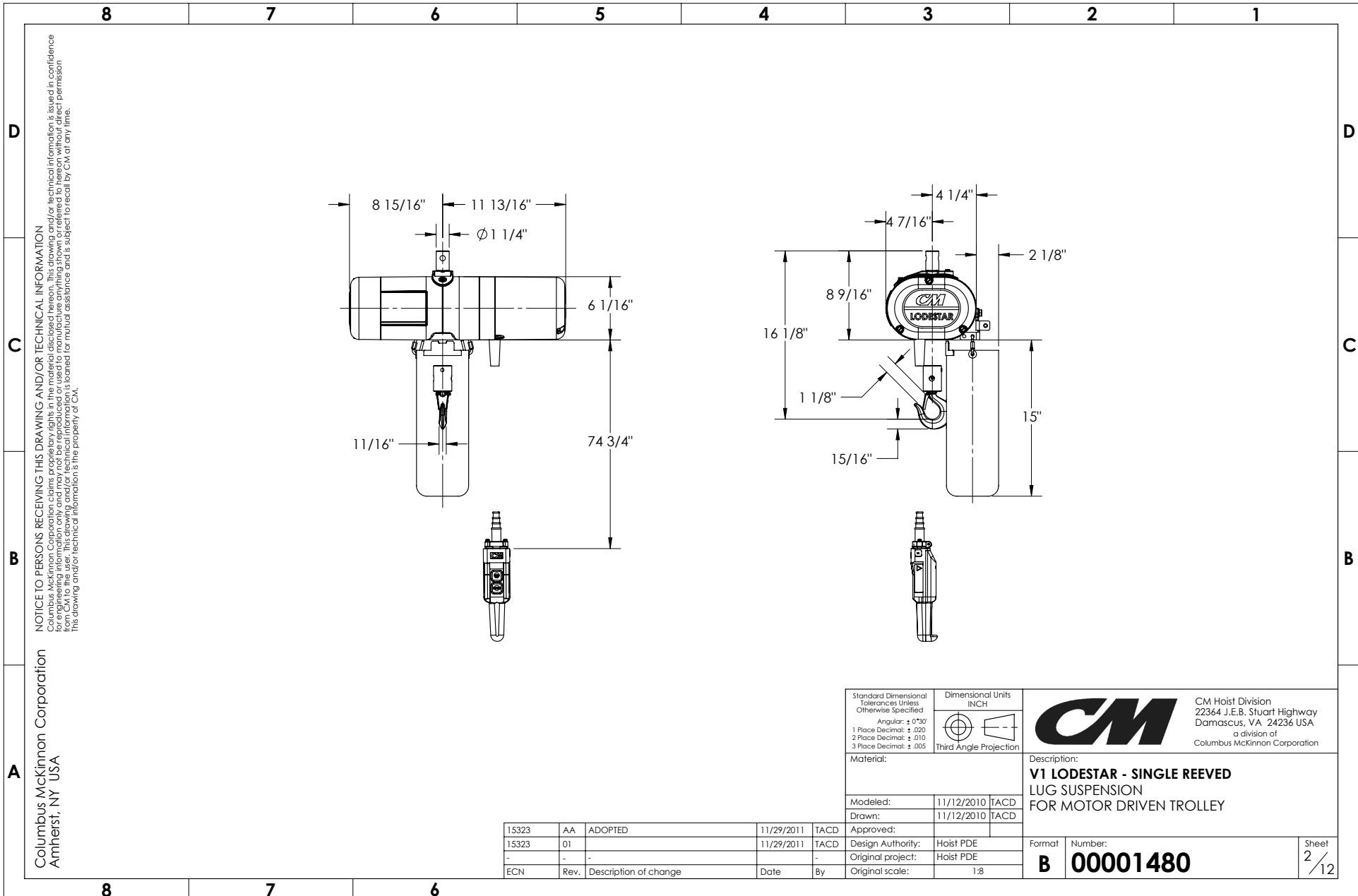


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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Standard Dimensional Tolerances Unless Otherwise Specified<br>Angular: ± 0°30'<br>1 Place Decimal: ± .020<br>2 Place Decimal: ± .010<br>3 Place Decimal: ± .005 | Dimensional Units<br>INCH<br>Third Angle Projection | <br>CM Hoist Division<br>22364 J.E.B. Stuart Highway<br>Damascus, VA 24236 USA<br>a division of<br>Columbus McKinnon Corporation |
| Description:<br><b>V1 LODESTAR - SINGLE REEVED LUG SUSPENSION FOR LOW HEADROOM TROLLEY</b>                                                                      |                                                     |                                                                                                                                                                                                                       |
| Material:                                                                                                                                                       | Madeled: 11/15/2010 TACD<br>Drawn: 11/15/2010 TACD  | Design Authority: Hoist PDE<br>Original project: Hoist PDE<br>Original scale: 1:8                                                                                                                                     |
| Formatted: <b>B</b><br>Number: <b>00001479</b>                                                                                                                  |                                                     | Sheet<br>1 / 12                                                                                                                                                                                                       |

| ECN   | Rev. | Description of change | Date       | By   |
|-------|------|-----------------------|------------|------|
| 15323 | AA   | ADOPTED               | 11/29/2011 | TACD |
| 15323 | 01   |                       | 11/29/2011 | TACD |
| -     | -    | -                     | -          | -    |

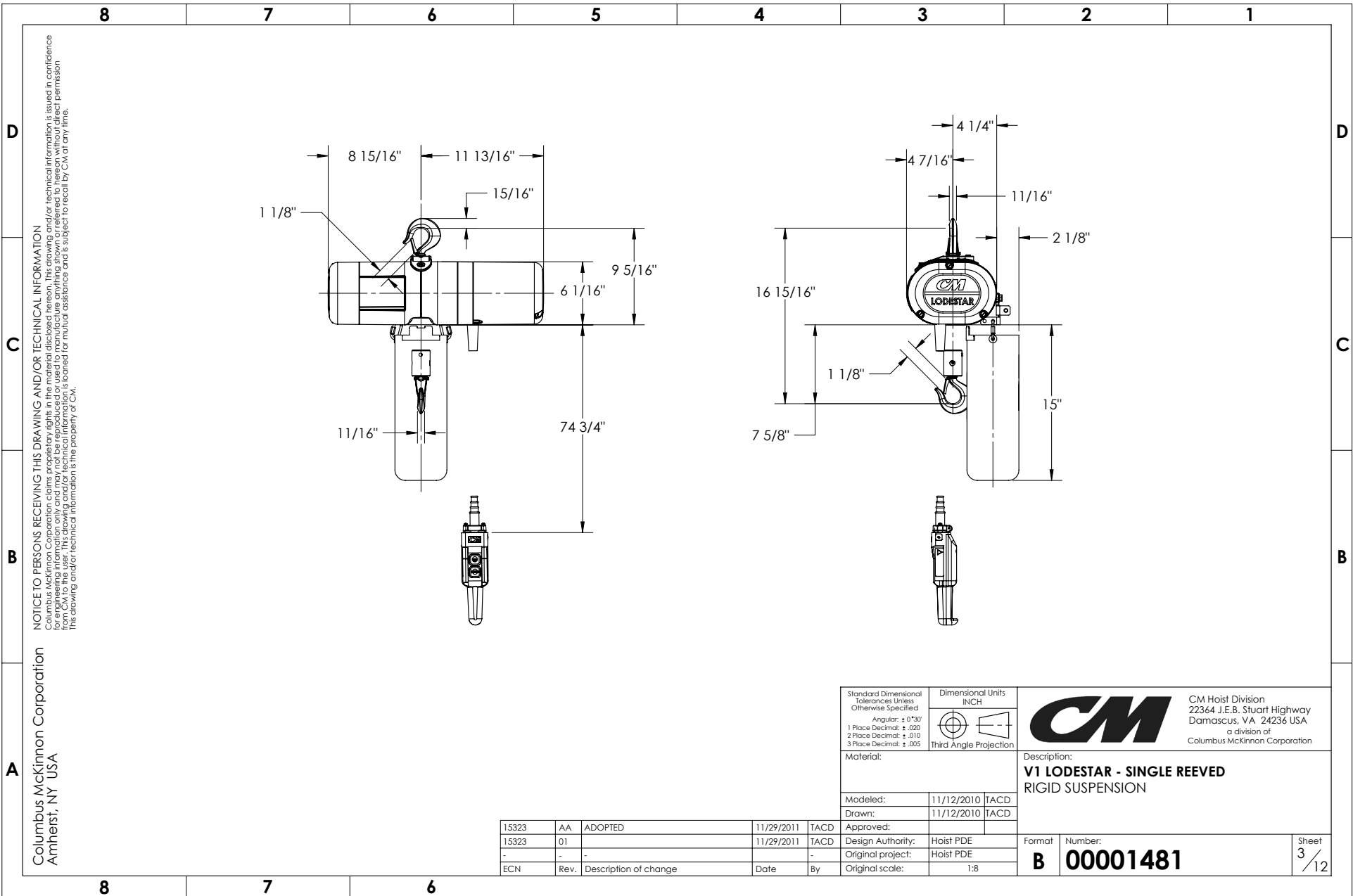


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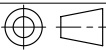
|                                                                                |  |                             |  |                     |                                                                                                                              |                              |
|--------------------------------------------------------------------------------|--|-----------------------------|--|---------------------|------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| Standard Dimensional Tolerances Unless Otherwise Specified<br>Angular: ± 0°30' |  | Dimensional Units<br>INCH   |  |                     | CM Hoist Division<br>22364 J.E.B. Stuart Highway<br>Damascus, VA 24236 USA<br>a division of<br>Columbus McKinnon Corporation |                              |
| 1 Place Decimal: ± .020<br>2 Place Decimal: ± .010<br>3 Place Decimal: ± .005  |  |                             |  |                     | Description:<br><b>V1 LODESTAR - SINGLE REEVED<br/>LUG SUSPENSION<br/>FOR MOTOR DRIVEN TROLLEY</b>                           |                              |
| Material:                                                                      |  | Modeled: 11/12/2010 TACD    |  | Format              |                                                                                                                              | Number:<br><b>B 00001480</b> |
| Drawn: 11/12/2010 TACD                                                         |  | Approved:                   |  | Sheet<br>2 / 12     |                                                                                                                              |                              |
| Design Authority: Hoist PDE                                                    |  | Original project: Hoist PDE |  | Original scale: 1:8 |                                                                                                                              |                              |

| ECN   | Rev. | Description of change | Date       | By   |
|-------|------|-----------------------|------------|------|
| 15323 | AA   | ADOPTED               | 11/29/2011 | TACD |
| 15323 | 01   |                       | 11/29/2011 | TACD |
| -     | -    | -                     | -          | -    |

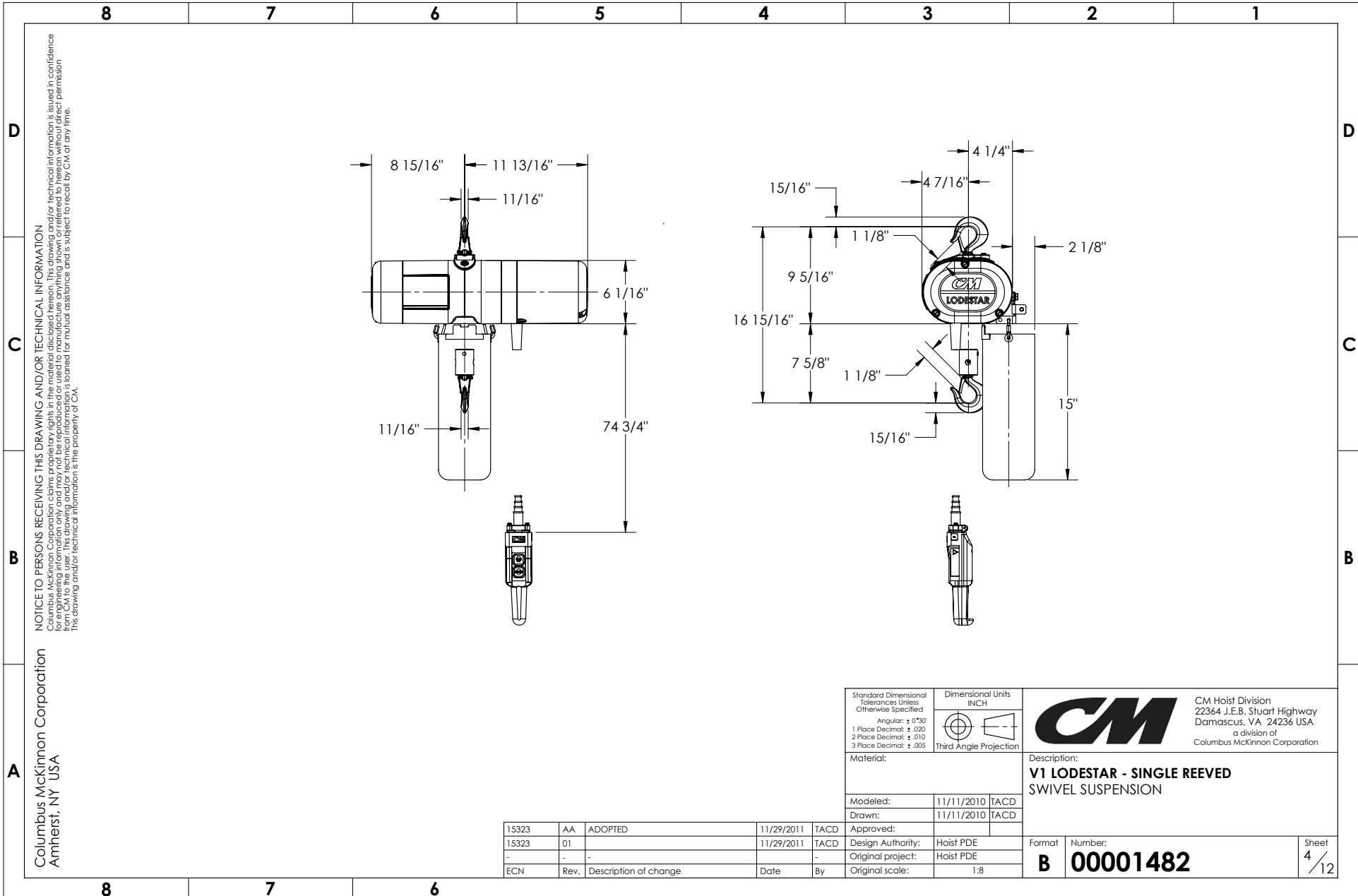


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|                                                                                                   |      |                                                                                                                 |            |                                                                                                                                                                                                                       |
|---------------------------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------------------------------------|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Standard Dimensional Tolerances Unless Otherwise Specified                                        |      | Dimensional Units INCH                                                                                          |            | <br>CM Hoist Division<br>22364 J.E.B. Stuart Highway<br>Damascus, VA 24236 USA<br>a division of<br>Columbus McKinnon Corporation |
| Angular: ± 0°30'<br>1 Place Decimal: ± .020<br>2 Place Decimal: ± .010<br>3 Place Decimal: ± .005 |      | <br>Third Angle Projection |            |                                                                                                                                                                                                                       |
| Material:                                                                                         |      |                                                                                                                 |            | Description:<br><b>V1 LODESTAR - SINGLE REEVED RIGID SUSPENSION</b>                                                                                                                                                   |
| Modeled:                                                                                          |      | 11/12/2010                                                                                                      | TACD       |                                                                                                                                                                                                                       |
| Drawn:                                                                                            |      | 11/12/2010                                                                                                      | TACD       |                                                                                                                                                                                                                       |
| Approved:                                                                                         |      |                                                                                                                 |            | Format: <b>B</b> Number: <b>00001481</b>                                                                                                                                                                              |
| Design Authority:                                                                                 |      | Hoist PDE                                                                                                       |            |                                                                                                                                                                                                                       |
| Original project:                                                                                 |      | Hoist PDE                                                                                                       |            |                                                                                                                                                                                                                       |
| Original scale:                                                                                   |      | 1:8                                                                                                             |            |                                                                                                                                                                                                                       |
| 15323                                                                                             | AA   | ADOPTED                                                                                                         | 11/29/2011 | TACD                                                                                                                                                                                                                  |
| 15323                                                                                             | 01   |                                                                                                                 | 11/29/2011 | TACD                                                                                                                                                                                                                  |
| -                                                                                                 | -    | -                                                                                                               | -          | -                                                                                                                                                                                                                     |
| ECN                                                                                               | Rev. | Description of change                                                                                           | Date       | By                                                                                                                                                                                                                    |

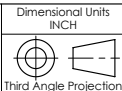




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 1 Place Decimal: ± .020  
 2 Place Decimal: ± .010  
 3 Place Decimal: ± .005



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 Damascus, VA 24236 USA  
 a division of  
 Columbus McKinnon Corporation

Material:

Description:  
**V1 LODESTAR - SINGLE REEVED SWIVEL SUSPENSION**

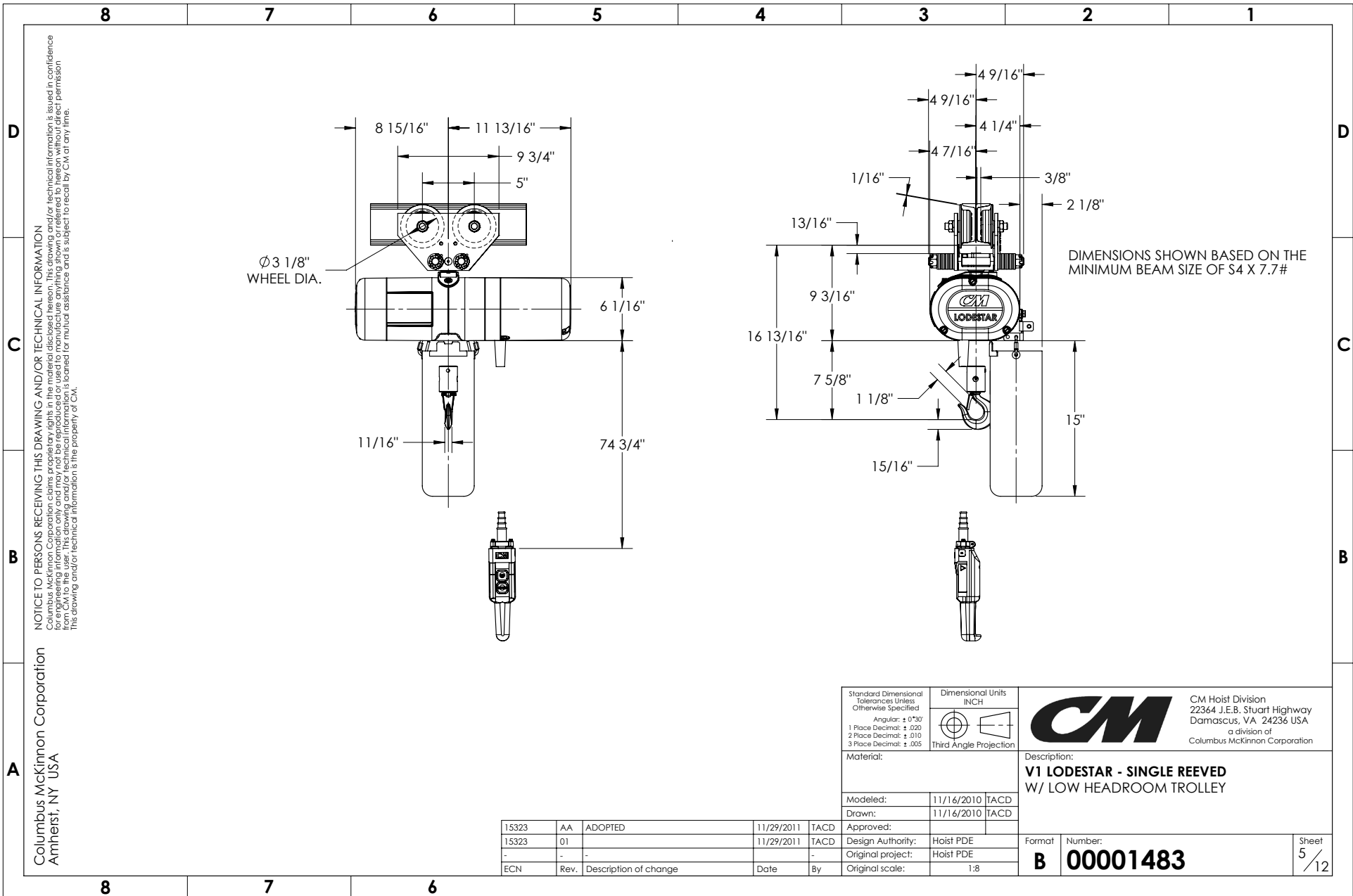
Modeled: 11/11/2010 TACD  
 Drawn: 11/11/2010 TACD

Approved:  
 Design Authority: Hoist PDE  
 Original project: Hoist PDE  
 Original scale: 1:8

Format Number:  
**B 00001482**

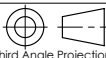

Sheet  
 4 / 12

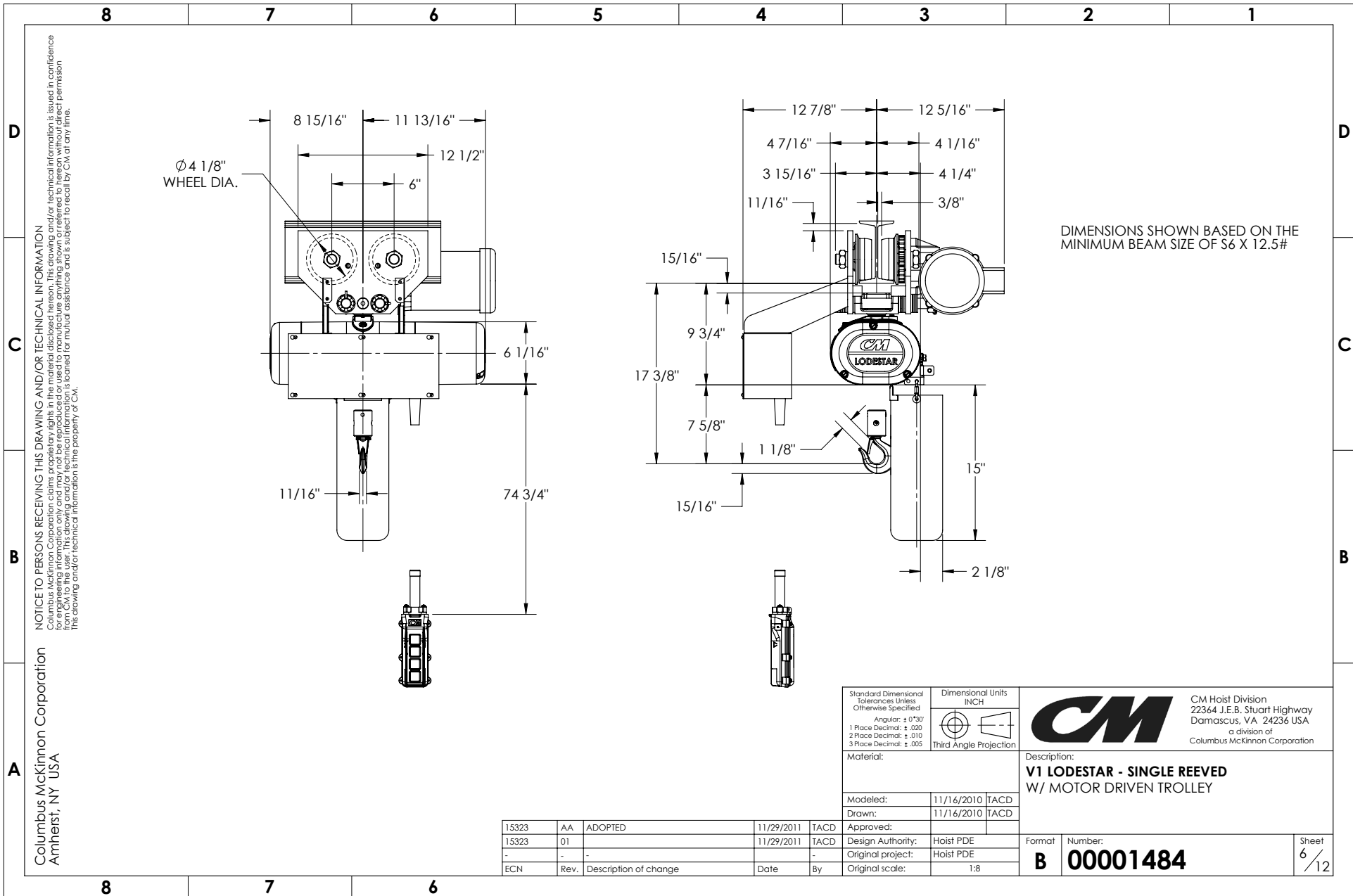
| ECN   | Rev. | Description of change | Date       | By   |
|-------|------|-----------------------|------------|------|
| 15323 | AA   | ADOPTED               | 11/29/2011 | TACD |
| 15323 | 01   |                       | 11/29/2011 | TACD |
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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-----------------------|------|----|-------|----|---------|------------|------|-------|----|--|------------|------|---|---|---|---|---|------------------------|
| Material: _____<br>Modeled: 11/16/2010 TACD<br>Drawn: 11/16/2010 TACD<br>Approved: _____<br>Design Authority: Hoist PDE<br>Original project: Hoist PDE<br>Original scale: 1:8                                                                                                                                                                                                                             |                                                                                                                                              |                                                                                                                                                                                                                    |            |                       |      |    |       |    |         |            |      |       |    |  |            |      |   |   |   |   |   |                        |
| Description:<br><b>V1 LODESTAR - SINGLE REEVED<br/>         W/ LOW HEADROOM TROLLEY</b>                                                                                                                                                                                                                                                                                                                   |                                                                                                                                              | Format: <b>B</b><br>Number: <b>00001483</b>                                                                                                                                                                        |            |                       |      |    |       |    |         |            |      |       |    |  |            |      |   |   |   |   |   |                        |
| <table border="1"> <thead> <tr> <th>ECN</th> <th>Rev.</th> <th>Description of change</th> <th>Date</th> <th>By</th> </tr> </thead> <tbody> <tr> <td>15323</td> <td>AA</td> <td>ADOPTED</td> <td>11/29/2011</td> <td>TACD</td> </tr> <tr> <td>15323</td> <td>01</td> <td></td> <td>11/29/2011</td> <td>TACD</td> </tr> <tr> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> </tbody> </table> |                                                                                                                                              | ECN                                                                                                                                                                                                                | Rev.       | Description of change | Date | By | 15323 | AA | ADOPTED | 11/29/2011 | TACD | 15323 | 01 |  | 11/29/2011 | TACD | - | - | - | - | - | Sheet<br><b>5</b> / 12 |
| ECN                                                                                                                                                                                                                                                                                                                                                                                                       | Rev.                                                                                                                                         | Description of change                                                                                                                                                                                              | Date       | By                    |      |    |       |    |         |            |      |       |    |  |            |      |   |   |   |   |   |                        |
| 15323                                                                                                                                                                                                                                                                                                                                                                                                     | AA                                                                                                                                           | ADOPTED                                                                                                                                                                                                            | 11/29/2011 | TACD                  |      |    |       |    |         |            |      |       |    |  |            |      |   |   |   |   |   |                        |
| 15323                                                                                                                                                                                                                                                                                                                                                                                                     | 01                                                                                                                                           |                                                                                                                                                                                                                    | 11/29/2011 | TACD                  |      |    |       |    |         |            |      |       |    |  |            |      |   |   |   |   |   |                        |
| -                                                                                                                                                                                                                                                                                                                                                                                                         | -                                                                                                                                            | -                                                                                                                                                                                                                  | -          | -                     |      |    |       |    |         |            |      |       |    |  |            |      |   |   |   |   |   |                        |

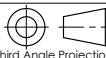


DIMENSIONS SHOWN BASED ON THE MINIMUM BEAM SIZE OF S6 X 12.5#

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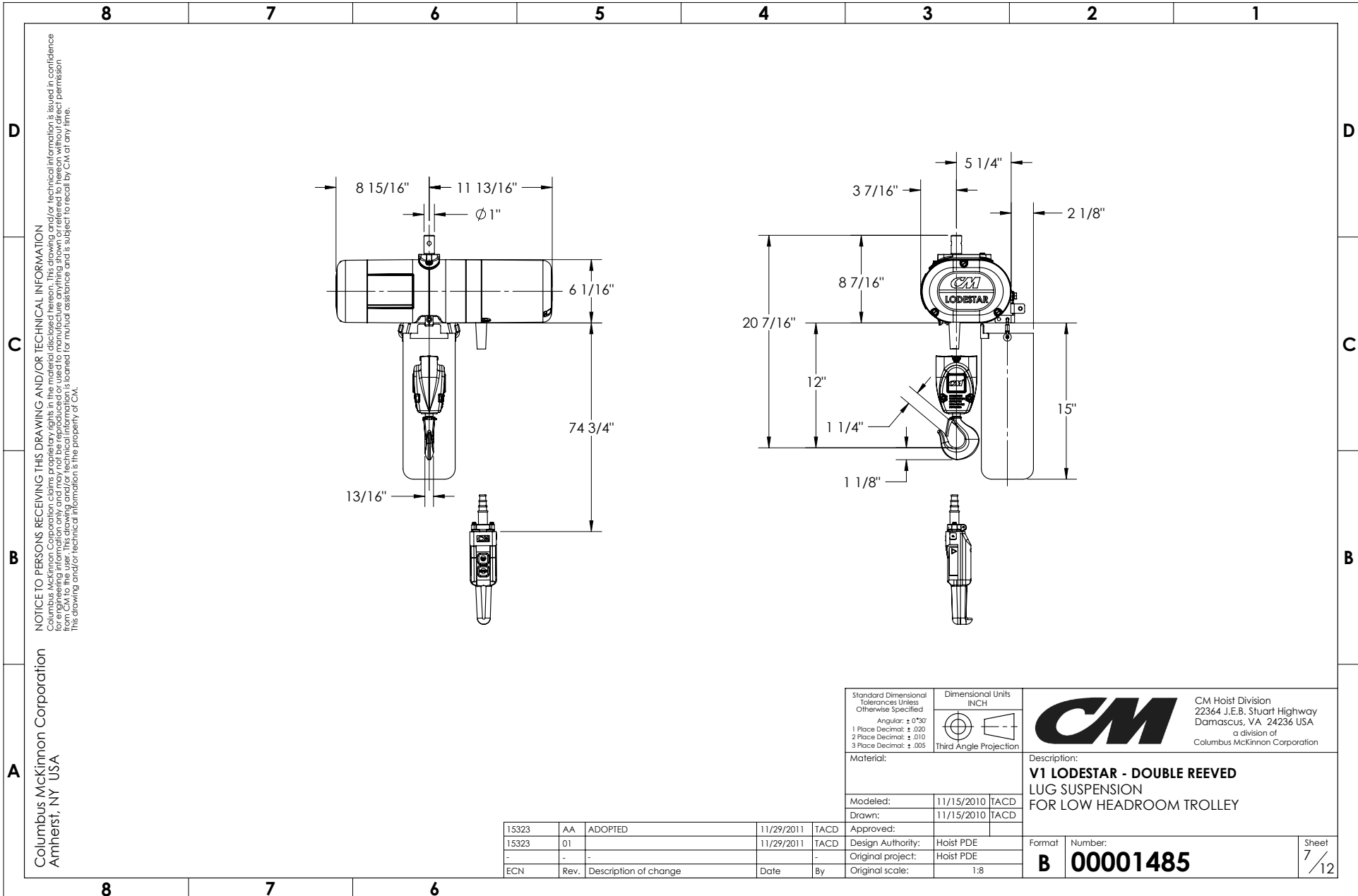
| ECN   | Rev. | Description of change | Date       | By   |
|-------|------|-----------------------|------------|------|
| 15323 | AA   | ADOPTED               | 11/29/2011 | TACD |
| 15323 | 01   |                       | 11/29/2011 | TACD |
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|                                                                                                                                                                  |                                                                                                                                              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Standard Dimensional Tolerances Unless Otherwise Specified:<br>Angular: ± 0°30'<br>1 Place Decimal: ± .020<br>2 Place Decimal: ± .010<br>3 Place Decimal: ± .005 | Dimensional Units<br>INCH<br><br>Third Angle Projection |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|


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 a division of  
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|                   |            |      |
|-------------------|------------|------|
| Material:         |            |      |
| Modeled:          | 11/16/2010 | TACD |
| Drawn:            | 11/16/2010 | TACD |
| Approved:         |            |      |
| Design Authority: | Hoist PDE  |      |
| Original project: | Hoist PDE  |      |
| Original scale:   | 1:8        |      |

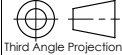
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| Description:<br><b>V1 LODESTAR - SINGLE REEVED<br/>W/ MOTOR DRIVEN TROLLEY</b> |                            |
| Format<br><b>B</b>                                                             | Number:<br><b>00001484</b> |
| Sheet<br>6/12                                                                  |                            |



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 1 Place Decimal: ± .020  
 2 Place Decimal: ± .010  
 3 Place Decimal: ± .005

Dimensional Units  
 INCH  
  
 Third Angle Projection



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 Damascus, VA 24236 USA  
 a division of  
 Columbus McKinnon Corporation

Material:

Description:  
**V1 LODESTAR - DOUBLE REEVED LUG SUSPENSION FOR LOW HEADROOM TROLLEY**

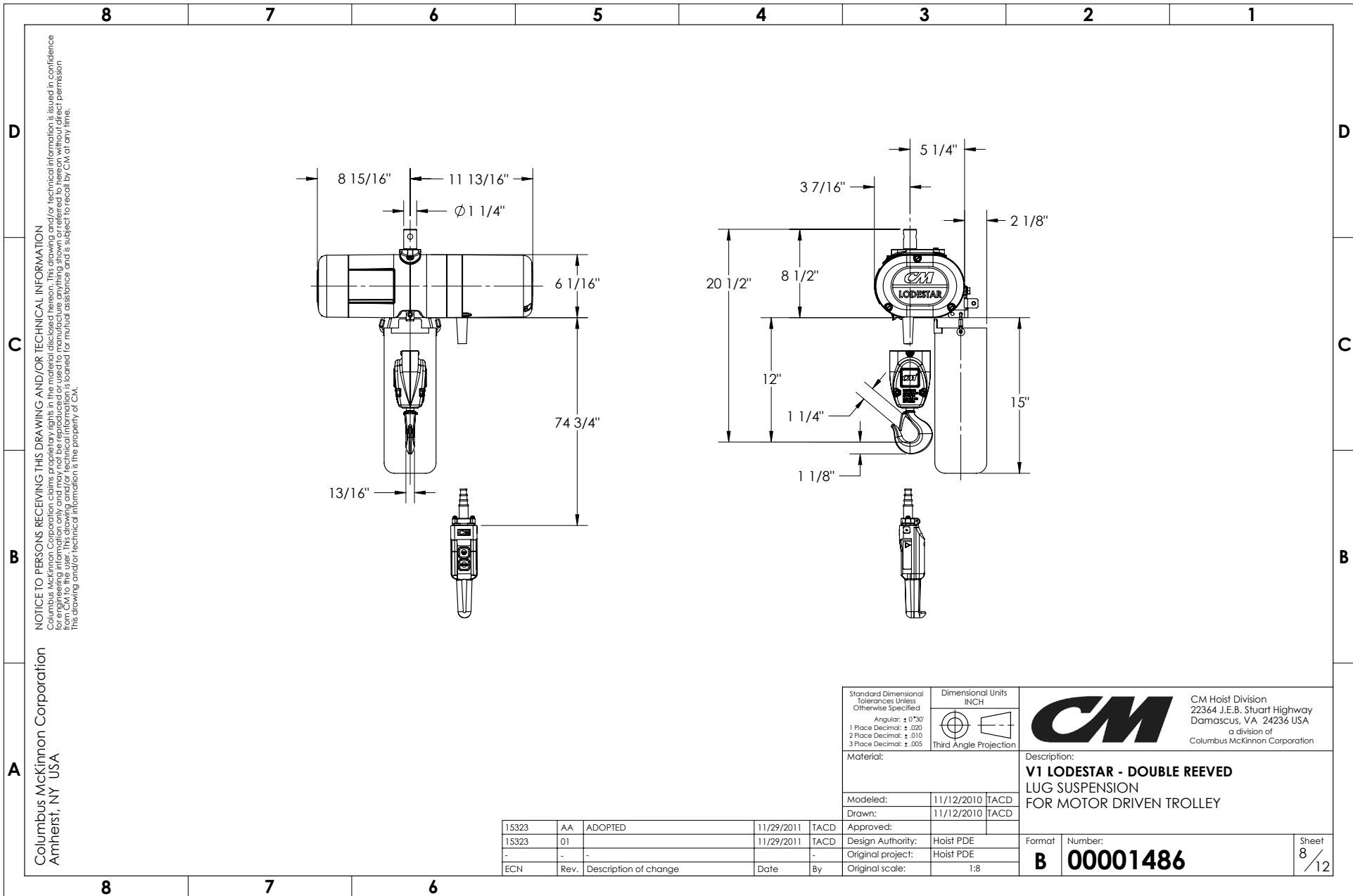
Modeled: 11/15/2010 TACD  
 Drawn: 11/15/2010 TACD

Approved:  
 Design Authority: Hoist PDE  
 Original project: Hoist PDE  
 Original scale: 1:8

Format Number:  
**B 00001485**

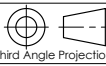

| ECN   | Rev. | Description of change | Date       | By   |
|-------|------|-----------------------|------------|------|
| 15323 | AA   | ADOPTED               | 11/29/2011 | TACD |
| 15323 | 01   |                       | 11/29/2011 | TACD |
| -     | -    | -                     | -          | -    |

Sheet  
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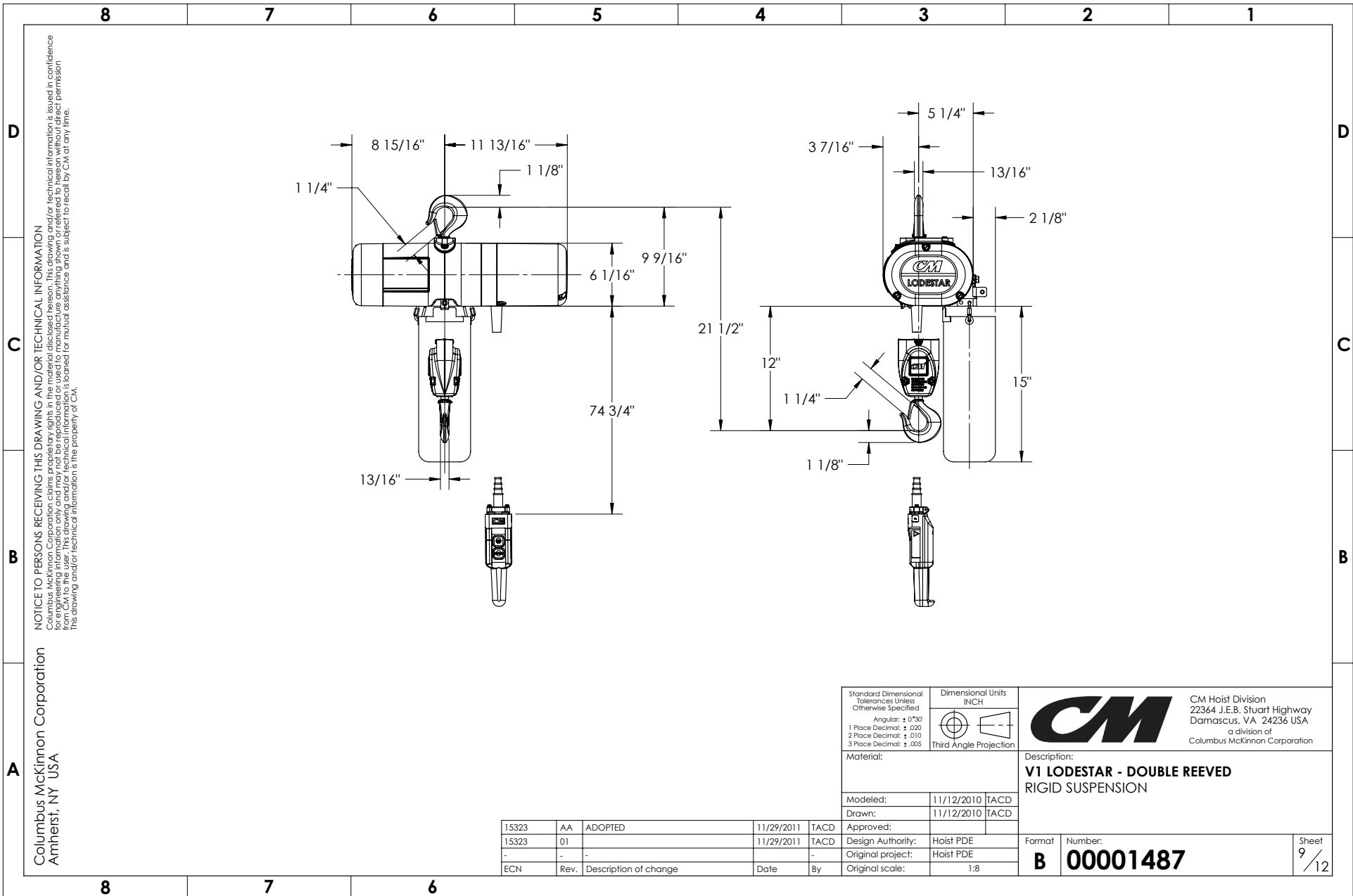


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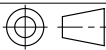

|                                                                                                                                                                  |            |                                                                                                                                              |                                                                                                                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Standard Dimensional Tolerances Unless Otherwise Specified:<br>Angular: ± 0°30'<br>1 Place Decimal: ± .020<br>2 Place Decimal: ± .010<br>3 Place Decimal: ± .005 |            | Dimensional Units<br>INCH<br><br>Third Angle Projection |  CM Hoist Division<br>22364 J.E.B. Stuart Highway<br>Damascus, VA 24236 USA<br>a division of<br>Columbus McKinnon Corporation |
| Material:                                                                                                                                                        |            | Description:<br><b>V1 LODESTAR - DOUBLE REEVED LUG SUSPENSION FOR MOTOR DRIVEN TROLLEY</b>                                                   |                                                                                                                                                                                                                    |
| Modeled:                                                                                                                                                         | 11/12/2010 | TACD                                                                                                                                         | Format: <b>B</b> Number: <b>00001486</b>                                                                                                                                                                           |
| Drawn:                                                                                                                                                           | 11/12/2010 | TACD                                                                                                                                         |                                                                                                                                                                                                                    |
| Approved:                                                                                                                                                        |            |                                                                                                                                              | Sheet <b>8</b> / <b>12</b>                                                                                                                                                                                         |
| Design Authority:                                                                                                                                                | Hoist PDE  |                                                                                                                                              |                                                                                                                                                                                                                    |
| Original project:                                                                                                                                                | Hoist PDE  |                                                                                                                                              |                                                                                                                                                                                                                    |
| Original scale:                                                                                                                                                  | 1:8        |                                                                                                                                              |                                                                                                                                                                                                                    |

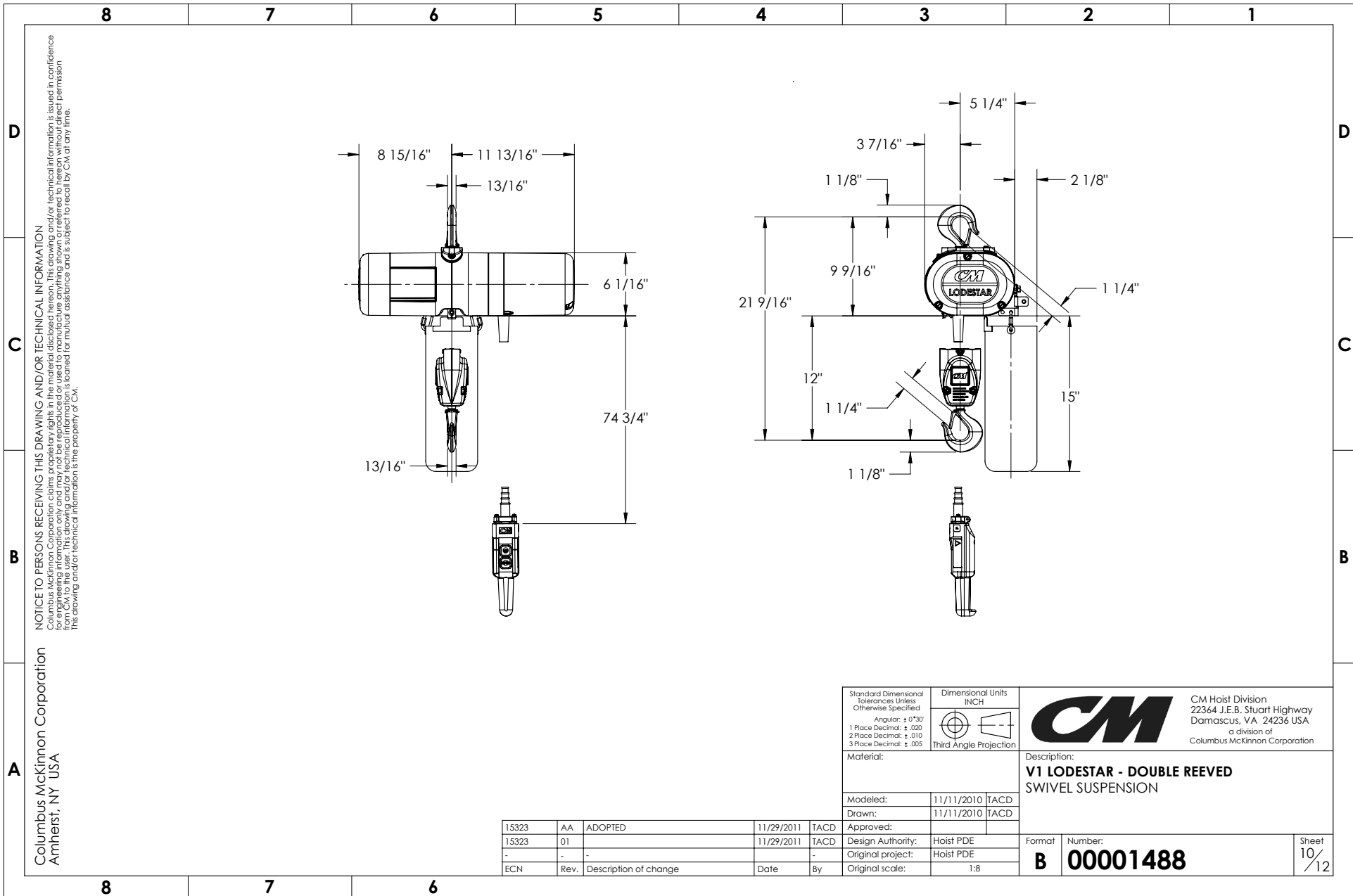
| ECN   | Rev. | Description of change | Date       | By   |
|-------|------|-----------------------|------------|------|
| 15323 | AA   | ADOPTED               | 11/29/2011 | TACD |
| 15323 | 01   |                       | 11/29/2011 | TACD |
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|                                                                                                                                                                  |            |                                                                                                                                              |                                                                                                                                                                                                                    |      |                   |           |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------------------|-----------|--|
| Standard Dimensional Tolerances Unless Otherwise Specified:<br>Angular: ± 0°30'<br>1 Place Decimal: ± .020<br>2 Place Decimal: ± .010<br>3 Place Decimal: ± .005 |            | Dimensional Units<br>INCH<br><br>Third Angle Projection |  CM Hoist Division<br>22364 J.E.B. Stuart Highway<br>Damascus, VA 24236 USA<br>a division of<br>Columbus McKinnon Corporation |      |                   |           |  |
| Material:                                                                                                                                                        |            | Description:<br><b>V1 LODESTAR - DOUBLE REEVED RIGID SUSPENSION</b>                                                                          |                                                                                                                                                                                                                    |      |                   |           |  |
| Modeled:                                                                                                                                                         | 11/12/2010 | TACD                                                                                                                                         | Format: <b>B</b> Number: <b>00001487</b>                                                                                                                                                                           |      |                   |           |  |
| Drawn:                                                                                                                                                           | 11/12/2010 | TACD                                                                                                                                         |                                                                                                                                                                                                                    |      |                   |           |  |
| Approved:                                                                                                                                                        |            |                                                                                                                                              | Sheet<br><b>9</b> / 12                                                                                                                                                                                             |      |                   |           |  |
| Design Authority:                                                                                                                                                | Hoist PDE  |                                                                                                                                              |                                                                                                                                                                                                                    |      |                   |           |  |
| Original project:                                                                                                                                                | Hoist PDE  |                                                                                                                                              |                                                                                                                                                                                                                    |      |                   |           |  |
| Original scale:                                                                                                                                                  | 1:8        |                                                                                                                                              |                                                                                                                                                                                                                    |      |                   |           |  |
| 15323                                                                                                                                                            | AA         | ADOPTED                                                                                                                                      | 11/29/2011                                                                                                                                                                                                         | TACD |                   |           |  |
| 15323                                                                                                                                                            | 01         |                                                                                                                                              | 11/29/2011                                                                                                                                                                                                         | TACD | Design Authority: | Hoist PDE |  |
| -                                                                                                                                                                | -          | -                                                                                                                                            | -                                                                                                                                                                                                                  | -    | Original project: | Hoist PDE |  |
| ECN                                                                                                                                                              | Rev.       | Description of change                                                                                                                        | Date                                                                                                                                                                                                               | By   | Original scale:   | 1:8       |  |

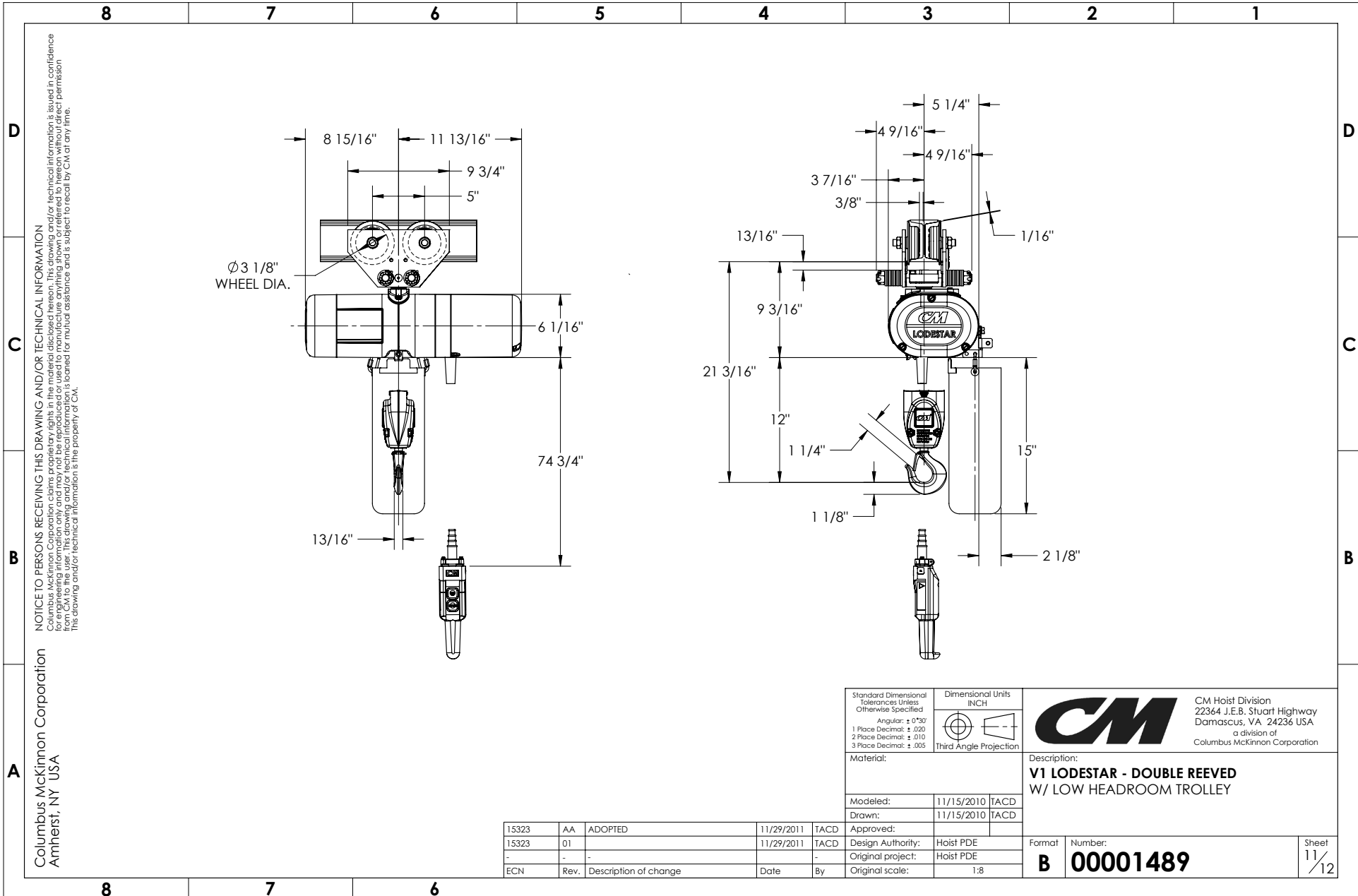


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|------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|----------------------------------------------------------------------|--|--------------------|------------------------------------------------------------------------------------------------------------------------------|----------------|
| Standard Dimensional Tolerances Unless Otherwise Specified:<br>Angular: ± 0°30'<br>1 Place Decimal: ± .020<br>2 Place Decimal: ± .010<br>3 Place Decimal: ± .005 |            | Dimensional Units<br>INCH<br>Third Angle Projection                  |  |                    | CM Hoist Division<br>22364 J.E.B. Stuart Highway<br>Damascus, VA 24236 USA<br>a division of<br>Columbus McKinnon Corporation |                |
| Material:                                                                                                                                                        |            | Description:<br><b>V1 LODESTAR - DOUBLE REEVED SWIVEL SUSPENSION</b> |  |                    |                                                                                                                              |                |
| Modeled:                                                                                                                                                         | 11/11/2010 | TACD                                                                 |  | Format<br><b>B</b> | Number:<br><b>00001488</b>                                                                                                   | Sheet<br>10/12 |
| Drawn:                                                                                                                                                           | 11/11/2010 | TACD                                                                 |  |                    |                                                                                                                              |                |
| Approved:                                                                                                                                                        |            |                                                                      |  |                    |                                                                                                                              |                |
| Design Authority:                                                                                                                                                | Hoist PDE  |                                                                      |  |                    |                                                                                                                              |                |
| Original project:                                                                                                                                                | Hoist PDE  |                                                                      |  |                    |                                                                                                                              |                |
| Original scale:                                                                                                                                                  | 1:8        |                                                                      |  |                    |                                                                                                                              |                |

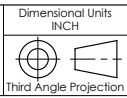
| ECN   | Rev. | Description of change | Date       | By   |
|-------|------|-----------------------|------------|------|
| 15323 | AA   | ADOPTED               | 11/29/2011 | TACD |
| 15323 | 01   |                       | 11/29/2011 | TACD |
| -     | -    |                       | -          | -    |



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 1 Place Decimal: ± .020  
 2 Place Decimal: ± .010  
 3 Place Decimal: ± .005



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 Damascus, VA 24236 USA  
 a division of  
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Description:  
**V1 LODESTAR - DOUBLE REEVED**  
**W/ LOW HEADROOM TROLLEY**

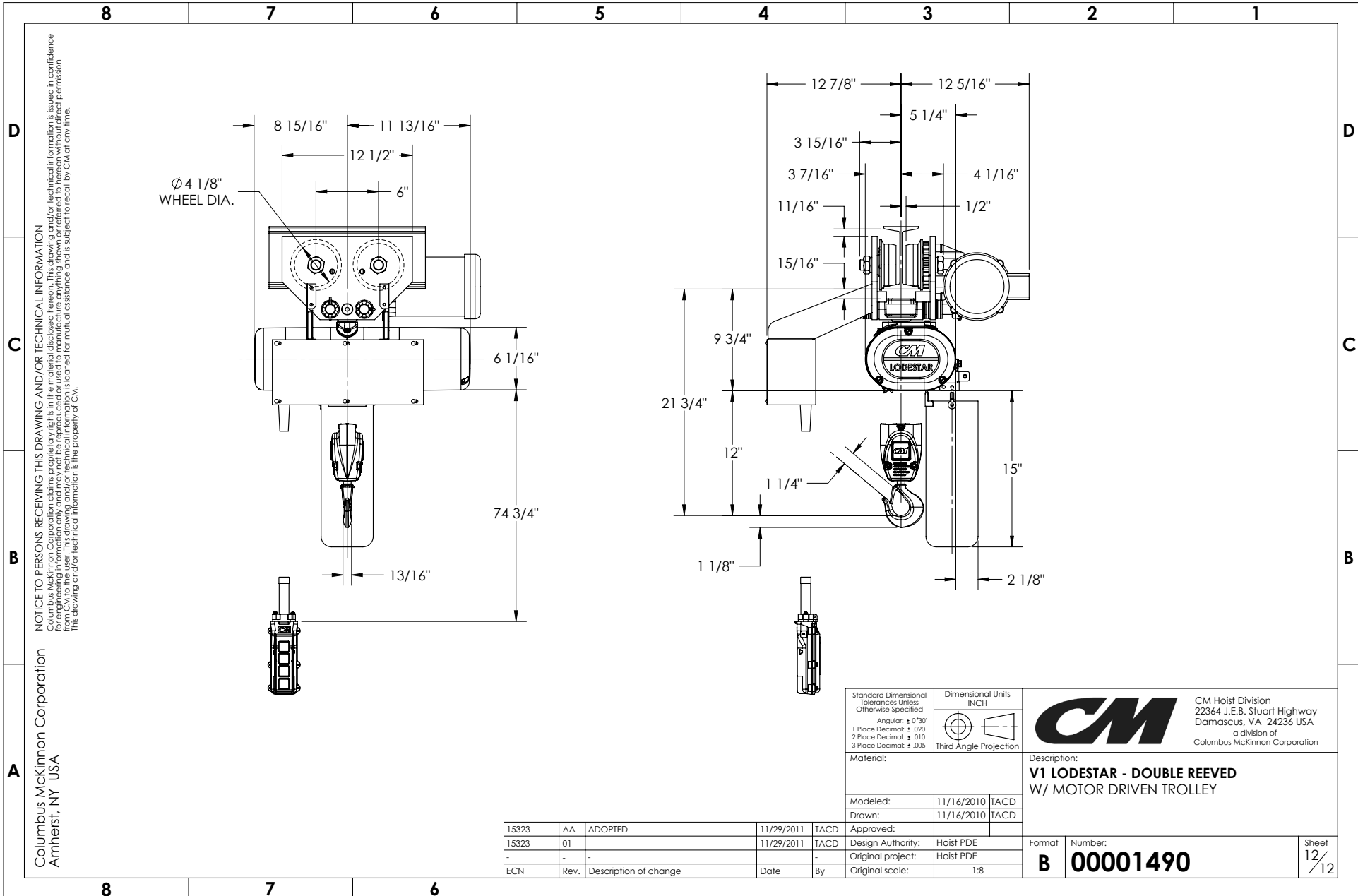
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|-------|------|-----------------------|------------|------|
| 15323 | AA   | ADOPTED               | 11/29/2011 | TACD |
| 15323 | 01   |                       | 11/29/2011 | TACD |
| -     | -    | -                     | -          | -    |

|                   |                 |
|-------------------|-----------------|
| Material:         |                 |
| Modeled:          | 11/15/2010 TACD |
| Drawn:            | 11/15/2010 TACD |
| Approved:         |                 |
| Design Authority: | Hoist PDE       |
| Original project: | Hoist PDE       |
| Original scale:   | 1:8             |

Format: **B**    Number: **00001489**

Sheet **11/12**





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Columbus McKinnon Corporation  
 Amherst, NY USA

| ECN   | Rev. | Description of change | Date       | By   |
|-------|------|-----------------------|------------|------|
| 15323 | AA   | ADOPTED               | 11/29/2011 | TACD |
| 15323 | 01   |                       | 11/29/2011 | TACD |
| -     | -    | -                     | -          | -    |

|                                                            |                            |
|------------------------------------------------------------|----------------------------|
| Standard Dimensional Tolerances Unless Otherwise Specified | Dimensional Units INCH     |
| Angular: ± 0°30'                                           | <br>Third Angle Projection |
| 1 Place Decimal: ± .020                                    |                            |
| 2 Place Decimal: ± .010                                    |                            |
| 3 Place Decimal: ± .005                                    |                            |

|                   |            |      |
|-------------------|------------|------|
| Material:         |            |      |
| Modeled:          | 11/16/2010 | TACD |
| Drawn:            | 11/16/2010 | TACD |
| Approved:         |            |      |
| Design Authority: | Hoist PDE  |      |
| Original project: | Hoist PDE  |      |
| Original scale:   | 1:8        |      |

|          |                                                                                                                              |              |
|----------|------------------------------------------------------------------------------------------------------------------------------|--------------|
|          | CM Hoist Division<br>22364 J.E.B. Stuart Highway<br>Damascus, VA 24236 USA<br>a division of<br>Columbus McKinnon Corporation |              |
|          | Description:<br><b>V1 LODESTAR - DOUBLE REEVED<br/>         W/ MOTOR DRIVEN TROLLEY</b>                                      |              |
| Format   | Number:                                                                                                                      | Sheet        |
| <b>B</b> | <b>00001490</b>                                                                                                              | <b>12/12</b> |