CWS INDUSTRIES (MFG) CORP.

Straight Dozers

Straight Dozer Groups operate only in the straight position. They are able to Tilt when equipped with one tilt cylinder or Tip and Tilt when equipped with two.

Three types of push groups are shown here:

• A) Tag Link Style • B) Diagonal Brace Group Style • C) Uni-Joint Style

PARTS:

1) Diagonal Brace Group

1a) Uni-Joint Push Group

2) Straight Blade

3) Tag Link

4) Dozer Lift Cylinders

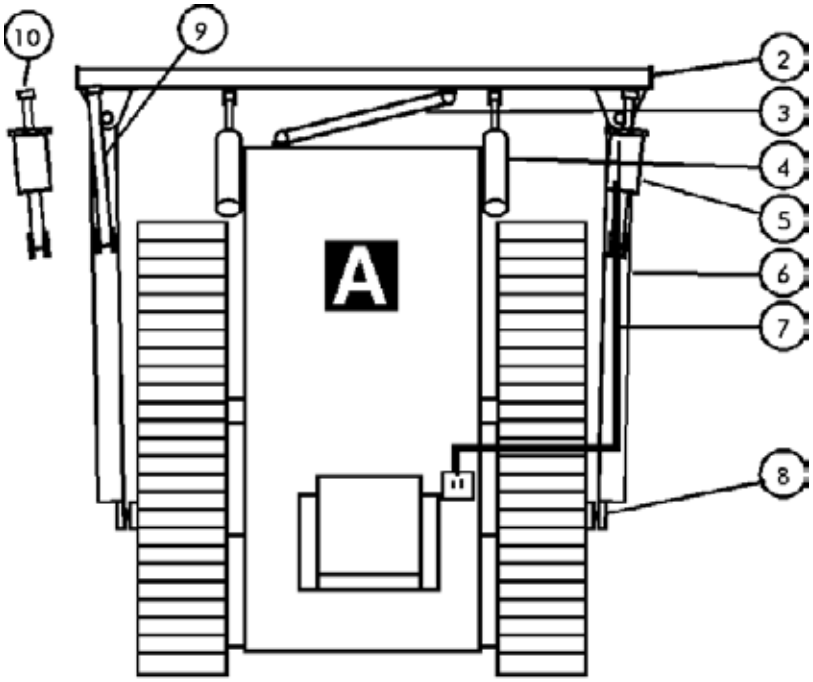
5) Single Tilt Cylinder

6) Push Arms

7) Hydraulic Lines out side of tractor to Tilt Cylinder

8) Dozer Mounting Trunnions

Tag Link Style



STRAIGHT DOZER

Tractor shown with Caterpillar's Tag Link Style Push Group

The Tag Link serves to transfer any side loads on the blade directly to the nose of the tractor. Ball joints at each end of the Tag Link, allow the blade to lift, tilt and tip.

9) Fixed Tilt Strut

10) Optional Second Tilt Cylinder for Tip

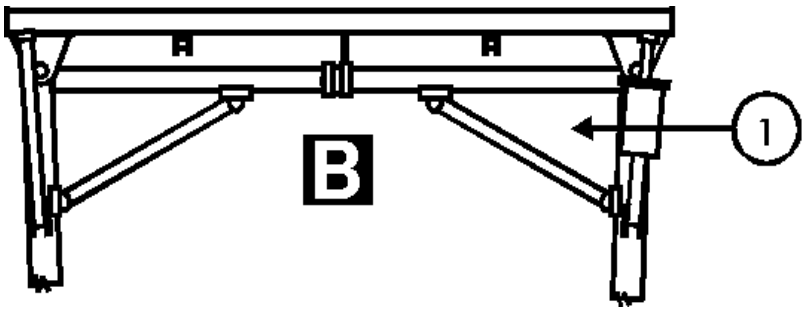
NOTES:

- Dozer Mounting Trunnions, Dozer Lift Cylinders, Control Valve and Piping within the machine for Tilt Cylinders is not part of standard Dozer Groups.
- When ordering "blades only" to go with O.E.M. push groups, hookup parts between the blade and the push group are not usually included as standard.
- Only specially built tractors are able to use the "Tag link" style of push group. All other tractors must use either the Diagonal Brace Group or Uni-Joint Style Push Group.
- Three different styles of blades are available:

  i) Straight - best for large objects

  ii) Semi-U - slightly dished to hold granular material in at the

Diagonal Brace Group Style (K-Brace Version)



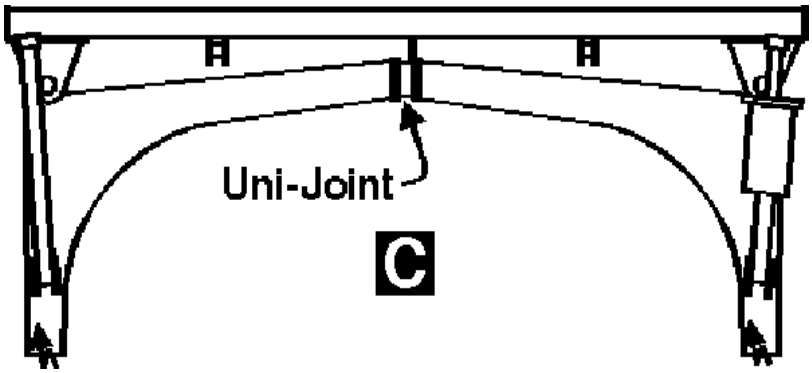
Diagonal braces transfer side load from the blade to the push arms. Moving joints at allow the blade to tilt and tip.

Uni-Joint Style

ends

iii) U-Blade - deeply dished for pushing large quantities of granular materials

Special versions off these three basic style are built for Soils, Rock, Coal, Woodchips, Sulfur, etc. Many combinations of moldboard size, shape and wear materials customize each basic blade for the conditions it will work in.



Stiff cornered push frames transfer side loads from the blade directly to the tractor. A flexible coupling joins the two arms together allowing the flexing needed between them for tilt and tip