

# Customer Guide to Ground Engaging Tools



Caterpillar's® Ground Engaging Tools (GET) are designed to

- Increase machine productivity by matching GET products to a machine and its applications
- Protect structural or more expensive machine components from wear.

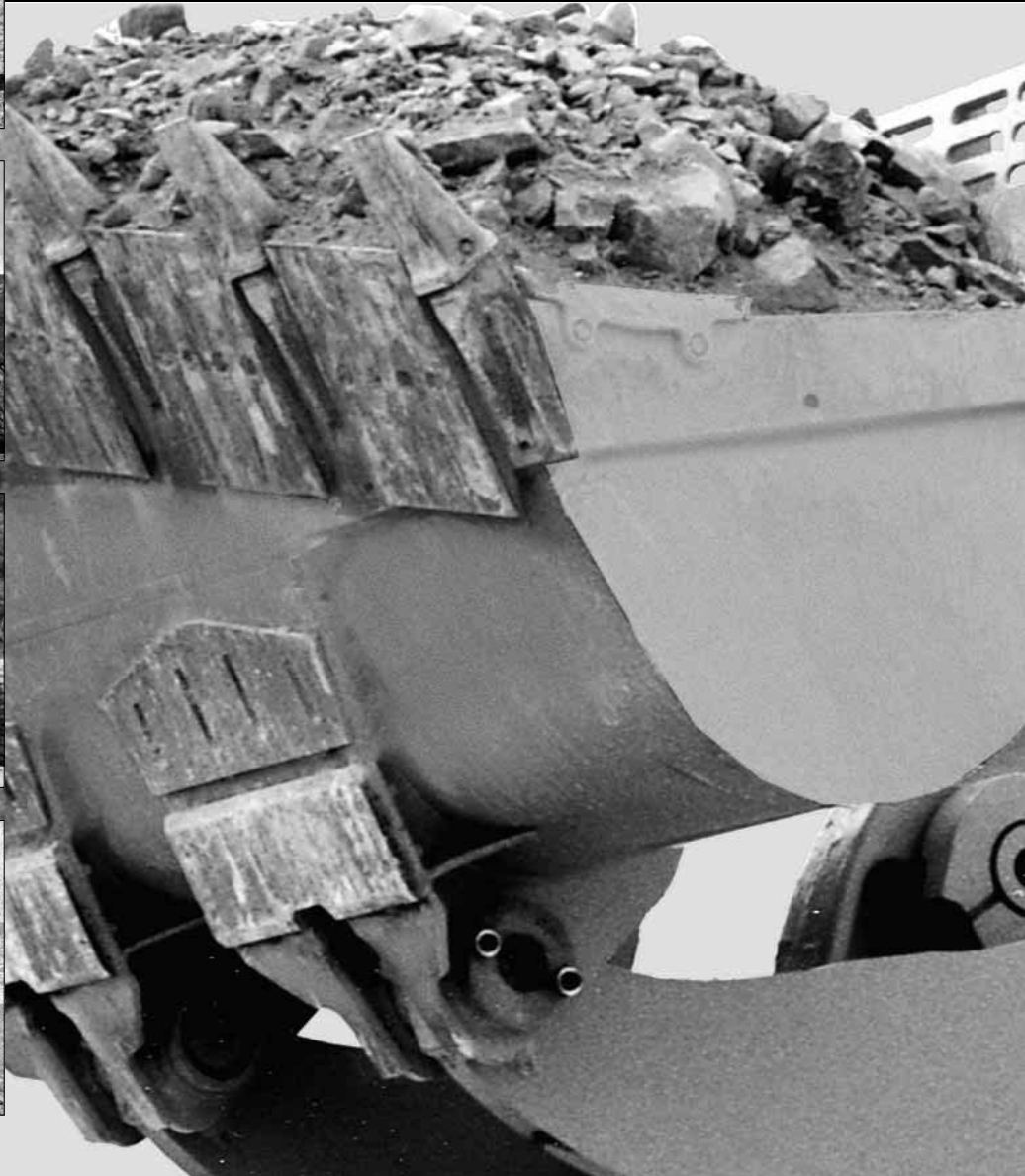
For the best performance, always use Cat® GET.

This booklet contains...

**Specifications, Index of measures, Selector guides**

for the following Cat machines

- Loaders
- Excavators
- Backhoe Loaders
- Motor Graders
- Tractors



# Loaders



## Bucket Maintenance Tips

**Never operate a bare bucket** – The base edge is an integral part of the bucket and directly affects its structural strength. Replacing the base edge generally removes machines from productive use during the repair period. Extension of base edge life through wear plates is an economic method of increasing machine up time. If the application does not require bucket teeth or teeth with bolt-on edge segments, then use flat bolt-on or weld-on half-arrow edges.

**Replace worn base edges** – Base edges should be replaced before they wear thin enough to fail. A failure means unscheduled downtime and a chance for structural bucket damage. If possible, use either Corner Guard System base edges or Caterpillar Rock Bucket edges with pre-drilled bolt holes. Both permit use of all available options.

**Rotate bucket tips and bolt-on edge segments** – Rotate tips from ends to the center and vice versa, also turning them over. Rotating and turning tips will extend wear life, distribute wear, and maintain tip sharpness. Rotating end segments toward the center at turn time will distribute wear among segments.

**Run bolt-on edges, segments, and tips** to their full service life but not beyond – Exceeding wear life could cause wear to bucket structural members and result in higher repair costs.

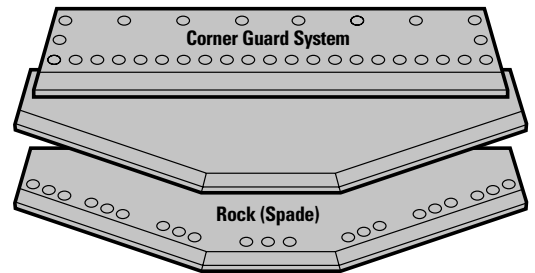
**Maintain the bucket positioner in proper adjustment** – This will keep the bucket level to the ground and help you eliminate uneven wear on the bottom. Maintaining proper bucket positioning will generally place tips at the angle for optimum penetration.

**Check the lubrication daily on the bucket linkage pins** – On machines not equipped with sealed linkage pins, consider installing them. They will extend lubrication intervals and reduce maintenance time. See lubrication instructions in your machine maintenance guide.

**Minimize bucket contact with the ground** – Lower the bucket to the ground only when you are ready to enter the stock-pile. Unnecessary contacts with the ground wear the bucket bottom and increase GET consumption.



Base



**A straight edge** allows for greater breakout force, give greater strength and generate more dump clearance.

**A spade edge** provides more penetration and increases the capacity of the bucket.

## Bucket Systems

### Keys



Maintenance Tips

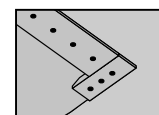
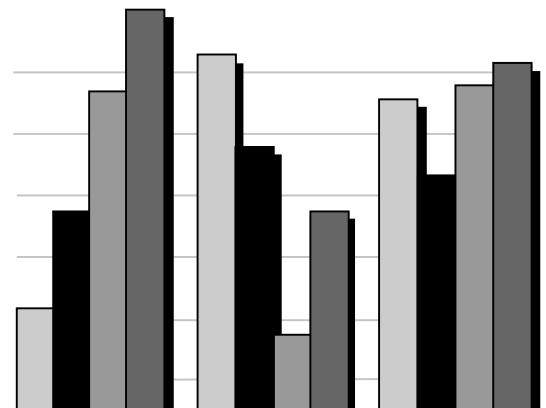


New Product Option

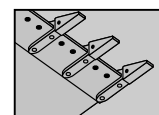


Important Note

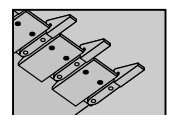
Penetration ability   
 Impact resistance   
 Wear life/  
 Abrasion protection   
 Smooth floor maintenance



Bolt-on cutting edges



Bolt-on two-strap adapters



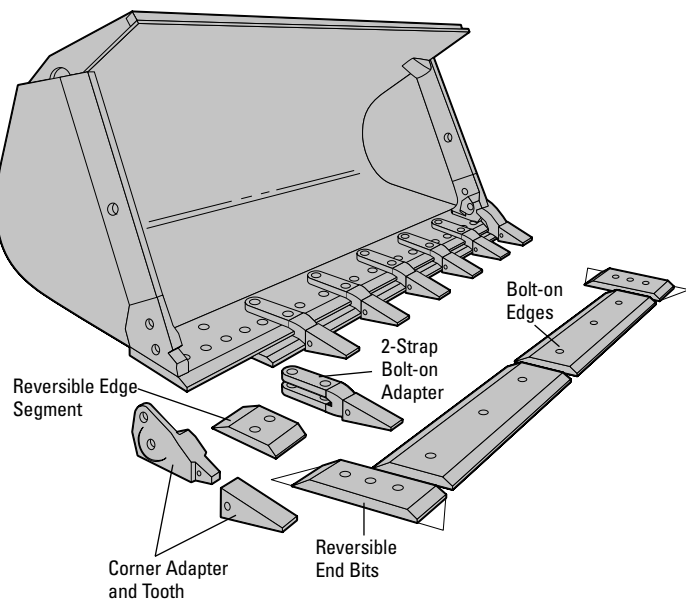
Bolt-on two-strap adapters with edge segments

## Bucket Systems

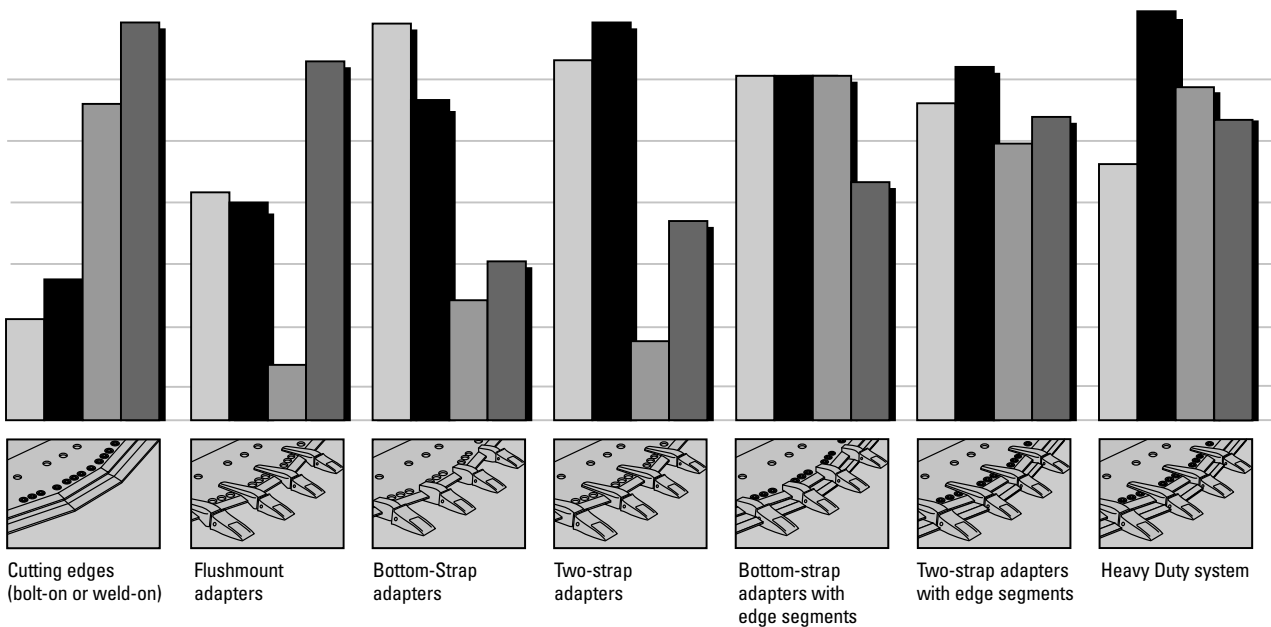
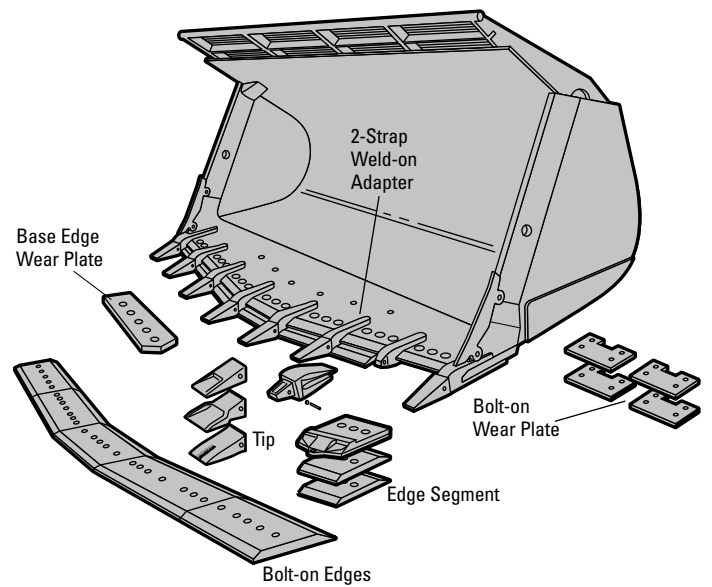
**Corner Guard System Edges** – Available for General Purpose and Multi-Purpose buckets. Depending on job requirements, Corner Guard System base edges can be equipped with either bolt-on edges, bolt-on teeth, or bolt-on teeth with bolt-on edge segments.

**Rock Bucket Edges** – Available with a spade shape (950 thru 994) or with a straight edge (988 thru 994-size buckets). Spade edges also come with bolt holes to accept either bolt-on edges (except 994) or bolt-on edge segments between teeth.

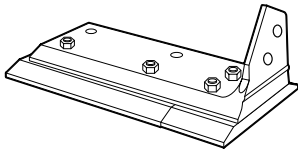
### Corner Guard System



### Rock Bucket System



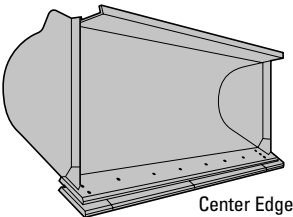
**Corner Guard Bolt-on Cutting Edges**



Two-Bolt Corner Guard

When penetration is not a problem, such as clean-up work or stockpiling, use the Corner Guard cutting edges. This system:

- increases base edge life up to 5 times over unprotected base edge
- is quick and easy to replace
- increases bucket capacity
- provides smooth floor maintenance capability
- is made from DH-2 steel alloy, through hardened to 430-520 Brinell.



End Bit

Center Edge

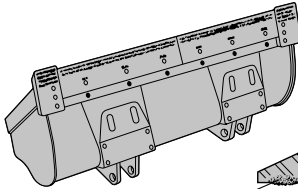
**Standard** cutting edges can be “propellered” to present a second wear life. Available for the full range of Wheel Loader (except 990-994).



**Heavy Duty** cutting edges are also reversible. This thicker option provides at least 50% more wear material and a better cost per hour. Available for 950B/E/F, 966C/D/E/F, 980C/F/G.



**The Abrasion Resistant Material (ARM)** cutting edges are available for Corner Guard System fitting General Purpose and Multi-Purpose buckets. Very hard abrasion resistant particles have been added to protect critical wear areas (under the leading edge, in front of bolt heads, and under the bucket’s front corners).



Abrasion-Resistant Material

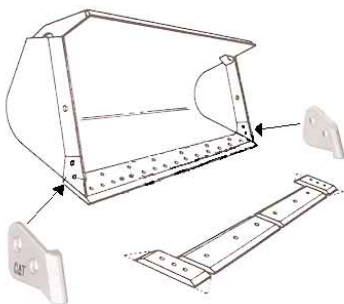
Recommended for low to moderate impact applications, it is ideal where sand, gravel and other abrasive materials create high wear rates.

These edges are not reversible but will give you three to five times the wear life of standard bolt-on cutting edges and are very cost effective in stockpile application. Available for the full range of Cat loader (except 990-994).

**Corner Protectors for Bolt-on Cutting Edges**



**The corner protectors** are designed to protect the bucket corners from wear when bolt-on cutting edges are used. This will ensure that bucket corners can accept bolt-on adapters when necessary. They will also provide a sharper edge than the bucket corner. This will result in better penetration in stockpile, bank loading, and light excavation applications with corner guard system buckets.



**Corner Guard System Corner Protectors**

| Machine Model  | Adapter Size | Right Hand | Left Hand |
|--|--------------|------------|-----------|
| 916, 918, 924, 926, 928, 938<br>939, 943, 953, IT18, IT24,<br>IT26, IT28, IT38 | J250         | 173-5422   | 173-5423  |
| 950, 960, 962, 963, 966C   | J300         | 173-5424   | 173-5425  |
| 966D, G, 970, 972G, 980  | J350         | 173-5426   | 173-5427  |
| 980G, 988G   | J400, J460   | 173-5428   | 173-5429  |

| Machine Model  | Style | Standard DH-2 Edges |          | Heavy Duty |          | ARM Edges  |           |            |           | Dimension Standard Center Edges |        |            | Dimension Standard End Bits |        |            | Width ARM Edges* |         |
|--|-------|---------------------|----------|------------|----------|------------|-----------|------------|-----------|---------------------------------|--------|------------|-----------------------------|--------|------------|------------------|---------|
|  |       | Center              | End Bits | Center     | End Bits | Center     |           | End Bits   |           | Width                           | Length | Thick-ness | Width                       | Length | Thick-ness | Center Edge      | End Bit |
|  |       |                     |          |            |          | Right hand | Left hand | Right hand | Left hand | mm                              | mm     | mm         | mm                          | mm     | mm         | mm               | mm      |
| 914G, IT14G  | CGS   | 9W8620              | 4T2914   |            |          | -          | -         | -          | -         | 254                             | 1525   | 19         | 433                         | 254    | 19         | -                | -       |
| 928G   | CGS   | 8E4567              | 4T8091   |            |          | 135-6728   | 135-6729  | 9W3481     | 9W3482    | 280                             | 1100   | 25         | 160                         | 342    | 25         | 245              | 290     |
| 936F, 938F,G   | CGS   | 107-3746            | 4T8091   |            |          | 107-3298   | 107-3299  | 9W3481     | 9W3482    | 280                             | 1180   | 25         | 160                         | 342    | 25         | 245              | 290     |
| 916, 918F, IT18F, 924F, IT24F, IT12, IT26, 926, 928F, IT28F, 953 | CGS   | 1U0295              | 4T8091   |            |          | 9W3486     | 9W3487    | 9W3481     | 9W3482    | 280                             | 1025   | 25         | 160                         | 342    | 25         | 245              | 290     |
| 920, IT28F, 928F, 930  | CGS   | 1U0607              | 4T8091   |            |          | 9W3483     | 9W3483    | 9W3481     | 9W3482    | 280                             | 1044   | 25         | 160                         | 342    | 25         | 245              | 290     |
| 936, 938F,   | CGS   | 1U0292              | 4T8091   |            |          | 9W3484     | 9W3485    | 9W3481     | 9W3482    | 280                             | 1162   | 25         | 160                         | 342    | 25         | 245              | 290     |
| 938F, 938G   | CGS   | 110-4711            | 4T8091   |            |          | 123-9195   | 123-9196  | 9W3481     | 9W3482    | 280                             | 1201   | 25         | 160                         | 342    | 25         | 245              | 290     |
| 944, 950A  | CGS   | 1U2414              | 4T8101   | 132-1030   | 132-1033 |            |           |            |           | 360                             | 1044   | 30         | 170                         | 496    | 30         |                  |         |
| 950G, 962G   | CGS   | 139-9230            | 4T8101   | 135-9666   | 132-1033 | 138-0672   | 138-0673  | 9W3489     | 9W3488    | 360                             | 1283   | 30         | 170                         | 496    | 30         | 360              | 365     |
| 944, 950A  | CGS   | 1U2412              | 4T8101   | 132-1031   | 132-1033 | 9W3490     | 9W3491    | 9W3488     | 9W3489    | 360                             | 1148   | 30         | 170                         | 496    | 30         | 245              | 365     |
| 950BEF, 960F   | CGS   | 1U0601              | 4T8101   | 132-1034   | 132-1033 | 9W3492     | 9W3493    | 9W3488     | 9W3489    | 360                             | 1210   | 30         | 170                         | 496    | 30         | 245              | 365     |
| 966C   | CGS   | 1U2406              | 3G6395   | 100-4045   | 100-4044 | 9W3479     | 9W3480    | 123-0336   | 123-0337  | 360                             | 1231   | 30         | 200                         | 510    | 35         | 282              | 380     |
| 960F, 966DEFG, 970F, 972G  | CGS   | 1U0593              | 3G6395   | 100-4046   | 100-4044 | 9W3477     | 9W3478    | 123-0336   | 123-0337  | 360                             | 1319   | 30         | 200                         | 510    | 35         | 282              | 380     |
| 966DE, 960F, 970F  | CGS   | 1U1909              | 3G6395   | 135-9533   | 100-4004 | 107-3282   | 107-3283  | 123-0336   | 123-0337  | 360                             | 1260   | 30         | 200                         | 510    | 35         | 282              | 380     |
| 972G, 970F, 966G   | CGS   | 100-6668            | 3G6395   | 135-9410   | 100-4044 | 107-3286   | 107-3287  | 123-0336   | 123-0337  | 360                             | 1400   | 30         | 200                         | 510    | 35         | 282              | 380     |
| 988B   | 3-PC. | 4T6588              |          |            |          |            |           |            |           | 406                             | 1211   | 35         |                             |        |            |                  |         |
| 980C   | 3-PC. | 4T6589              | 4T6590   | 107-8574   | 107-8575 |            |           |            |           | 406                             | 1666   | 35         | 406                         | 859    | 35         |                  |         |
| 980C   | 3-PC. | 4T6594              | 4T6592   | 107-8578   | 107-8577 |            |           |            |           | 360                             | 1542   | 35         | 406                         | 858    | 35         |                  |         |
| 966C   | 3-PC. | 1U1476              | 1U1475   |            |          | 9W3472     |           | 9W3473     | 9W3474    | 360                             | 1404   | 30         | 360                         | 756    | 30         |                  |         |
| 944,950A   | 3-PC. | 1U1465              | 1U1464   | 132-1026   | 132-1027 | 9W3469     |           | 9W3471     | 9W3470    | 280                             | 788    | 25         | 280                         | 819    | 25         | 245              | 245     |
| 945, 950A  | 3-PC. | 1U1470              | 1U1460   | 132-1028   | 132-1029 | 9W3466     |           | 9W3467     | 9W3468    | 360                             | 991    | 30         | 280                         | 819    | 25         | 245              | 245     |
| 980CF  | CGS   | 1U0762              | 1U0761   | 100-4047   | 100-4043 | 6Y3271     | 6Y3271    | 123-0335   | 123-0337  | 406                             | 1406   | 35         | 265                         | 556    | 40         | 282              | 420     |
| 980G   | CGS   | 109-9212            | 1U0761   | 109-9230   | 100-4043 | 109-9214   | 109-9214  | 123-0334   | 123-0335  | 406                             | 1450   | 35         | 265                         | 556    | 40         | 282              | 420     |
| 988B   | CGS   | 9W1375              | 1U0761   |            |          | 109-2697   | 109-2697  | 123-0334   | 123-0335  | 406                             | 1524   | 35         | 265                         | 556    | 40         | 406              | 420     |
| 988FG  | CGS   | 104-5841            | 1U0761   | 183-5325   |          | 132-1070   | 132-1069  | 123-0334   | 123-0335  | 406                             | 1587   | 35         | 265                         | 556    | 40         | 406              | 410     |
| 944, 950A  | 3-PC. | 1U1470              | 1U1469   | 132-1028   | 132-1029 | 9W3466     |           | 9W3467     | 9W3468    | 360                             | 991    | 30         | 841                         | 360    | 30         | 245              | 245     |
| 920, 930, 944, 950   | 3-PC. | 1U1465              | 1U1464   |            |          | 9W3469     | 9W3469    | 9W3470     | 9W3471    | 280                             | 788    | 25         | 819                         | 280    | 25         | 245              | 245     |
| 966C   | 3-PC. | 1U1476              | 1U1475   |            |          | 9W3472     | 9W3472    | 9W3473     | 9W3474    | 360                             | 1404   | 30         | 756                         | 360    | 30         | 245              | 245     |

\* ARM edges and end bits have the same Length and Thickness as the standard edges and end bits.

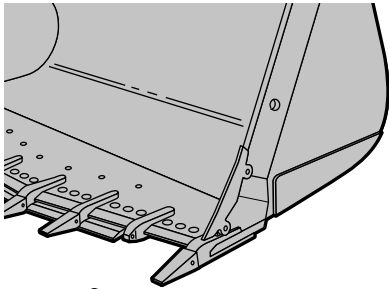
### Bolt-on Cutting Edges for Rock Buckets

Used across the entire rock bucket base edge, bolt-on cutting edges:

- can extend the base edge life up to five times
- maintain smooth, clean work surface
- increase bucket capacity
- are reversible to provide a second wear life
- are ideal for abrasive conditions where penetration is not a problem
- are made from DH-2 steel alloy, through hardened to 430-520 Brinell.



➔ **Heavy Duty** options are thicker for extended wear life and lower cost per hour. Available for 980 - 992



Half-Arrow Segment  
Heavy-Duty  
Standard

**Bolt-on Edge Segments**

Bolted directly to the bottom of the base edge between adapters, these segments:

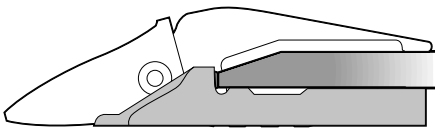
- increase bucket capacity
- maintain smoother work surface
- protect base edge between teeth, eliminating scalloping
- increase base edge life up to 5 times
- are hardened to 430-520 Brinell.

**Standard** segments are reversible. Available for all sizes of Cat loaders.

➔ **Heavy-Duty** – this thicker option provides at least 50% more wear material and a better cost per hour. Available for large wheel loaders, from the 980 thru 994.

➔ **Half-Arrow** segments are designed to:

- stay sharper and enhance protection of the base edge's front and bevel
- combat scalloping of the base edge between adapters
- combat scalloping of the segment
- match bottom strap thickness of shouldered adapters
- available for large wheel loaders, from the 966G thru 994.



| Edge thickness | Segment location and thickness                 | Standard                                  | Heavy Duty   | Half-Arrow*  | Adapter family | Machine Model |
|----------------|--|---|--|--|----------------|---------------|
| 70 mm          | Center<br>Right Hand<br>Left Hand<br>Thickness | 4T6760<br>4T6761<br>4T6762<br>40 mm       | 107-3530/107-6294<br>107-3531/107-6295<br>107-3532/107-6296<br>50 mm/60 mm | 119-9600/109-2675<br>119-9601/109-2676<br>119-9602/109-2677<br>60mm/75 mm  | J600           | 992G          |
| 64 mm          | Center<br>Right Hand<br>Left Hand<br>Thickness | 4T6760<br>4T6761<br>4T6762<br>40 mm       | 107-3530/107-6294<br>107-3531/107-6295<br>107-3532/107-6296<br>50 mm/60 mm | 119-9600/109-2675<br>119-9601/109-2676<br>119-9602/109-2677<br>60 mm/75 mm | J550           | 992/990       |
| 51 mm          | Center<br>Right Hand<br>Left Hand<br>Thickness | 101-9435<br>101-9436<br>101-9437<br>40 mm | 107-3536<br>107-3537<br>107-3538<br>45 mm                                  | 109-9080<br>109-9081<br>109-9082<br>45 mm                                  | J460           | 988F, G       |
| 51/45 mm       | Center<br>Right Hand<br>Left Hand<br>Thickness | 9W5734<br>9W5737<br>9W5730<br>35 mm       | 107-3490<br>107-3491<br>107-3492<br>45 mm                                  | 116-7460<br>116-7461<br>116-7462<br>45 mm                                  | J460/J400      | 988B/980G     |
| 40 mm          | Center<br>Right Hand<br>Left Hand<br>Thickness |   | 135-9294<br>135-9295<br>135-9296<br>40 mm                                  | 135-9544<br>135-9545<br>135-9546<br>40 mm                                  | J350           | 966G, 972G    |

\* Also available for the 994. – See your Cat dealer for further details.

### Bucket Base Edges without Holes

**Selector Guides** – Recommended Base Edge Thickness by Loader Weight.  
Available for installation on Caterpillar Buckets and other brands of buckets.  
Hardened to 400-500 Brinell.

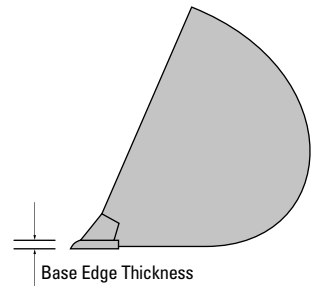
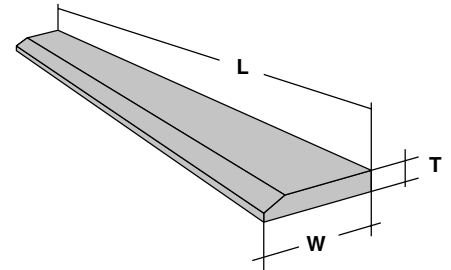
Dimensions in mm

| T  | W   | L    | Part No. |
|----|-----|------|----------|
| 25 | 203 | 2799 | 6K7099   |
| 25 | 228 | 2248 | 9K8461   |
| 25 | 228 | 2286 | 1V9077   |
| 25 | 228 | 2438 | 1V3916   |
| 25 | 228 | 2686 | 1V3915   |
| 25 | 228 | 3225 | 8K9916   |
| 25 | 245 | 2890 | 5V7418   |
| 32 | 266 | 2438 | 7V0782   |
| 32 | 266 | 2997 | 8K9915   |
| 32 | 266 | 3454 | 8K9913   |
| 32 | 266 | 3810 | 8K9914   |
| 32 | 282 | 2997 | 7V0781   |
| 32 | 282 | 3453 | 7V0780   |
| 32 | 282 | 3810 | 7V0779   |
| 40 | 290 | 2690 | 9V5287   |
| 40 | 290 | 2934 | 9V5283   |
| 57 | 445 | 4313 | 9V0009   |

| Edge Thickness mm | Caterpillar Buckets and Conversions*   | kg            |
|-------------------|--|---------------|
| 19 - 25           | 416, 426, 910, 916, 920, 930, 931, 935 | 6350-9980     |
| 25 - 32           | 936, 943, 950, 953, 963                | 9980-19 050   |
| 32 - 40           | 966, 973, 977                          | 19 050-22 680 |
| 38 - 51           | 980, 983, 988                          | 22 680-63 500 |
| 51 - 64           | 990, 992                               | 63 500-90 700 |

\* Conversions: Corresponding sizes of other manufacturers machines/buckets.

Ask your dealer for further edge options.

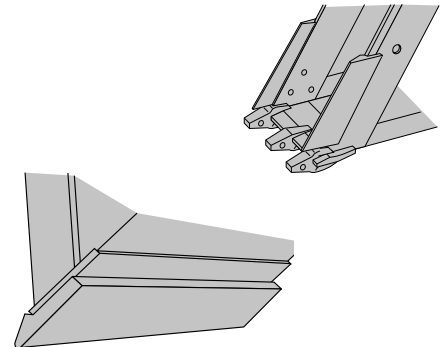
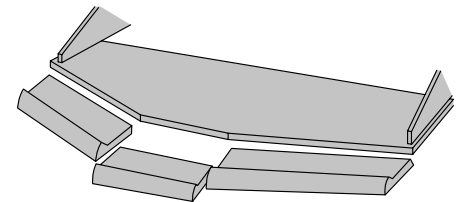
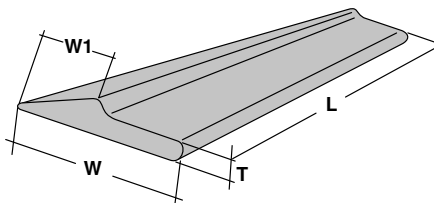


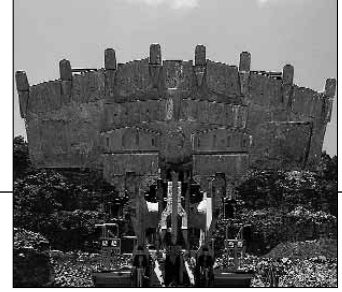
### Half-arrow Weld-on Edges

- Improve bucket penetration
- Increase bucket capacity in light and loose material handling
- Help to protect the bucket structure by adding more wear material to the base edge
- Can fit any bucket
- Hardened to 400-500 Brinell
- Can be used as Side Cutters on excavator buckets

Dimensions in mm

| L    | W   | W1  | T  | Part No. |
|------|-----|-----|----|----------|
| 5486 | 254 | 125 | 41 | 109-2696 |
| 3657 | 254 | 125 | 41 | 6Y2107   |
| 3657 | 254 | 125 | 28 | 8J8176   |
| 3657 | 203 | 75  | 19 | 8J8141   |
| 2438 | 151 | 78  | 16 | 134-1776 |
| 2438 | 101 | 52  | 11 | 134-1774 |





**Heavy Duty Quarry Bucket System\* for 980G, 988F, 988G, 990, 992D, 992G**

**Key Benefits** – Cat Heavy Duty Quarry Buckets offer superior protection, durability and performance. Specifically designed for quarry, aggregates and mining operations in high impact and/or high abrasion applications, these buckets are factory-modified with additional protection.

Heavy-duty Cat GET components are designed to reduce down time and bucket-related operating cost to help you get the most from your machines. Each protection item and component was carefully chosen in response to customer requests for a bucket that delivers maximum strength, durability and wear life in high impact/high abrasion conditions.

**1 Liner\*\*** – Adds strength and extends overall bucket life. The base edge is raised to match the liner’s height and provide a smooth working surface.

**2 Inner Side Wear Plate** – One piece inner side wear plate matches thickness of outer upper side wear plate. Provides protection to lower half of inner side plate.

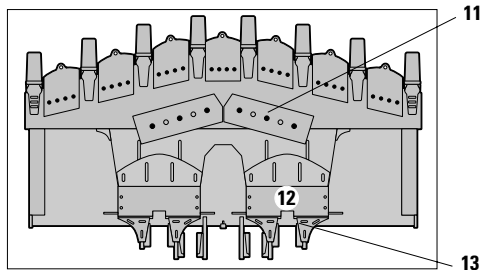
**3 Heavy Duty Adapters 992G (Heavy Duty Quarry Bucket uses Standard J700 Adapters)** – Interior adapters feature new shouldered design which provides greater strength, protection and wear life. Bottom strap thickness is matched to the thickness of the Heavy Duty Half-Arrow Segment for smoother material flow.

**4 Three Heavy Duty Tip Options** offer different combination of strength, wear life and penetration to best fit your job needs:

- Heavy Duty Long Tip
- Heavy Duty Abrasion Tip
- Heavy Duty Long Life Tip
- Heavy Duty Penetration Tip

\* The Heavy Duty Quarry Bucket should only be used in material densities of 1.6 t/m<sup>3</sup> or less due to increased bucket weight.

\*\* All Heavy Duty Quarry Bucket wear plates options including liner, can be purchased from Cat for placement on bucket rebuilds.



| Upsized Base Edge and Adapters* |                     |              |                     |              |
|---------------------------------|---------------------|--------------|---------------------|--------------|
| Machine Model                   | Standard            |              | Heavy Duty Quarry   |              |
|                                 | Base Edge Thickness | Adapter Size | Base Edge Thickness | Adapter Size |
| 980G                            | 45 mm               | J400         | 50 mm               | J460         |
| 988F, 988G                      | 50 mm               | J460         | 63 mm               | J550         |
| 988F**                          | 50 mm               | J460         | 50 mm               | J460         |
| 990                             | 63 mm               | J550         | 63 mm               | J550         |
| 992D                            | 63 mm               | J550         | 70 mm               | J600         |
| 992G                            | 70 mm               | J600         | 76 mm               | J700         |

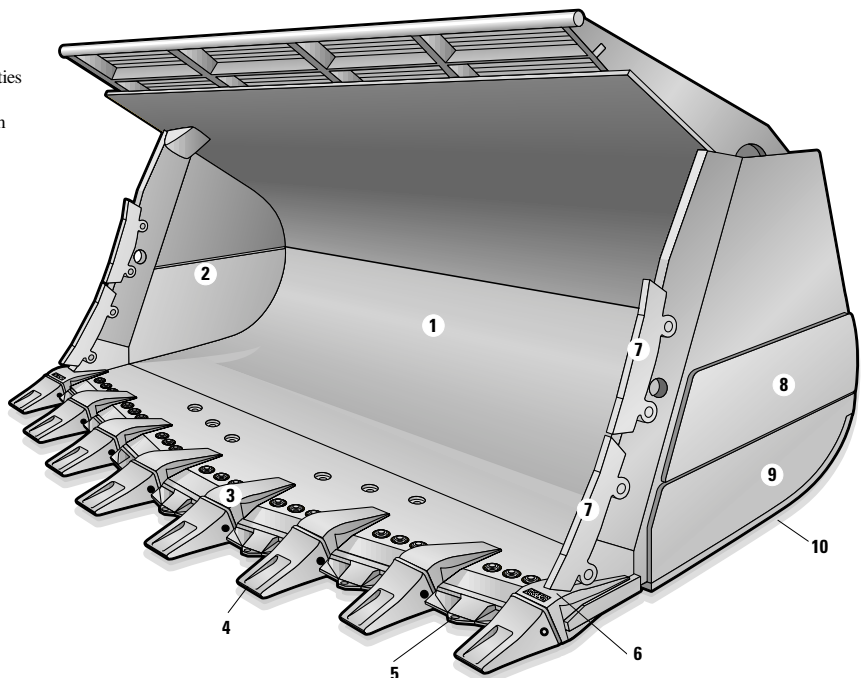
\* **Base Edge and Adapters:** Except for 990 buckets the base edge and adapters are upsized for greater strength.

\*\* High Lift

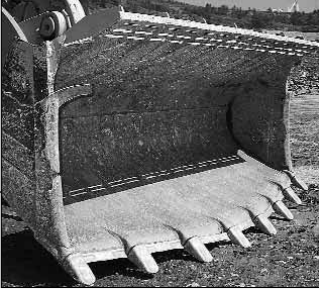
**5 Three Segment Options** – designed to allow choices between more wear material, protection, strength and penetration:

- Standard Flat Segment
- Heavy Duty Flat Segment
- Heavy Duty Half-Arrow Segment

**6 Heavy Duty Long Life (ARM) (Corner Adapters 992G Heavy Duty Quarry Bucket uses Standard J700 Adapters)** – Shouldered corner adapters use Abrasion Resistant Material (ARM) to increase wear resistance. Because corner adapters are subjected to higher wear rates, ARM is used to extend corner adapter life.







**7 Dual Sidebar Protectors** – Sidebars are drilled to accept dual sidebar protectors. Cat Sidebar Protectors can be stacked to cover wear patterns that extend above a single protector. Single or dual sidebar protectors can be used to match the wear conditions of the application.

**8 Outer Upper Side Wear Plate\*** – Upper side wear plates combat the wear that occurs on bucket side plates in high impact/abrasion conditions. Because wear on the upper areas of the bucket is less severe, these plates are thinner than the lower side wear plates to save weight.

**9 Outer Lower Side Wear Plate\*** – Lower side wear plates are thicker than the upper side wear plates. These thicker plates handle the greater wear which occurs on the lower quarter of the bucket sides in tough quarry, aggregates and mining operations.

\* All Heavy Duty Quarry Bucket wear plates options including liner, can be purchased from Cat for placement on bucket rebuilds.

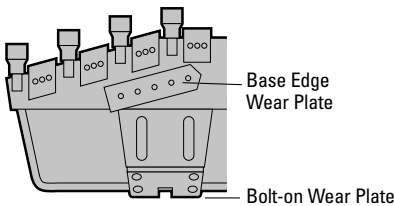
**10 Outer Skid Plates\*** – Skid plates on the outer bottom areas of the bucket shield high wear areas at and just behind the bucket’s corners. They also add corner strength. Skid plates extend past the outside of the bucket side plates to protect the side plate welds.

**11 Base Edge Wear Plates\*** – Wear plates offer enhanced protection to the base edge. Bolt holes accept bolt-on wear plates for complete edge protection and extended base edge life. Base edge wear plates cover the bottom area of the base edge not protected by segments.

**12 Heavy Duty Rear Wear Plates\*** – Bolt-on thicker rear wear plates extend life.

**13 Hinge Bracket Wear Plates\*** – Weld-on wear plates protect the lower heel of the hinge bracket assembly during bucket loading for longer bracket life.

### Bolt-on Rear Wear Plates



Most buckets on larger wheel loaders have **bolt-on rear wear plates**.

Certain 980G thru 994 Rock Buckets have also **base edge wear plates** in addition to the bolt-on rear wear plates.

Ask for details from your Caterpillar dealer.

| Machine Model | Bucket Assembly            | Wear Plates                   | Thickness in mm | Hardware |
|---------------|----------------------------|-------------------------------|-----------------|----------|
| 992D          | All                        | 6W0276                        | 35              | b        |
| 992C          |                            | 6Y3610                        | 45              | b        |
| 992, 992B     | 2V6380<br>3V2478<br>3V2474 | 9K0071                        | 35<br>45        | b<br>b   |
| 990           | All                        | 6Y3573                        | 35              | b        |
| 988B          | All                        | 9V5793<br>6Y3609              | 25<br>35        | b<br>b   |
| 980G, F       | All                        | 113-0349<br>19 mm<br>109-9215 | 35              | c        |
| 980F, C/973   | All                        | 9W6750                        | 35              | c        |
| 970           | All                        | 9W6749                        | 35              | c        |
| 966F          | <b>All except 7V1474</b>   | 9W6749                        | 35              | c        |
| 966D, E       | All*                       | 9W6749                        | 35              | c        |
| 963           | All                        | 9W6748                        | 25              | d        |
| 960F, 962G    | All                        | 9W6747                        | 25              | d        |
| 950F, G       | All                        | 9W6747                        | 25              | d        |
| 950B, E       | All**                      | 9W6747                        | 25              | d        |
| 950, 944      | 5V7265                     | 9W6747                        | 25              | d        |

\* Except bucket assemblies 7V1474, 7V1784, 7V6825, 5V5464, 5V6215

\*\* Except bucket assemblies 5V7352, 9V3298

Also available for the 994

#### Hardware Reference

| Note | Bolt   | Nut    | Washer | Torque in Nm |
|------|--------|--------|--------|--------------|
| b    | 4J9058 | 2J3507 | 5P8250 | 1220         |
| c    | 5J4773 | 2J3506 | 5P8248 | 475          |
| d    | 4F7827 | 2J3506 | 5P8248 | 475          |



# Excavators



## Bucket Maintenance Tips

**Bottom** – Inspect inside and underside looking for cracks in bottom either along welds or through plates. Cracks here indicate structural failure. Major repairs may be needed. Are there areas of extreme wear? Bottom may be weakened by wear and subject to early failure.

**Replace worn edges** – Edges should always be replaced before the bucket is damaged by wear or weakened through loss of edge support.

**Replace worn side-cutters** – Side-cutters should be replaced if they no longer protect the side-plates of the bucket. Always check for loose bolts and maintain proper torque to avoid loss of side-cutter.

**Rotate and turn tips** – A blunt tip reduces loading efficiency. Caterpillar’s tips are self-sharpening for efficient penetration throughout their service life. Tips seldom wear evenly, usually the ones near the bucket corners wear fastest. By periodically rotating outside tips to the center and also turning the tips over, tip life can be increased up to 50%. This method “evens out” tip wear.

A bucket that is regularly loaded at an angle into the material will show uneven wear on the leading side. Rotating and turning tips or a change in loading direction will help equalize your tip wear.

**Replace worn wear plates** – Look for severe wear near the rear of plates. If they are severely worn, cracks are likely to develop around them. Wear plates are not part of the basic bucket structure, but are used to protect the structure. They should always be replaced before they wear through. If the basic structure is weakened by wear, it may be necessary to rebuild your bucket before installing new plates. It is always easier and less costly to install or replace wear plates before your bucket suffers damage.

## How to select the right bucket for the job

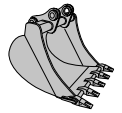
Bucket choice is a key to success, and it depends mainly on the material to be worked. Is it compacted or fragmented? How abrasive? Does it require digging, handling or separating? These variables dictate bucket design, choice of steel, component thickness and accessories. You can be sure to find the right combination in the Cat excavator bucket range.

**Utility Standard (SU).** – Demolition and construction bucket handles bricks and broken concrete, as well as trench filling, floor leveling and bank finishing.

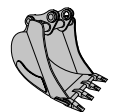


**Utility Light (LU).** Low cost earthmoving bucket for floor, bank and ditch finishing.

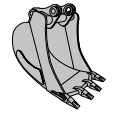
**Excavation/Trenching (X).** – Digs and loads soft to medium materials such as clay. Features weld on tip adapters, hardened cutting edge and side bars.



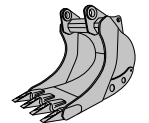
**Extreme Excavation/Trenching (EX).** – Digs and loads compact/abrasive materials like earth/rock, sand/clay, sand/gravel, coal, chalk and low abrasion ores. Features bigger ground engaging tools, plus abrasion resistant steel for all wear parts.



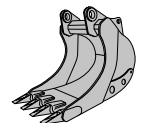
**Rock (Classical/Standard).** – Digs and loads mixed earth/rock soils containing high percentage of rock or other abrasive materials. Features V-spade cutting edge, thicker base and wear surfaces.



**Rock Loading (RL)\*.** – Loads large blocks of rock and other abrasive materials. Features longer floor plate and increased side bar curvature for better stability under load.



**Block Handling (BH)\*.** – Handles pre-shaped blocks of marble, granite, in quarries. Features increased tip radius, deep cut side bars for long floor platform.

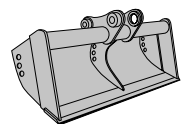


**Skeleton Light (SL)\*.** – For soft and humid soils or where separation of materials, e.g., branches, peatmoss, is required.

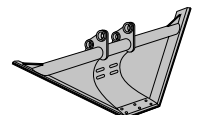


**Skeleton Heavy Duty (SH)\*.** – As S.L., but for more demanding separation work such as sorting rock from sand or gravel on demolition sites.

**Ditch Cleaning (DC).** – Wide, light bucket used mainly with long reach configurations to clean water beds and banks.

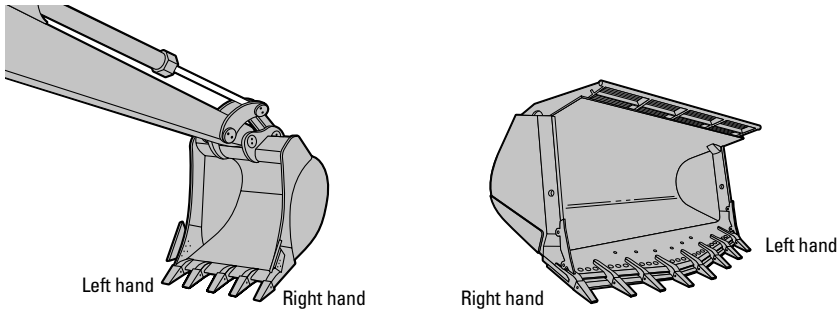


**Trapezoidal (T)\*.** – To prepare and maintain small irrigation ditches. Features angled sides to shape ditch banks in one operation.



\* Bucket available on a “Made As Ordered” (MAO) basis. See you Cat dealer for further details.

# Bucket Adapters for Loaders and Excavators



Left hand and right hand positions are based on a view from the cab.

## Bolt-on Adapters for Front End Loaders

The Corner Guard System uses two strap bolt-on adapters with fitted tips.

### One-Bolt Corner Adapter

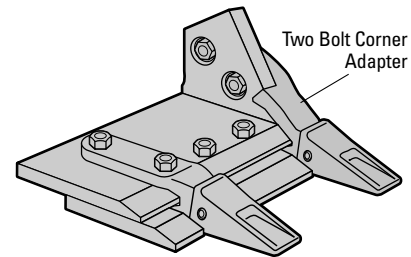
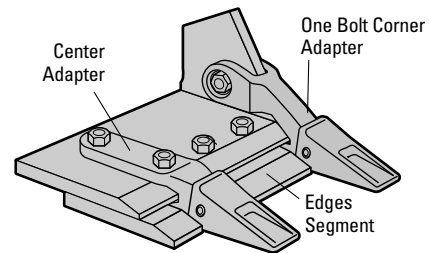
- Protects bucket corner for longer base edge life.
- Easy to install, remove and replace.

### Two-Bolt Corner Adapter

- Keeps adapter securely attached. Prevents shifting.
- Eliminates stress and associated breakage of inner ear of one-bolt design
- Keeps tip aligned during entire life
- Easy retrofit. Converts old buckets with new corners and simple welding process.

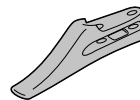
### Center Bolt-on Two-Strap Adapter

- For general loader applications when you don't need a smooth work surface.
- Provides good base edge protection.
- Easy to install, remove and replace.



## Unitooth

- Tip and adapter are one integrated piece for easy installation and lower initial cost
- Improved penetration where breakage is not a problem
- Recommended for nonabrasive materials



## The offset concept available for all adapters

How fast and easily a tooth digs depends on its offset, its position with respect to the base edge. Offset is measured from the base edge planed to the front of the tip.

The greater the offset, the more aggressively the tooth digs.

## Weld-On Adapter Options

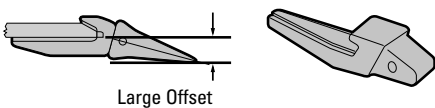
### Flush Mounted, Weld-on Adapters for Front End Loaders, Excavators and Backhoes



- Provides smooth bucket footprint, leaving a clean, unrutted work surface
- Extends tire life
- 15° adapter nose angle

| Edge thickness mm | Center Adapter | Right hand Adapter | Left hand Adapter | Tip Family | Machine Model  |
|-------------------|----------------|--------------------|-------------------|------------|--|
| 51-64             | 3G4554         | 3G4555             | 3G4556            | J550       | 990, 992C  |
| 45-51             | 8E0464         | 8E0465             | 8E0466            | J460       | 988, 983   |
| 38-51             | 107-3404       | —                  | —                 | J400       | 980G   |
| 32-45             | 1U1354         | 1U1355             | 1U1356            | J350       | 245, 980, 977, 973, 970, 966DEF, 950   |
| 32-38             | 8J7123         | —                  | —                 | J250       | 229, 225   |
| 25-38             | 1U1304         | —                  | —                 | J300       | 235, 966C, 963, 955, 950   |
| 19-32             | 1U1254         | —                  | —                 | J250       | 213, 214, 211, 212, 205, 206, 953, 951, 943, 941, 938, 936, 930, 928, 926, 916, IT38, IT28, IT18 |
| 13-25             | 4T1204         | —                  | —                 | J200       | 935, 931, 910, 428, 426, 416, IT14, IT12   |

### Bottom Strap, Weld-on Adapters for Front End Loaders, Excavators and Backhoes



- Provides the largest offset for the most aggressive digging
- Thick bottom strap provides greatest base edge protection
- Easy loading and dumping because there is no tip or adapter on top of the cutting edge to obstruct material flow
- For work where there's little concern about abrasion and tire life
- 15° adapter nose angle

| Edge thickness mm | Center Adapter | Right hand Adapter | Left hand Adapter | Tip Family | Machine Model   |
|-------------------|----------------|--------------------|-------------------|------------|---|
| 51-64             | 9J3662         | 9J3663             | 9J3664            | J550       | 990, 992  |
| 45-57             | 8E5464         | 8E5465             | 8E5466            | J460       | 988, 983  |
| 32-45             | 1U1350         | 1U1351             | 1U1352            | J350       | 224, 214B, 213B, 980, 977, 973, 970, 966DEF, 960, 950   |
| 25-32             | 9J8929         | —                  | —                 | J300       | 224, 213, 214, 211, 212, 966C, 963, 955, 950  |
| 25-32             | 3G0169         | —                  | —                 | J250       | 213, 214, 211, 212, 205, 206, 953, 951, 943, 941, 938, 936, 930, 928, 926, 920, 916, IT38, IT28, IT18 |
| 13-19             | 8J7525         | —                  | —                 | J200       | 935, 931, 914, 910, 438, 428, 426, 416, IT14, IT12  |

### Weld-On Adapter Options for Front End Loaders

#### Standard Two-strap, Weld-on Adapters



- Provides good retention in high-impact work
- Protects the base edge well
- For general loading, where adapter retention is a bigger concern than tire life
- 15° adapter nose angle

#### Heavy Duty and Heavy Duty Long Life (ARM) Weld-on Shouldered Adapters



##### More Protection

- Shouldered to provide rear tip protection. It prevents impact which can drive the tip forward into the pin causing pin bending or breaking

##### More Strength

- Thicker and wider strap profile to add strength
- Enlarged weld-groove for easier welding; enhances adapter retention

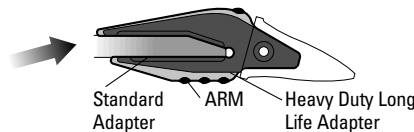
##### More Wear Material

- Thicker straps add 24-40% more wear material than standard adapters, more wear life and increased segment and edge protection

| Edge thickness mm | Location                          | Standard                   | Heavy Duty                       | Heavy Duty Long Life             | Tip family | Machine model   |
|-------------------|-----------------------------------|----------------------------|----------------------------------|----------------------------------|------------|-----------------|
| 100               | Center                            |                            | 6I8804                           |                                  | J800       | 994             |
| 100               | Center                            |                            | 100-7416                         |                                  | J700       | 994             |
| 76                | Center<br>Right Hand<br>Left      | 4T4704<br>4T4705<br>4T4706 |                                  |                                  | J700       | 994             |
| 70                | Center<br>Right Hand<br>Left Hand | 6I8604<br>6I8605<br>6I8606 | 119-8604<br>119-8605<br>119-8606 | 119-8607<br>119-8609<br>119-8608 | J600       | 992G            |
| 70                | Center<br>Right Hand<br>Left Hand |                            | 133-0704<br>133-0705<br>133-0706 | 133-0707<br>133-0709<br>133-0708 | J700       | 992G            |
| 64                | Center<br>Right Hand<br>Left Hand | 9W9704<br>9W9705<br>9W9706 |                                  |                                  | J700       | 992             |
| 64                | Center<br>Right Hand<br>Left Hand |                            | 143-3114<br>143-3115<br>143-3116 | 186-5384<br>186-5385<br>186-5386 | J600       | 992C,D, 990     |
| 64                | Center<br>Right Hand<br>Left Hand | 3G9494<br>3G9495<br>3G9496 | 107-3554<br>107-3555<br>107-3556 | 112-2554<br>112-2555<br>112-2556 | J550       | 992, 990        |
| 51                | Center<br>Right Hand<br>Left Hand | 4T7554<br>4T7555<br>4T7556 | 138-6554<br>138-6555<br>138-6556 | 159-0554<br>159-0555<br>159-0556 | J550       | 988             |
| 51                | Center                            | 8G3464                     |                                  |                                  | J460       | 988, 983, 977   |
| 51                | Center<br>Right Hand<br>Left Hand | 8E3464<br>8E3465<br>8E3466 | 114-0464<br>114-0465<br>114-0466 | 116-7464<br>116-7465<br>116-7466 | J460       | 988, 983, 980G* |
| 45                | Center<br>Right<br>Left           | 8E2164<br>8E2165<br>8E2166 |                                  |                                  | J460       | 980             |
| 45                | Center<br>Right Hand<br>Left Hand | 9U9476<br>9U9477<br>9U9478 | 125-8404<br>125-8405<br>125-8406 | 125-8407<br>125-8408<br>125-8409 | J400       | 980G            |
| 45                | Center<br>Right Hand<br>Left Hand | —                          | 113-0354<br>113-0355<br>113-0356 | —                                | J350       | 980F            |
| 40                | Center<br>Right Hand<br>Left Hand | —                          | 135-9354<br>135-9355<br>135-9356 | —                                | J350       | 966             |

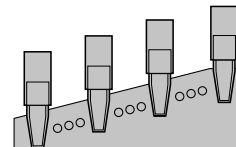
\* Heavy Duty adapter on the Heavy Duty Quarry Bucket.

#### Abrasion Resistant Material (ARM)



The Heavy Duty long life are made with ARM. Made of extremely hard tungsten carbide, ARM retards wear.

#### Adapter Size-up Options



- Larger bucket tips for longer wear life.
- Larger adapters for greater resistance to breakage.
- Ideal for extremely abrasive or high impact conditions.
- Not recommended for applications where penetration is a concern.

#### Technical information

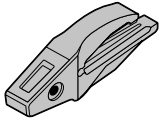
Welding procedure is shown in Special Instruction SEHS8811-01



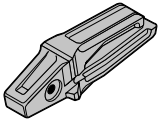
You have two ways to upsize your current system:

- Increase the size of your tooth system
- Increase the size of your edge and your tooth system.

## Two-strap, Weld-on Adapters for Excavators



Standard Two-strap



Shouldered adapters

- Protects the base edge well
- Provides good retention in high-impact work
- 8° Nose downward angle for excavator applications

- Thicker straps for enhanced strength
- Shouldered to provide protection to rear of bucket tip
- 8° Nose downward angle for excavator applications

| Edge thickness mm | Center Adapter               | Right hand Corner Adapter | Left hand Corner Adapter | Tip Family           | Machine Model   |
|-------------------|------------------------------|---------------------------|--------------------------|----------------------|---|
| 80                | 113-9604                     | 113-9605                  | 113-9606                 | J600                 | 375   |
| 70                | 618604                       | 618605                    | 618606                   | J600                 | Spade 375, 245 Front Shovel                                     |
| 70                | 616604                       | 616605                    | 616606                   | J600                 | 375   |
| 64                | 3G9494                       | 3G9495                    | 3G9496                   | J550                 | 245 Front Shovel  |
| 60                |                              | 105-6269                  | 105-6270                 | J550                 | Spade 375, 350  |
| 60                | 616554                       | 616555                    | 616556                   | J550                 | 375, 350  |
| 50                | 159-0464<br>8E2464           | 159-0465<br>8E2465        | 159-0466<br>8E2466       | J550<br>J460         | 375, 350<br>235, 229, 227, 225, E300                            |
| 45                | 616404                       | 616405                    | 616406                   | J400                 | 330, 325, 322, 320  |
| 40                | 616354                       | 616355                    | 616356                   | J350                 | 330A, 325, 322, 320, M318                                       |
| 38                | 3G8354                       | 3G8355                    | 3G8356                   | J350                 | 229, 225, 219, 215, E240, E300, E180                            |
| 36                | 8E9490                       |                           |                          | J300                 | 325A, 320, M318, 317, 315                                       |
| 32                | 3G6304<br>9W1304<br>119-3253 | 3G6305<br>7T3305          | 3G6306<br>7T3306         | J300<br>J300<br>J250 | 219, 215, E200, E180<br>219, 215, E200, E180<br>M315, 312, M312 |
| 22                | 6Y3224                       |                           |                          | J225                 | 307, 446, E70   |
| 25                | 119-3204                     |                           |                          | J200                 | 416 - 436   |
| 19                | 119-3205                     |                           |                          | J200                 | 416-436   |

Note: Part number beginning with 61 are shouldered adapter.

### Side cutters for Excavator Buckets

- Increase bucket width and capacity
- Protect bucket sides
- Improve sidebar penetration

#### Strike-off

- Use in moderate to light-impact conditions

#### One Piece

- Effective in moderate-impact applications
- Suitable for most soil conditions

#### Blade Type

- Effective in moderate-impact conditions
- Drilled to accept bolt-on combination plates

#### Combination

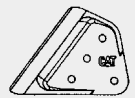
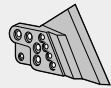
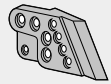
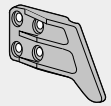
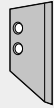
- Blade-type side cutter with bolt-on combination plate
- Transfers the wear to the less expensive combination plate
- Increases bite width
- Suitable for moderate to light-impact conditions

#### Tooth Type

- For heavy impact conditions where enhanced penetration is needed
- Consists of replaceable tips pinned to side mounted adapters
- Adapters accept all tips available for excavator buckets

#### Heavy Duty

- For tough digging conditions
- More wear material to cover more of the sidebar for enhanced sidebar and bucket side protection



## Adapter Options for Backhoe Loaders

| Edge thickness mm | Bucket capacity liters | Unitooth bolt-on | Adapters |            | Tip family | Bolt-on edges | Bucket width mm | Machine Model |
|-------------------|------------------------|------------------|----------|------------|------------|---------------|-----------------|---------------|
|                   |                        |                  | bolt-on  | weld-on    |            |               |                 |               |
| 20                | 0.3-0.8                | 135-8203         | 8E2184   | 8J7525*    | J200       | 9W8215 (2)    | 2262            | 416, 426,     |
| 20                |                        |                  |          |            | J200       | 118-7110 (2)  | 2396            | 428, 438      |
| 22                | 0.3-0.8                |                  |          | 6Y3224**   | J225       | 9U9665 (2)    | 2434            | 446           |
| 20                | 0.3-0.8                |                  |          | 119-3204** | J200       |               |                 | 416-438       |
| 25                | 0.3-0.8                |                  |          | 119-3205** | J200       |               |                 | 416-438       |

\* Bottom strap

\*\* Two strap

# Bucket Tips for Loaders and Excavators

What to consider when you're choosing tips? Bucket tips come in so many different shapes and sizes, you might think it takes an expert to pick the right one... Not so!

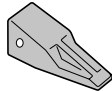
The major factors for selecting tips can be reduced to a few simple guidelines:

- Wear life
- Penetration
- Strength

Choose tips that have the right balance of these for your work and you'll get the full return for your investment.

## Tips for Wheel Loader and Excavator applications

### Penetration



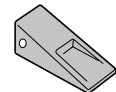
- Use in densely compacted material such as clay.
- Gives maximum penetration.
- Self-sharpening.

### Short



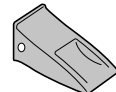
- Use in high-impact and pry-out work such as rock.
- Extremely strong.

### Long



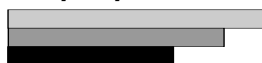
- Use in most general applications where breakage is not a problem.

### Heavy Duty Long



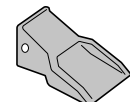
- Use on machines in general loading and excavation work.
- Has longer wear life and greater strength

### Heavy Duty Penetration



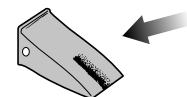
- Use in high impact, abrasive materials
- Has longer wear life and greater strength

### Heavy Duty Abrasion



- Use on machines when working in sand, gravel and well shot rock.
- Maximum wear material.

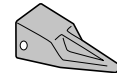
### Heavy Duty Long Life



- ARM positioned to increase wear life and penetration.
- Not recommended for extreme impact (increased wear life will not be experienced in extreme impact conditions).

## Tips for special Excavator applications

### Sharp



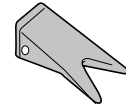
- Use when penetration is the primary concern.
- Provides less wear material.

### Long Sharp



- Use in densely compacted, abrasive materials
- Has longer wear life

### Twin Sharp



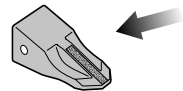
- Use for enhanced fracture capability.
- Less penetration than sharp tip.
- More wear material than sharp tip.

### Penetration Plus



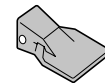
- Use in high impact trenching
- Has longer wear life and greater strength

### Penetration Long Life



- ARM increases wear life in moderate- to high-impact conditions
- Self-sharpening tip enhances penetration

### Wide



- Provides clean floor.
- Increases capacity with less spillage.

Wear Material

Penetration

Strength

# Tip Family

| Type of Tip                 | J200     | J225     | J250     | J300     | J350     | J400     | J460     | J550     | J600     | J700     | J800     |
|-----------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Long                        | 1U3202   | 6Y3222   | 1U3252   | 1U3302   | 1U3352   | 7T3402   | 9W8452   | 9W8552   | 6I6602   | 4T4702   |          |
| Heavy Duty Long             |          | 8E4222   | 9N4252   | 9N4302   | 9N4352   | 8E4402   | 9N4452   | 9N4552   | 7Y0602   | 9U9702   | 6I8802   |
| Heavy Duty Long Life (ARM)  |          |          |          | 125-8302 | 135-9352 | 116-7402 | 101-9054 | 101-9055 | 107-8602 | 107-2001 | 117-6802 |
| Short                       |          | 6Y6221   | 1U3251   | 1U3301   | 1U3351   | 7T3401   | 9W8451   | 9W8551   | 6I6601   |          |          |
| Abrasion                    | 4T2203   |          |          |          |          |          |          |          |          | 4T4703   |          |
| Heavy Duty Abrasion         |          | 6Y6223   | 9N4253   | 9N4303   | 9N4353   | 7T3403   | 9N4453   | 6Y2553   | 6I6603   | 9U9703   | 6I8803   |
| Penetration                 | 1U3209   | 6Y8229   | 9J4259   | 9J4309   | 9J4359   | 6Y7409   | 9W8459   | 9W8559   | 7I7609   | 4T4709   | 117-6809 |
| Penetration Long Life (ARM) |          |          |          |          | 119-9359 | 124-7409 | 116-7459 | 113-0559 | 119-9609 |          |          |
| Penetration Plus            |          |          |          | 183-5300 | 168-1359 | 168-1409 | 159-0459 | 159-0559 | 159-0607 | 171-1709 |          |
| Heavy Duty Penetration      |          |          |          | 135-9300 | 144-1358 | 135-9400 | 138-6451 | 138-6552 | 135-9600 | 135-9700 | 135-9800 |
| Sharp: Long                 |          |          |          | 168-1300 | 168-1350 | 159-0400 | 159-0450 | 159-0550 | 159-0600 | 138-8700 |          |
| Sharp: Corner               | 9W8208   | 6Y7228   | 9W8258   | 9W8308   | 9W2358   | 6Y5408   | 6I8458   | 6I8558   | 107-8608 |          |          |
| Sharp: Center               | 9W8209   | 6Y7229   | 9W8259   | 9W8309   | 9W2359   | 6Y5409   | 7T8459   | 9W6559   | 107-8609 |          |          |
| Sharp: Twin                 | 135-8208 | 135-8228 | 135-8258 | 135-9308 | 135-9357 | 135-9408 | 138-6458 | 138-6558 | 135-9608 |          |          |
| Wide                        | 109-9200 |          | 3G8250   | 107-3300 | 107-3350 | 107-3400 | 107-3450 | 107-3550 |          |          |          |

| Size                       | Part No. | Length (mm) | Front Width (mm) | kg    |
|----------------------------|----------|-------------|------------------|-------|
| <b>Long</b>                |          |             |                  |       |
| J200                       | 1U3202   | 146         | 57               | 1.1   |
| J225                       | 6Y3222   | 167         | 58               | 2.0   |
| J250                       | 1U3252   | 194         | 74               | 2.8   |
| J300                       | 1U3302   | 220         | 90               | 4.2   |
| J350                       | 1U3352   | 240         | 102              | 6.5   |
| J400                       | 7T3402   | 265         | 107              | 9.3   |
| J460                       | 9W8452   | 292         | 131              | 11.1  |
| J550                       | 9W8552   | 338         | 154              | 16.6  |
| J600                       | 6I6602   | 388         | 170              | 31.1  |
| J700                       | 4T4702   | 418         | 180              | 41.9  |
| <b>Heavy Duty Long</b>     |          |             |                  |       |
| J225                       | 8E4222   | 178         | 56               | 2.0   |
| J250                       | 9N4252   | 199         | 63               | 3.7   |
| J300                       | 9N4302   | 223         | 70               | 5.5   |
| J350                       | 9N4352   | 250         | 87               | 8.0   |
| J400                       | 8E4402   | 277         | 102              | 10.7  |
| J460                       | 9N4452   | 306         | 105              | 14.8  |
| J550                       | 9N4552   | 347         | 192              | 25.4  |
| J600                       | 7Y0602   | 408         | 170              | 39.9  |
| J700                       | 9U9702   | 430         | 188              | 55.8  |
| J800                       | 6I8802   | 475         | 219              | 85.3  |
| <b>Heavy Duty Abrasion</b> |          |             |                  |       |
| J225                       | 6Y6223   | 178         | 80               | 3.1   |
| J250                       | 9N4253   | 199         | 94               | 4.4   |
| J300                       | 9N4303   | 223         | 110              | 6.8   |
| J350                       | 9N4353   | 250         | 125              | 10.7  |
| J400                       | 7T3403   | 270         | 144              | 13.6  |
| J460                       | 9N4453   | 306         | 166              | 21.5  |
| J550                       | 6Y2553   | 347         | 192              | 31.2  |
| J600                       | 6I6603   | 408         | 230              | 55.9  |
| J700                       | 9U9703   | 430         | 260              | 65.8  |
| J800                       | 6I8803   | 495         | 296              | 106.5 |
| <b>Penetration Plus</b>    |          |             |                  |       |
| J300                       | 183-5300 | 235         | 79/55*           | 5.4   |
| J350                       | 168-1359 | 260         | 83/57*           | 6.9   |
| J400                       | 168-1409 | 290         | 101/71*          | 11.0  |
| J460                       | 159-0459 | 325         | 122/86*          | 15.5  |

| Size                               | Part No. | Length (mm) | Front Width (mm) | kg   |
|------------------------------------|----------|-------------|------------------|------|
| <b>Penetration</b>                 |          |             |                  |      |
| J200                               | 1U3209   | 147         | 27               | 1.0  |
| J225                               | 6Y8229   | 167         | 28               | 1.5  |
| J250                               | 9J4259   | 194         | 34               | 2.0  |
| J300                               | 9J4309   | 216         | 42               | 3.6  |
| J350                               | 9J4359   | 240         | 49               | 5.4  |
| J400                               | 6Y7409   | 247         | 52               | 8.1  |
| J460                               | 9W8459   | 292         | 53               | 9.1  |
| J550                               | 9W8559   | 334         | 70               | 13.6 |
| J600                               | 7I7609   | 408         | 82               | 25.4 |
| J700                               | 4T4709   | 420         | 85               | 38.0 |
| J800                               | 117-6809 | 455         | 105              | 52.2 |
| <b>Penetration Long Life (ARM)</b> |          |             |                  |      |
| J350                               | 119-9359 | 251         | 87/40*           | 7.7  |
| J400                               | 124-7409 | 277         | 102/44*          | 10.9 |
| J460                               | 116-7459 | 306         | 115/48*          | 14.9 |
| J550                               | 113-0559 | 347         | 145/52*          | 24.5 |
| J600                               | 119-9609 | 408         | 190/60*          | 37.1 |
| <b>Heavy Duty Penetration</b>      |          |             |                  |      |
| J300                               | 135-9300 | 260         | 77/32*           | 8.2  |
| J350                               | 144-1358 | 286         | 82/32            | 10.9 |
| J400                               | 135-9400 | 312         | 100/36*          | 16.0 |
| J460                               | 138-6451 | 341         | 120/36*          | 22.4 |
| J550                               | 138-6552 | 380         | 134/36*          | 29.4 |
| J600                               | 135-9600 | 445         | 168/44*          | 52.9 |
| J700                               | 135-9700 | 465         | 178/48*          | 66.5 |
| J800                               | 135-9800 | 505         | 196/60*          | 95.5 |

\* Width before/after chisel

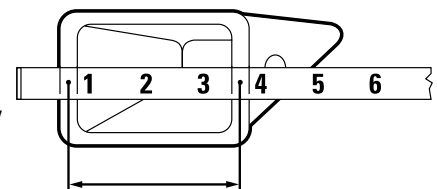
| Size                              | Part No. | Length (mm) | Front Width (mm) | kg   |
|-----------------------------------|----------|-------------|------------------|------|
| <b>Heavy Duty Long Life (ARM)</b> |          |             |                  |      |
| J250                              | 135-8252 | 199         | 63               | 3.8  |
| J300                              | 125-8302 | 223         | 70               | 5.8  |
| J350                              | 135-9352 | 250         | 87               | 8.5  |
| J400                              | 116-7402 | 277         | 102              | 11.5 |
| J460                              | 101-9054 | 306         | 115              | 17.1 |
| J550                              | 101-9055 | 347         | 145              | 26.8 |
| J600                              | 107-8602 | 408         | 170              | 40.5 |
| J700                              | 107-2001 | 430         | 188              | 56.5 |
| J800                              | 117-6802 | 475         | 219              | 86.4 |
| <b>Short</b>                      |          |             |                  |      |
| J225                              | 6Y6221   | 149         | 52               | 1.7  |
| J250                              | 1U3251   | 165         | 74               | 2.6  |
| J300                              | 1U3301   | 187         | 90               | 4.0  |
| J350                              | 1U3351   | 205         | 102              | 5.6  |
| J400                              | 7T3401   | 236         | 107              | 8.5  |
| J460                              | 9W8451   | 260         | 131              | 10.2 |
| J550                              | 9W8551   | 287         | 154              | 14.5 |
| J600                              | 6I6601   | 341         | 170              | 28.6 |
| <b>Wide</b>                       |          |             |                  |      |
| J200                              | 109-9200 | 161         | 100              | 1.4  |
| J250                              | 3G8250   | 195         | 114              | 3.6  |
| J300                              | 107-3300 | 216         | 150              | 5.5  |
| J350                              | 107-3350 | 240         | 177              | 6.8  |
| J400                              | 107-3400 | 265         | 205              | 11.1 |
| J460                              | 107-3450 | 292         | 228              | 15.1 |
| J550                              | 107-3550 | 338         | 278              | 25.3 |
| <b>Long Sharp</b>                 |          |             |                  |      |
| J460                              | 159-0450 | 341         | 20*              | 11.7 |
| J550                              | 159-0550 | 377         | 24*              | 17.0 |
| J600                              | 159-0600 | 445         | 30*              | 29.3 |
| J700                              | 136-8700 | 465         | 36*              | 39.4 |

## Tip J – Family identification

### How to find the tip family ?

Place a tape measure across the back of the tip at midpoint of the side walls.

Example: 3.0" (76.2 mm) measure is J300 family  
 3.5" (88.9 mm) measure is J350 family  
 5.5" (139.7 mm) measure is J550 family





## Mechanically Attached Wear Plate Systems

➔ The Mechanically Attached Wear Plate System provides a hammerless means of installation and removal. They are capable of protecting wear areas previously unprotected or on areas previously protected by weld-on or bolt-on wear plates. Skeletal MAWPS uses the same Series 20 base and retainer as the regular MAWPS, but has a modified skeletal plate that fits on the base. The Skeletal MAWPS wear plate is skeletal in form so it traps material in the plate and between the plates, adding an extra layer of protection.

- **Mechanical, hammerless installation** - The system consists of a through-hardened DH-2 wear plate which slides onto a weld-on base plate and is held in place with a patented compression retainer.
- **Reduced downtime and maintenance** - worn wear plates can be replaced quickly and easily using a common prybar or MAWPS removal tool, 160-5119. Wear plates can be replaced without hammering or welding.
- **Extended Wear** - Patented compression retainer is positioned low in the base plate allowing a greater percentage of the wear plate to be worn away before replacement. The base plate is not subject to wear under normal conditions since it is entirely covered by the wear plate.
- **Flexible Application** - The weld-on base plate can be welded on virtually any flat or moderately curved surface. The system is designed to take loads from any direction so the orientation of the weld plate to the direction of the load is inconsequential.



| Series                                      | Suggested Models                           | Base Place (thickness)       | Wear Plate (dimensions)                          | Compression Retainer | Radius Capability* |
|---|--|------------------------------|--|----------------------|--------------------|
| 20 Series                                   | 966, 980, 988, 345B<br>other similar sizes | 138-0020<br>18 mm<br>2.43 kg | 138-0022<br>225 mm x 200 mm x 35 mm<br>6.42 kg   | 138-0006             | 200 mm<br>minimum  |
| Heavy Duty                                  | same                                       | same                         | 138-0023<br>225 mm x 200 mm x 50 mm<br>10.85 kg  | same                 | same               |
| 30 Series                                   | 990, 992, 375, 5080<br>other similar sizes | 138-0030<br>22 mm<br>3.72 kg | 138-0032<br>275 mm x 200 mm x 45 mm<br>9.67 kg   | 138-0006             | 400 mm<br>minimum  |
| Heavy Duty                                  | same                                       | same                         | 138-0033<br>275 mm x 200 mm x 60 mm<br>14.8 kg   | same                 | same               |
| 40 Series                                   | 5110, 5130<br>other similar sizes          | 138-0040<br>29 mm<br>4.61 kg | 138-0042<br>275 mm x 200 mm x 60 mm<br>13.28 kg  | 138-0007             | 800 mm<br>minimum  |
| Heavy Duty                                  | same                                       | same                         | 138-0043<br>275 mm x 200 mm x 75 mm<br>18.7 kg   | same                 | same               |
| 50 Series                                   | 994, 5230<br>other similar sizes           | 138-0050<br>29 mm<br>6.08 kg | 138-0052<br>300 mm x 250 mm x 75 mm<br>25.08 kg  | 138-0007             | 1200 mm<br>minimum |
| Heavy Duty                                  | same                                       | same                         | 138-0053<br>300 mm x 250 mm x 100 mm<br>37.75 kg | same                 | same               |
| <b>Skeletal mechanically attached MAWPS</b> |  |                              |  |                      |                    |
| Standard                                    | Off Highway Trucks                         | 138-0020<br>18 mm<br>2.43 kg | 138-0024<br>202 mm x 310 mm x 35 mm<br>5.9 kg    | 138-0006             | 200 mm             |
| Heavy Duty                                  | Off Highway Trucks                         | 138-0020<br>18 mm<br>2.43 kg | 138-0025<br>207 mm x 310 mm x 45 mm<br>8.4 kg    | 138-0006             | 200 mm             |

\* Not recommended for convex radii smaller than those specified in this chart



## Series I & II Toothbars for Caterpillar Skid Steer Loaders

Using Series I & II Toothbars allows you to easily and quickly convert General and Multipurpose Buckets to Penetration Buckets.

**Series I** Toothbars fit buckets having no bolt on cutting edge or teeth

**Series II** Toothbars fit buckets equipped with bolt on cutting edges

- Increase utility of General Purpose and Multipurpose Buckets
- Provide excellent, long-lived penetration ability
- Easily attached and removed, using only two bolts
- Completely protect underlying base or cutting edge and corners
- Eliminates need for replaceable teeth and adapters
- Fit bucket widths of 1500 mm, 1676 mm, and 1828 mm.

| Series I | Series II | Description                       |
|----------|-----------|-----------------------------------|
| 136-8734 | 159-0330  | 1500 mm Toothbar Assembly         |
| 136-8735 | 159-0340  | 1676 mm Toothbar Assembly         |
| 136-8736 | 159-0350  | 1828 mm Toothbar Assembly         |
| 8S9093   | 8S9093    | Bolt - 1" dia. (2 bolts required) |
| 2J3507   | 2J3507    | Nut (2 required)                  |
| 3B3416   | 3B4516    | Lock Washer (2 required)          |
| 5P8250   | 5P8250    | Washer (2 Required)               |



Series I

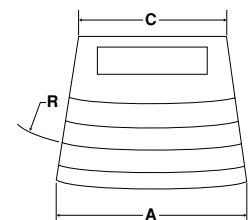
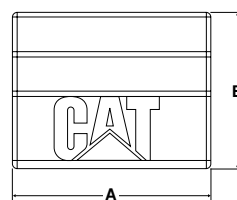
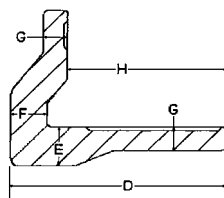


Series II

## Weld-on Heel Shrouds

Weld-on heel shrouds protect the lower outside corner of all types of Caterpillar and other brand buckets. Straight and curved heel shrouds are available in two different sizes to best match bucket contour and size, and abrasiveness of the application. Shrouds need not be placed tightly together. They can be spaced apart and still provide full protection due to 'shadowing'.

| Part No. | Type     | Weight<br>kg | A<br>mm | B<br>mm | C<br>mm | D<br>mm | E<br>mm | F<br>mm | G<br>mm | H<br>mm | R<br>mm |
|----------|----------|--------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 157-1019 | straight | 31           | 250     | 200     | —       | 270     | 50      | 45      | 30      | 200     | —       |
| 157-1027 | curved   | 28.6         | 250     | 200     | 193     | 270     | 50      | 45      | 30      | 200     | 800     |
| 138-6529 | straight | 13.8         | 175     | 150     | —       | 205     | 40      | 35      | 25      | 150     | —       |
| 138-6551 | curved   | 13.4         | 175     | 150     | 136     | 205     | 40      | 35      | 25      | 150     | 600     |





### White-Iron Wear Blocks

The high chrome alloy “white iron” is brazed to a mild steel backing plate which can be plug-welded with an E7018 3/32” (or similar) stick electrode to a bucket, dozer moldboard, or anywhere quick installation, low cost, abrasion protection is desired.

This product is designed to add long wear life in highly abrasive applications. It has a hardness rating of Rc 60-65 and offers lower cost protection than “hardfacing”.

- quick installation
- versatility
- low cost
- protected welds and steel base



| Part No. | mm             | kg   |
|----------|----------------|------|
| 137-9699 | 102 x 205 x 25 | 3.27 |
| 137-9698 | 117 x 117 x 14 | 1.27 |
| 137-9697 | 117 x 51 x 14  | 0.52 |

### Compact Construction Equipment

| Skid Steer Loader GET |              |          |          |          |        |
|-----------------------|--------------|----------|----------|----------|--------|
| Model                 | Bucket Width | BOCE     | Unitooth | Bolt     | Nut    |
| All                   | 1372 mm      | 135-9393 | 132-4720 | 148-8862 | 8T1757 |
| All                   | 1524 mm      | 135-9394 | 132-4720 | 148-8862 | 8T1757 |
| All                   | 1676 mm      | 135-9395 | 132-4720 | 148-8862 | 8T1757 |
| All                   | 1829 mm      | 135-9396 | 132-4720 | 148-8862 | 8T1757 |
| All                   | 1980 mm      | 135-9397 | 132-4720 | 148-8862 | 8T1757 |

| Mini Hydraulic Excavator GET |          |          |        |
|------------------------------|----------|----------|--------|
| Model                        | Unitooth | Bolt     | Nut    |
| 301.5                        | 138-6410 | 160-0018 | 6V8149 |
| 302.5                        | 135-9390 | 159-8839 | 8T4778 |
| 303.5                        | 135-9390 | 159-8839 | 8T4778 |
| 304.5                        | 135-8203 | 4F3656   | 4K0367 |

| Compact Wheel Loader GET |                               |          |          |        |          |          |          |        |
|--------------------------|-------------------------------|----------|----------|--------|----------|----------|----------|--------|
| Model                    | Bucket Type                   | Unitooth | Adapter  | Tip #  | BOCE     | WOCE     | Bolt     | Nut    |
| 902                      | GP, MP Weld-on                | –        | 135-8200 | 7T8202 | –        | 132-4726 | –        | –      |
| 902                      | GP, MP, SS, HD (Bolt on)      | 132-4720 | –        | –      | 132-4723 | –        | 148-8862 | 8T1757 |
| 902                      | LM                            | –        | –        | –      | 132-4723 | –        | 148-8862 | 8T1757 |
| 906                      | GP, MP Weld on                | –        | 135-8200 | 7T8202 | –        | 132-4727 | –        | –      |
| 906                      | GP, MP, SD, SS (Bolt on)      | 132-4720 | –        | –      | 132-4724 | –        | 148-8862 | 8T1757 |
| 906                      | HD                            | 132-4720 | –        | –      | 132-4723 | –        | 148-8862 | 8T1757 |
| 906                      | LM                            | –        | –        | –      | 132-4719 | –        | 148-8862 | 8T1767 |
| 908                      | GP, MP weld-on                | –        | 135-8200 | 7T8202 | –        | 132-4728 | –        | –      |
| 908                      | GP, MP, HD, SS & SD (Bolt on) | 132-4720 | –        | –      | 132-4725 | –        | 148-8862 | 8T1757 |
| 908                      | LM                            | –        | –        | –      | 132-4725 | –        | 148-8862 | 8T1757 |

- # – Tip retention hardware (pin - 8E6208, retainer - 8E6209)
- GP – General Purpose
- MP – Multi-purpose
- HD – High Dump
- LM – Light Material
- SD – Side Dump
- SS – Stone Sieve

# Tip Retention System

## Maintenance Tips


**Inspect used pins for damage.** Unless they are obviously bent or severely damaged, there is no need to replace them.

On grooved pins, damage in the groove is more critical because the pin is thinner in this area. Slightly damaged groove walls should not be cause for rejecting a pin.

However, as the walls flatten out, the advantage of the groove becomes less.

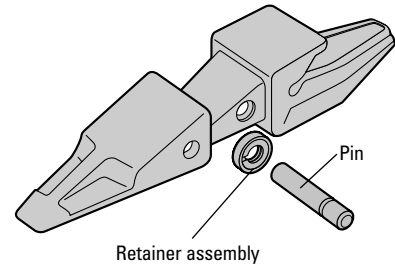
For maximum security, retainer assemblies should not be reused. However, in most applications, retainer assemblies can probably be reused at least twice. This is especially true when used on grooved pins. Do not attempt to straighten or reuse a retainer assembly that has been bent.

### Installation advice

 Always drive pin in from the counterbore side of adapter.

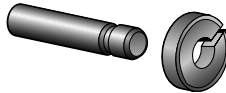
Pins for side pinned tips and adapters on bucket edges can work out of position if improperly installed.

When the pin and retainer assembly are removed, drive the pin out from the counterbore side (from machine left to machine right). Do not use a tapered punch to remove the pin as it will cause the retainer assemblies to spread. A smaller driver (3 mm) than the diameter of the pin should be used to eliminate retainer assemblies damage.



## Standard Retention System (J200)

- Grooved pin eliminates pin walking in general applications.
- Increased retainer hardness increases clamp force 35%.
- Retainer holder eliminates distortion during installation.



## Heavy Duty Retention System

In a standard retention system, the retainer is free to rotate around the pin. In some applications, abrasives can work their way between the pin and the retainer, causing wear as the retainer rotates. As a result, the retainer can lose its grip on the pin, allowing the pin to "walk" out the retainer and causing the tip to fall off the adapter.

The **Heavy Duty Retention System** has a two coil retainer which

- Grips the pin much tighter
- Stops retainer rotation and keeps abrasives from causing pin and retainer wear
- Will not spread when subjected to side loads.

### Designed for easy installation:

- Ivory-colored plastic holder helps align the pin and retainer during installation to assure maximum clamping force and prevent possible retainer damage
- Ivory-colored holder cues installer to use Heavy Duty Pins ONLY with Heavy Duty Retainers
- Heavy Duty Pins are chamfered on both ends to allow installation from either side, so they can be installed easily... even on machines where space between bucket tips is tight.

| Size | Heavy Duty |                   |
|------|------------|-------------------|
|      | Pin        | Retainer Assembly |
| J800 | 134-1808   | 134-1809          |
| J700 | 113-4708   | 113-4709          |
| J600 | 113-9608   | 113-9609          |
| J550 | 107-3378   | 107-8559          |
| J460 | 104-0468   | 107-3469          |
| J400 | 116-7408   | 116-7409          |
| J350 | 114-0358   | 114-0359          |
| J300 | 132-4766   | 149-5733          |
| J250 | 132-4763   | 149-5733          |
| J225 | 132-4762   | 149-5733          |

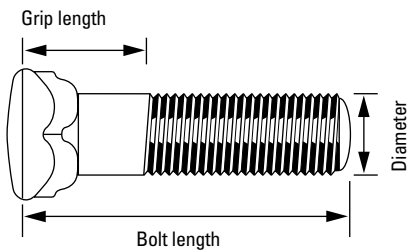


Reuse of Heavy Duty Pins and Retainers is NOT recommended. The system is designed for use when tip retention is crucial... such applications where a crusher is used or where tip life is extremely long.

# Hardware

Cat cutting edge hardware meets or exceeds requirements for SAE Grade 8 threaded fasteners.

## Dimensions



| Size                          | Overall length   | Grip length | Part number |        |
|-------------------------------|------------------|-------------|-------------|--------|
| 5/8"<br>(11 threads per inch) | 1-1/2            | 5/8         | 4F3664      |        |
|                               | 1-3/4            | 5/8         | 4F3653      |        |
|                               | 2                | 3/4         | 4F3654      |        |
|                               | 2-1/4            | 1-1/4       | 3F5108      |        |
|                               | 2-1/2            | 1           | 4F3656      |        |
|                               | 2-3/4            | 1-1/4       | 4F3657      |        |
|                               | 3                | 1-1/2       | 4F3658      |        |
|                               | 3-1/2            | 2           | 4F3665      |        |
|                               | 3-3/4            | 2-1/4       | 4F0391      |        |
|                               | 4                | 2-1/2       | 4F3671      |        |
|                               | Heat Treated Nut |             |             | 4K0367 |
|                               | Hardened Washer  |             |             | 5P8247 |

|                               |                  |        |        |        |
|-------------------------------|------------------|--------|--------|--------|
| 3/4"<br>(10 threads per inch) | 2                | 3/4    | 4F3672 |        |
|                               | 2-1/4            | 1      | 4F7827 |        |
|                               | 2-1/2            | 1-3/16 | 5J4773 |        |
|                               | 2-3/4            | 1-1/2  | 5J4771 |        |
|                               | 3-1/8            | 1-3/8  | 1J6762 |        |
|                               | 3-3/4            | 2      | 5F8933 |        |
|                               | 4-1/4            | 2-1/2  | 1J0962 |        |
|                               | 4-5/8            | 2-7/8  | 1J6761 |        |
|                               | Heat Treated Nut |        |        | 2J3506 |
|                               | Hardened Washer  |        |        | 5P8248 |

| Size                         | Overall length   | Grip length | Part number |        |
|------------------------------|------------------|-------------|-------------|--------|
| 7/8"<br>(9 threads per inch) | 2-1/2            | 1-3/8       | 5J4772      |        |
|                              | 2-3/4            | 1-1/2       | 6F0196      |        |
|                              | 3                | 1-1/4       | 5J2409      |        |
|                              | 3-1/4            | 2-7/16      | 8J2935      |        |
|                              | 3-1/2            | 1-3/4       | 2J2548      |        |
|                              | 4-1/4            | 2-1/2       | 2J5458      |        |
|                              | 4-5/8            | 2-5/8       | 1J0849      |        |
|                              | Heat Treated Nut |             |             | 2J3505 |
|                              | Hardened Washer  |             |             | 5P8249 |


|                            |                  |         |        |         |
|----------------------------|------------------|---------|--------|---------|
| 1"<br>(8 threads per inch) | 2-1/2            | 1-5/16  | 3J2801 |         |
|                            | 2-3/4            | 1-1/2   | 1J5607 |         |
|                            | 3                | 1-3/4   | 4F4042 |         |
|                            | 3-1/4            | 1-29/32 | 4J9058 |         |
|                            | 3-1/2            | 1-3/16  | 4J9208 |         |
|                            | 3-3/4            | 2-11/16 | 8J2928 |         |
|                            | 4                | 3       | 5P8136 |         |
|                            | 4-1/2            | 2-1/4   | 1J3527 |         |
|                            | 5-1/4            | 3       | 1J4947 |         |
|                            | Heat Treated Nut |         |        | 2J3507  |
|                            | Heat Treated Nut |         |        | 8J2933* |
|                            | Hardened Washer  |         |        | 5P8250  |

|                                  |                  |       |        |         |
|----------------------------------|------------------|-------|--------|---------|
| 1 - 1/4"<br>(7 threads per inch) | 3-1/4            | 1-5/8 | 8T9079 |         |
|                                  | 3-3/4            | 2-1/4 | 6V6535 |         |
|                                  | 4-1/8            | 2-1/4 | 5P8823 |         |
|                                  | 4-1/2            | 2-1/4 | 6V8360 |         |
|                                  | 4-15/16          | 2-1/4 | 5P8361 |         |
|                                  | Heat Treated Nut |       |        | 3K9770  |
|                                  | Heat Treated Nut |       |        | 5P8362* |
|                                  | Hardened Washer  |       |        | 4K0684  |

\* Conical

## Torque requirements for plow bolts

| Imperial Measurements |                     | Metric Measurements |               |
|-----------------------|---------------------|---------------------|---------------|
| Size                  | Torque              | Size                | Torque        |
| 5/8"                  | 200 ± 20 ft.lbs.    | 16 mm               | 270 ± 25 Nm   |
| 3/4"                  | 350 ± 35 ft.lbs.    | 19 mm               | 475 ± 50 Nm   |
| 7/8"                  | 550 ± 60 ft.lbs.    | 22 mm               | 750 ± 80 Nm   |
| 1"                    | 825 ± 80 ft.lbs.    | 25 mm               | 1125 ± 100 Nm |
| 1 - 1/4"              | 1700 ± 150 ft. lbs. | 32 mm               | 1850 ± 175 Nm |

 Do NOT apply lubricants of any type to GET hardware (nut may back off prematurely).



# Motor Graders



## Maintenance Tips

**Before installing new – you should carefully inspect both the face and underside of your edge support** – Check for bent or cracked areas. Look for severely worn areas that might have weakened the support.

**Tighten bolts correctly** – Pay particular attention to proper tightening sequence. Loose cutting edge hardware is almost certain to fail. Always use heat treated nuts and bolts in all edge and end bit installations. When installing bolts, start in the center and work out towards the ends or begin at one end and work to the other. Proper torque values are shown on page 17.

**Never tighten from both ends towards the center.**  
 The reason for this is a worn or bent moldboard might prevent proper alignment of bolts at the center of the edge.

**Inspect edges and bits as part of daily routine maintenance** – Check for breaks or severe cracks that could break during the next day's operation. Tighten or replace loose or missing bolts as needed.

**Replace worn cutting edges** – Never start a day's work with a motor grader whose cutting edge is worn near the edge support.

**Moldboard end bits should be used for all applications** – Overlays are recommended for high impact applications and when a machine is doing ditching work.

**Scarifier tips should be inspected regularly** and replaced before they wear down to the shank nose.

**Reuse hardware**

## Edge Shape

### Flat Edges

- Designed for demanding jobs like road maintenance and pioneering.
- Provide abrasion and impact resistance.

### Curved Edges

- Give superior penetration and rolling action necessary for fine grading and finish work.

### Serrated Edges

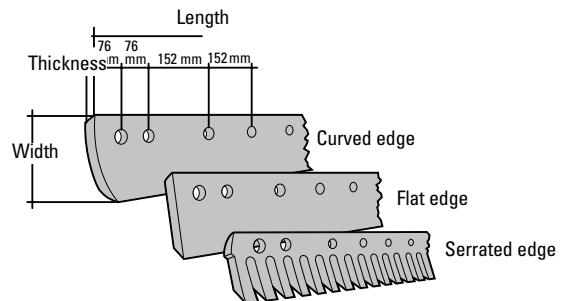
- Available in flat and curved shapes.
- Designed to loosen hard-to-penetrate materials such as packed gravel, frozen earth and ice.

## DH-2 Edges

- Made with through-hardened steel.
- Uniform hardened to the range of Brinell 390-512.
- Double bevel shape improves penetration and retention.

| Edge length<br>ft. (mm) | Edge<br>thickness<br>inch (mm) | 5/8" (16 mm) holes |           | 3/4" (19 mm) holes          |           | Bolt<br>Quantity |
|-------------------------|--------------------------------|--------------------|-----------|-----------------------------|-----------|------------------|
|                         |                                | Curved             | Flat      | Curved                      | Flat      |                  |
|                         |                                |                    |           | 6" (152 mm)<br><b>Wide</b>  |           |                  |
| 2 (610)                 | 0.62 (16)                      | 9W1835             | —         | —                           | —         | 4                |
| 4 (1220)                | 0.50 (13)                      | 3G8016             | —         | —                           | —         | 9                |
| 5 (1524)                | 0.50 (13)                      | 9J3862             | —         | —                           | —         | 11               |
|                         | 0.62 (16)                      | 7D4508             | —         | —                           | —         |                  |
|                         | 0.75 (19)                      | 3G7966             | —         | —                           | —         |                  |
| 6 (1829)                | 0.50 (13)                      | 8D2786             | —         | 9J3660                      | —         | 13               |
|                         | 0.62 (16)                      | 5D9553             | —         | 9J3657                      | —         |                  |
|                         | 0.75 (19)                      | 5D9556             | —         | —                           | —         |                  |
| 7 (2134)                | 0.50 (13)                      | 8D2787             | —         | 9J3659                      | —         | 15               |
|                         | 0.62 (16)                      | 5D9554             | —         | 9J3658                      | —         |                  |
|                         | 0.75 (19)                      | 5D9557             | —         | —                           | —         |                  |
| 8 (2438)                | 0.50 (13)                      | 8J7782             | —         | 9J3656                      | —         | 17               |
|                         | 0.62 (16)                      | 8J4043             | —         | 9J3655                      | —         |                  |
|                         |                                |                    |           | 8" (203 mm)<br><b>Wide</b>  |           |                  |
| 2 (610)                 | 0.62 (16)<br>0.75 (19)         | —<br>—             | —<br>—    | 3G2166<br>3G2165            | —<br>—    | 4                |
| 4 (1220)                | 0.50 (13)                      | 3G7965             | —         | —                           | —         | 9                |
|                         | 0.75 (19)                      | 8D3428(S)          | —         | 8J8255(S)                   | —         |                  |
|                         | 1.00 (25)                      | —                  | —         | 4T3512(S)                   | 7T3600(S) |                  |
| 5 (1524)                | 0.50 (13)                      | 9J3863             | —         | —                           | —         | 11               |
|                         | 0.62 (16)                      | 7D4509             | 4T2967    | —                           | —         |                  |
|                         | 0.75 (19)                      | 9W6252             | 4T3034    | —                           | —         |                  |
|                         | 0.75 (19)                      | —                  | 8D3429(S) | 8J8256(S)                   | —         |                  |
| 6 (1829)                | 1.00 (25)                      | 4T2240             | 7T3497    | 4T3511(S)                   | 7T3601(S) | 13               |
|                         | 0.50 (13)                      | 8D2788             | —         | 3G1626                      | —         |                  |
|                         | 0.62 (16)                      | 5D9562             | 4T2968    | 9J7701                      | 4T2971    |                  |
|                         | 0.75 (19)                      | 5D9558             | 4T3007    | 7D1576                      | 4T3033    |                  |
|                         | 1.00 (25)                      | 4T2244             | 7T3499    | 4T2231                      | 7T3493    |                  |
| 7 (2134)                | 0.50 (13)                      | 8D2789             | —         | 3G1627                      | —         | 15               |
|                         | 0.62 (16)                      | 5D9561             | 4T2969    | 7D1158                      | 4T2970    |                  |
|                         | 0.75 (19)                      | 5D9559             | 4T3036    | 7D1577                      | 4T3032    |                  |
|                         | 1.00 (25)                      | 4T2242             | 7T3498    | 4T2233                      | 7T3494    |                  |
| 8 (2438)                | 0.50 (13)                      | 8J8980             | —         | 3G1628                      | —         | 17               |
|                         | 0.62 (16)                      | 5D9731             | 4T2966    | 8J9821                      | 4T9603    |                  |
|                         | 0.75 (19)                      | 5D9732             | 4T3035    | 7D1949                      | 4T3037    |                  |
|                         | 1.00 (25)                      | 4T2237             | 7T3496    | 4T2236                      | 7T3495    |                  |
|                         |                                |                    |           | 10" (254 mm)<br><b>Wide</b> |           |                  |
| 4 (1220)                | 1.00 (25)                      | —                  | —         | —                           | 4T8800(S) | 9                |
| 5 (1524)                | 1.00 (25)                      | —                  | —         | —                           | 4T8801(S) | 11               |
| 6 (1829)                | 1.00 (25)                      | —                  | —         | —                           | 4T6502    | 13               |
| 7 (2134)                | 1.00 (25)                      | —                  | —         | —                           | 4T6508    | 15               |
|                         | 1.38 (35)                      | —                  | —         | —                           | 4T8316    |                  |
| 8 (2438)                | 1.00 (25)                      | —                  | —         | —                           | 4T6511    | 17               |
|                         | 1.38 (35)                      | —                  | —         | —                           | 4T8317    |                  |

(S) indicates a serrated edge.



## High Carbon Cutting Edges



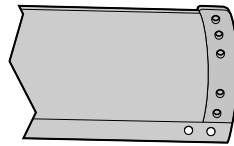
- Made from SA 1084 High Carbon Steel.
- Intended for low impact and finish grading applications.
- Wear resistant, but does not offer the same toughness or breakage resistance as Cat DH-2 through-hardened edges.
- Curved double bevel shape for improved penetration.
- Breakage warranty does not apply.

| Edge thickness   | Edge width     | Bolt hole    | Length ft (mm) / Part number |                  |                  |                  |                  |
|------------------|----------------|--------------|------------------------------|------------------|------------------|------------------|------------------|
|                  |                |              | 4 (1524)                     | 5 (1829)         | 6 (2134)         | 7 (2134)         | 8 (2438)         |
| 1/2"*<br>(13 mm) | 6"<br>(152 mm) | 5/8"<br>3/4" | 9W2293<br>9W2294             | 9W2295<br>9W2296 | 9W2297<br>9W2298 | 9W2299<br>9W2300 | 9W2301<br>9W2302 |
| 5/8"<br>(16 mm)  | 6"<br>(152 mm) | 5/8"<br>3/4" | 9W2325<br>9W2326             | 7T1640<br>9W2327 | 7T1633<br>7T1637 | 7T1645<br>7T1626 | 7T1632<br>7T1629 |
| 3/4"<br>(19mm)   | 6"<br>(152 mm) | 5/8"<br>3/4" | 9W2331<br>9W2332             | 7T1642<br>9W2333 | 7T1635<br>9W2334 | 7T1644<br>9W2335 | 9W2336<br>9W2337 |
| 1/2"*<br>(13 mm) | 8"<br>(203 mm) | 5/8"<br>3/4" | 9W2309<br>9W2310             | 9W2311<br>9W2312 | 9W2313<br>9W2314 | 9W2315<br>9W2316 | 9W2317<br>9W2318 |
| 5/8"<br>(16 mm)  | 8"<br>(203 mm) | 5/8"<br>3/4" | 9W2328<br>9W2329             | 7T1641<br>9W2330 | 7T1636<br>7T1639 | 7T1643<br>7T1624 | 7T1631<br>7T1628 |
| 3/4"<br>(19mm)   | 8"<br>(203 mm) | 5/8"<br>3/4" | 9W2338<br>9W2339             | 9W2340<br>9W2341 | 7T1634<br>7T1638 | 7T1623<br>7T1625 | 7T1630<br>7T1627 |

\* Also available in 10' (3048 mm), 12' (3658 mm) and 14' (4267 mm).  
See your Cat dealer.

## Moldboard End Bits

- Recommended for all applications.
- Made of through-hardened DH-2 steel.
- Designed to protect the ends of the moldboard from wear and damage.



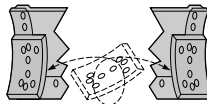
For machines equipped with power blade arrangement, refer to the appropriate parts book for the correct moldboard end bit.

- \* Use 8E5531 End Bits on the following machines:  
12G (61M11716-Up), 120G (87V08135-Up), 130G (74V02293-Up), 140G (72V09829-Up)
- \*\* 9W2945 is 1/8" (3 mm) thicker than 7D2052 and is recommended for use when installing overlay end bit.

| Machine Model                 | Serial number                         | End bit (R-L)                  | Bolts (quantities)                     | Nuts (quantities)                      |
|-------------------------------|---------------------------------------|--------------------------------|--|--|
| 16G, 16H                      | 93U1-2777<br>93U2778-Up<br>625-Up     | 9D4880/1<br>8E5530             | 4F7827 (4)<br>5J4773 (5)               | 2J3506 (4)<br>2J3506 (5)               |
| 16                            | All others                            | 9J4407/8                       | 3F5108 (4)                             | 4K0367 (4)                             |
| 14G<br>14G*<br>14             | 96U1-7324<br>96U7325-Up<br>All others | 9J4405/6<br>8E5529<br>7D2083/4 | 4F7827 (4)<br>5J4773 (5)<br>3F5108 (5) | 2J3506 (4)<br>2J3506 (5)<br>4K0367 (5) |
| 112, 12,<br>120, 130,*<br>140 | All                                   | 7D2052*<br>9W2945**            | 3F5108 (5)                             | 4K0367 (5)                             |
| 212                           | All                                   | 9J4411                         | 3F5108 (4)                             | 4K0367 (4)                             |
| 160H<br>135H                  | All                                   | 8E5529 (2)<br>8E5531 (2)       | 5J4774 (5)<br>3F5108 (5)               | 2J3506 (5)<br>4K0367 (5)               |

## Overlay End Bits

- Recommended for High Impact Applications.
- Made of through-hardened DH-2 steel.
- Very beneficial in ditching application where cutting edges wear faster on the outer corners.
- Designed to protect the ends of the cutting edge from excessive wear.
- On machines using curved edges, worn overlay end bits can be rotated 180° and used on the other end of the moldboard for a second wear life.



| Edge Shape inch (mm) | Machine Model   | End bit  | Type | Bolt (5 each) | Nut (5 each) |
|----------------------|---|----------|------|---------------|--------------|
| Curved<br>8 (203)    | 12, 120, 130, 140,<br>early 14<br>early 16<br>14G, 16G<br>14G (96U7325-Up)<br>16G (93U2778-Up), 16H | 6D1948*  | R    | 4F3658        | 4K0367       |
|                      |   | 7D5583   | R    | 1J6762        | 2J3506       |
|                      |   | 7D5193   | R    | 4F3658        | 4K0367       |
|                      |   | 7D9999   | R    | 1J6762        | 2J3506       |
|                      |   | 6Y2805   | R    | 1J6762        | 2J3506       |
|                      |   | 6Y2805   | R    | 1J6762        | 2J3506       |
| Curved<br>6 (152)    | 12, 120, 130, 140,<br>early 14 & 16<br>early 16   | 6D1904** | R    | 4F3658        | 4K0367       |
|                      |   | 7D5582   | R    | 1J6762        | 2J3506       |
| Flat edge<br>8 /203) | 12, 120, 130, 140,<br>later 14  | 4D5757/8 | NR   | 4F3658        | 4K0367       |

Flat overlays must be used with flat edges.

\* Use 9W1768 Overlay End Bits on the following machine:

\*\* Use 9W1767 Overlay End Bits on the following machine: 12G (61M11716-Up), 120G (87V08135-Up), 130G (74V02293-Up), 140G (72V09829-Up)

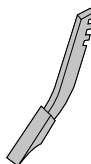
NR – non-reversible  
R – reversible

## Scarifiers

Scarifiers are through-hardened and tempered to resist wear, bending and breakage. They are available in two lengths:

- Standard for most applications
- Long where additional penetration is required

Scarifier tips are made of DH-3 material.



| Components    | V-Block (rear notched) | V-Block (front notched) | Straight block (rear notched) |
|---------------|------------------------|-------------------------|-------------------------------|
| <b>Shank:</b> |                        |                         |                               |
| Standard      | 5B0947                 | 9F5124                  | 5B6251                        |
| Long          | —                      | 7D4501                  | 7D4499                        |
| <b>Tips:</b>  |                        |                         |                               |
| Long          | 6Y5230                 | 6Y5230                  | 6Y5230                        |


## Dozers



### Maintenance Tips

**Always change your edges and end bits before wear reaches the support.** If wear has occurred on the support, check for burrs. Grind them off to insure that the edge or bit will fit flat against the support. Remove any soil that is packed between the edge or end bit and the support.

**Keep your end bit and edge hardware tight at all times.** Loose or missing bolts can result in failure. Use only Caterpillar high strength bolts and heat treated nuts with Caterpillar edges and end bits. These fasteners exceed SAE Grade 8 strength standards.


 When installing new edges and end bits, the best way to insure proper torquing is to use the “Torque – Bang-Torque” method. First torque the bolt to its specification; then tap the head of the bolt with a hammer. This gets rid of the initial loosening which may occur. If the bolts aren’t seated properly, hammering can reduce torque by 40%. After hammering, retorque the bolts to spec.

**Inspect bolt holes on the back side of edge and end bit supports.** Be sure there is a solid, smooth surface to support the nut. If not, it will be impossible to keep hardware tight. Repeated burning off of hardware can weaken support around the holes. Also, prolonged or repeated operation of the blade with loose hardware can cause bolt holes in the support to become enlarged.

### Bulldozer Cutting Edges

Caterpillar offers multi-section cutting edges for easier handling, storage installation and turning. And since pieces can be replaced, switched or turned individually, you can save money by getting maximum wear life from each piece.

**Reduce speed.** Speed is the enemy of your dozer Ground Engaging Tools. When a boulder or hard compact layer of material won’t budge, a slow and steady prying force is more desirable than high speed impact.

 Operators often attempt to move a tough obstacle by backing off and hitting it with greater momentum. This method sometimes gets the job done, but it increases the possibility of breaking the cutting edge and end bits and damaging the edge support. Speed also accelerates wear on your dozer frame, hydraulics, and the tractor drive train.

**Turn your edges and replace end bits only as needed.** You can lower replacement parts cost considerably by turning individual edge sections and replacing end bits as wear limits for each piece are reached. Downtime and labor costs involved in selectively changing, turning, or rotating dozer edges may make such a procedure uneconomical.

Caterpillar Cutting edges are:

- Made from DH-2 rolled steel to resist breaking.
- Through-hardened for maximum wear life.
- Available in optional thicknesses to match edge to job.
- Deep countersink for good plow bolt protection.
- Extended Wear Life (EWL) Edge System.

Note: Optional cutting edges made from DH-3 steel are available for large Dozers. Ask your dealer for information.

### End Bits

While each option has specific characteristics, all versions have common features that help increase production and decrease operating cost.

- Through-hardened for maximum wear life.
- DH-3 and DH-2 material are used to achieve wear life match with edges.
- Thickness in bolt hole area matches cutting edge for long system life and provides good plow bolt head protection.
- Side extension beyond dozer sidebar protects moldboard.
- Thickness in wear area designed to produce a favorable end bit-to-cutting edge wear ratio.



## Application Guide

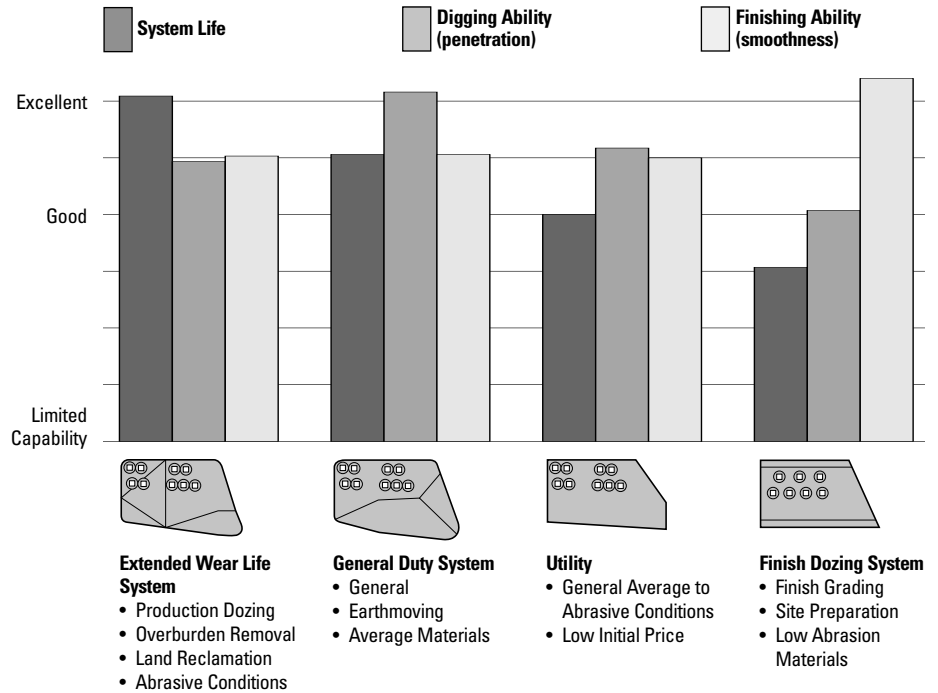
Four main\* options are available:

- Extended Wear Life System\*\*
- General Duty System\*\*
- Utility
- Finish Dozing System

\* Two additional types of end bits are available:  
Hot Cupped and forged Impact


\*\* Made in DH-3 on D8 through D11 dozer to maintain hardness at high working temperatures

Ask your dealer for further information

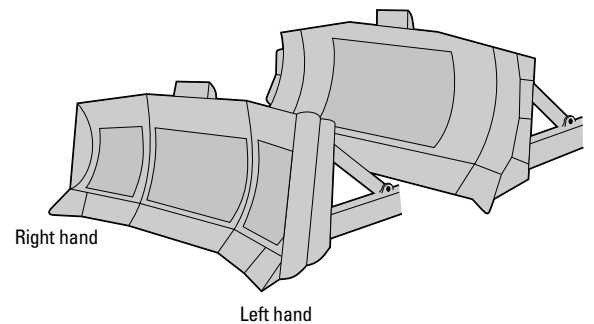


## Wear Plates and Push Plates

Caterpillar high-strength wear plates, formed to fit the curve of the blade, are used to repair or resurface worn or damaged moldboards.

 In highly abrasive or extreme impact conditions, it may be profitable to add wear plates to a new dozer before the machine is put into service.

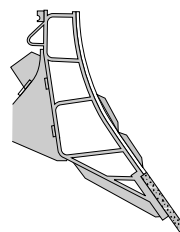
Push plates should be installed on any dozer used to push loading scrapers. These plates are made of heat treated steel. And, like wear plates, they're formed to fit the curve of the blade.



## Wear Bars

Wear bars provide additional blade protection in highly abrasive applications where short liner life has been encountered. Dozer wear bars are designed to be welded on top of the normal blade liner. This eliminates the possibility of burning through the skin of the dozer blade and generating costly repairs. Placing the wear bars on top of a liner also results in stronger blade.

Wear bars are made from DH-2 steel alloy, through-hardened for greater resistance and strength.



| Thickness mm | Width mm | Length mm | Part number |
|--------------|----------|-----------|-------------|
| 254          | 203      | 2438      | 107-3386    |
| 254          | 203      | 2743      | 107-3387    |
| 254          | 203      | 3353      | 107-3388    |
| 254          | 203      | 3658      | 107-3389    |
| 254          | 203      | 3962      | 107-3390    |
| 254          | 203      | 4572      | 107-3391    |

# Rippers



## Maintenance Tips

**Inspect your ripper daily** – A daily maintenance inspection can greatly reduce failures. In the daily inspection, look for the following: Worn Tips, Worn Protectors, Loose Pins, Broken Tips, Worn Shanks.

**Sound operating techniques** are absolutely essential to get maximum production from a ripper.

**Operator efficiency** – Ripping is one of the toughest jobs in earthmoving. The key to economic and effective ripping rests ultimately with the operator. Therefore, you should put your best operator on the ripping tractor. Much can be gained or lost, depending on his ability.

**Use first gear** – Ripping requires maximum pull. Shock loads – and ripper damage – increase with speed. Ripping at lower speeds reduces wear, decreases breakage, and prolongs undercarriage life. Production can be enhanced from this reduced downtime. Maintenance costs can rise rapidly due to wear with only a small increase in speed.

**Rip downhill** – Downhill ripping will enlist gravity to add to your machine pull and increase ripping ability.

**Leave a cushion** – Don't take off all ripped material. Leave a layer for better traction and less track wear.

**Rip to uniform depth** – This keeps the working area level. An even cut makes for easier loading and less wear and tear on the hauling units.

**Follow laminations** – When material is laminated, rip from shallow to deep end. This pulls the tip into the ground for deeper, more efficient penetration and improved fracturing of material.

**Break the material into a size easily handled by scrapers** – Spacing of passes, number of passes, control of ripping depth and cross ripping determine finished material size. Thus, an experienced and competent operator is the only sure way to determine depth and spacing.

**Use the proper ripping angle** – Larger Caterpillar Rippers feature a hydraulically adjustable shank angle. This allows the operator to readily select ripper shank angle settings forward or rearward of vertical position. Shank angle can be changed up to 33°, even while ripping. Regardless of ripper shank length or ripping depth, simply adjust the shank angle to provide an effective tip angle. This achieves maximum performance throughout each ripping pass.

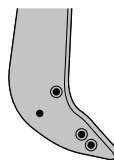
**Use the right number of shanks** – Material density, rippability, machine power, and final size of material determine the number of shanks that can be used. Number of shanks is largely a matter of operator experience and judgement. Start with one shank in the center pocket and if it is apparent that there is an excess of horse-power, go to two shanks. Do not merely insert another shank on one of the outside pockets; remove the center shank, and install the two outside shanks. If three shanks can be used, reinsert the center shank.

## Shanks

### One piece design

The one-piece shank (no weld joint) is now available for ripper D8 size and larger. This design:

- provides more strength
- improves heel clearance
- gives a tighter fit between the shank, tip and protector.

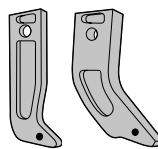


### Straight or Curved

If you're operating D6 size rippers or smaller, there are two options:

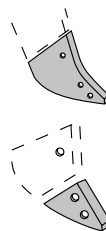
- Straight shanks are stronger and reach further.
- Curved shanks provide better penetration by exerting more pressure.

They also lift and break material ahead of the shank and can be stored out of the way when not in use.



### Repair or Conversion

For most ripper assemblies, replacement adapters and noses are available. By replacing **only** the portions of the assembly, repair costs can be held to a minimum. These parts can also be used on other makes of shank assemblies so you can use Cat DH-3 ripper tips.



|                 |        |        |                          |  |            |  |
|-----------------|--------|--------|--------------------------|--|------------|--|
|                 | 983    | D7     | D6, D5<br>977<br>973, 16 | D4, 963, 955<br>941, 163<br>160H, 143H<br>140, 130<br>14, 12 | 953<br>943 | D4C, D3<br>939, 933<br>931, 135H<br>120H |
| <b>Straight</b> | 7J6671 | 9W7382 | 9J3139                   | 9J6586   |            | 8J5299                                   |
| <b>Curved</b>   |        |        | 9J8923                   | 9J8913   | 1U1257     |  |

|                |                                       |                  |             |        |                    |   |
|----------------|---------------------------------------|------------------|-------------|--------|--------------------|---|
|                | D10N,<br>D11N MS,<br>D10N,<br>D10R MS | D11, D10,<br>D9L | D9R,<br>D8R | D9, D8 | 983, D7,<br>D6, D5 | D4, 963,<br>955, 951,<br>941, 14,<br>140, 130,<br>12, 12D |
| <b>Adapter</b> | 107-3361*                             |                  |             |        | 9W7488             |   |
| <b>Nose</b>    |                                       | 103-8114         | 9U9694      | 4T9776 | 8E7350             | 8E7300  |

\* Two pin protector

### Technical information

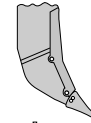
Installation procedures are shown in Special Instructions SEHS7888/9051

## Shank Protectors

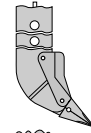
To protect the lower portion of the shank and the adapter, shank protectors are available in three different styles:

- Standard design is an economical choice for light, easily ripped materials and applications.
- Sharpened design is intended for tough to rip materials. This design reduces resistance to ripping and drawbar horsepower loss.
- Extended protectors are available for highly abrasive or deep ripping applications.

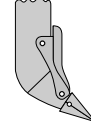
All are made in DH-2 steel for maximum strength and wear resistance. They are side-pinned for easy replacement.



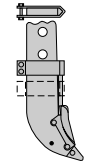
**Protector**  
D9G, D9H, D9N, D8H, D8K, D8N  
D9R (upsized), D8R



**Single Shank Sharp Protector**  
D11R, D11N



**Multi-type Sharp Protector**  
D11R, D11N, D10R, D10N, D9R, D, D9N, D9L



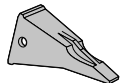
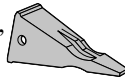
**Multi-piece Protector**  
D11R, D11N, D10R, D10N, D9R, D9N, D8R, D8N


## Ripper Tips

All ripper tips are made of through-hardened DH-3 steel.


Two types of ripper tip designs:

- Centerline design should be used in most applications, especially when wear life is a major factor. Because they have wear material on both sides, you can turn them over for additional life.
- Penetration design is for hard and/or compacted materials. They have a more aggressive angle that breaks through the hardest surfaces and gets into the ground more effectively.



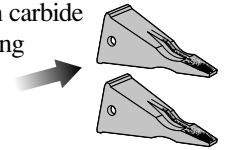
 Penetration tips should be installed with the RIB up.


For D8 and larger rippers, each tip may come in as many as three lengths: short, intermediate and long.

 Always use the longest tip that wears out without breaking. If it does break, switch to the next shorter tip.

ARM intermediate tips are available. Tungsten carbide particles form a protective shield on key wearing surface. This helps to:

- Increase tip life
- Improve productivity
- Reduce cost per meter of ripped material.



 ARM tips are not reversible.

|                                | D11<br>(SS, DR) | D11 MS,<br>D10N<br>D10, D9L | D9, D8L,<br>D8                               |
|--------------------------------|-----------------|-----------------------------|--|
| <b>Tips</b>                    |                 |                             |  |
| Penetration                    |                 |                             |  |
| Short                          |                 | 4T5501                      | 4T5451                                       |
| Intermediate                   | 6Y3552          | 4T5502                      | 4T5452                                       |
| Intermediate ARM               |                 | 8E5772                      | 8E5771                                       |
| Long                           |                 | 4T5503                      |  |
| Centerline                     |                 |                             |  |
| Short                          | 9W4551          | 4T4501                      | 9W2451                                       |
| Intermediate                   | 9W4552          | 4T4502                      | 9W2452                                       |
| Intermediate ARM               |                 | 8E5774                      | 8E5770                                       |
| Long                           |                 | 8E8503                      | 114-0453                                     |
| <b>Retention System</b>        |                 |                             |  |
| Counterbored Ripper Nose       |                 |                             |  |
| Pin Assembly (Non-reusable)    | 9N4245          | 6Y1204                      |  |
| Retainer (Non-reusable)        | 6Y1205          | 6Y1202                      |  |
| Pin Assembly (Option Reusable) | 8E2229          | 6Y3909                      | 6Y3394                                       |
| Retainer (Option Reusable)     | 8E2230          | 4T4707                      | 8E4743                                       |
| Non Counterbored Ripper Nose   |                 |                             |  |
| Pin Assembly                   | 6Y2443          | 102-9062                    | 4T2479 <sup>1)</sup><br>6J8814 <sup>2)</sup> |

|                         | D7       | D6, D5, 977,<br>973, 16 | D4, 963,<br>955, 951,<br>163H, 160H,<br>143H, 140,<br>130, 14, 12 | 953, 943 | D4C, D3,<br>939, 931,<br>135H,<br>120H |
|-------------------------|----------|-------------------------|---|----------|--|
| <b>Tips</b>             |          |                         |   |          |  |
| Centerline              | 6Y0352   | 6Y0352                  | —   | —        | —                                      |
| Penetration             | 6Y0359   | 6Y0359                  | 6Y0309  | 9J4259   | 1U3209                                 |
| Long                    | —        | —                       | —   | 1U3252   | 1U3202                                 |
| Short                   | —        | —                       | —   | 1U3251   | —                                      |
| Sharp                   | —        | —                       | 9W7309  | —        | —                                      |
| <b>Retention System</b> |          |                         |   |          |  |
| Pin                     | 114-0358 | 114-0358                | 9W2668  | 8E6258   | 8E6208                                 |
| Retainer                | 114-0359 | 114-0359                | 1U2405  | 8E6259   | 8E6209                                 |

<sup>1)</sup> Top protector hole: Ripper Tip  
<sup>2)</sup> Lower Protector Hole

## **Caterpillar Warranty**

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Caterpillar Ground Engaging Tools carry a lifetime warranty against breakage. Please contact your Caterpillar dealer for details of this Cat GET warranty, including the specific product covered. In addition to the terms and conditions listed in the warranty, the warranty is subject to the following:

**Warranty Period** – The warranty period is not limited by time and is applicable throughout the life of the ground engaging tools covered.

**Caterpillar Responsibilities** – If a breakage occurs during normal operation, Caterpillar will provide, at a place of business of a Caterpillar dealer or other source approved by Caterpillar:

- New or Caterpillar-approved repaired parts, at Caterpillar's choice.

**User Responsibilities** –  
The user is responsible for:

**Limitations** – Caterpillar is not responsible for failures resulting from any use or installation which Caterpillar judges improper.

- Caterpillar is not responsible for breakage of ground engaging tools due to worn mating components of those that have been hardfaced or improperly welded.
- Cracks in the “ARM” weld and chipping of hard particles out of the weld are not considered “breakage” under the terms of the warranty.

## **Your Caterpillar Dealer...**

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We have a large stock of ground engaging tools to match your job.

Our GET specialist and product support representatives are trained and experienced in matching the right tools to the application. They can provide technical assistance in selecting the tool you need for each specific job.

So depend on us for the equipment, service and ground engaging tools that keep you producing.