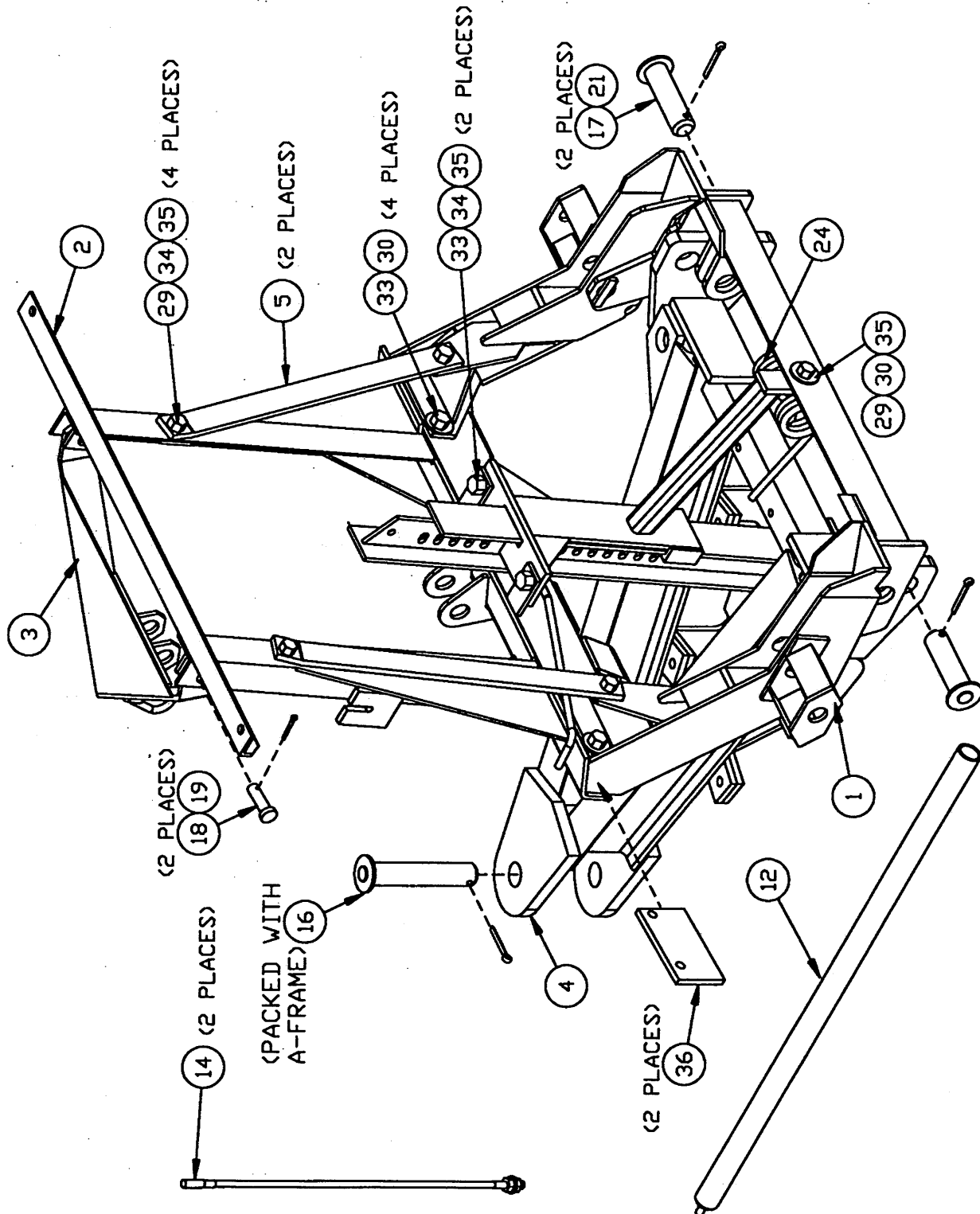
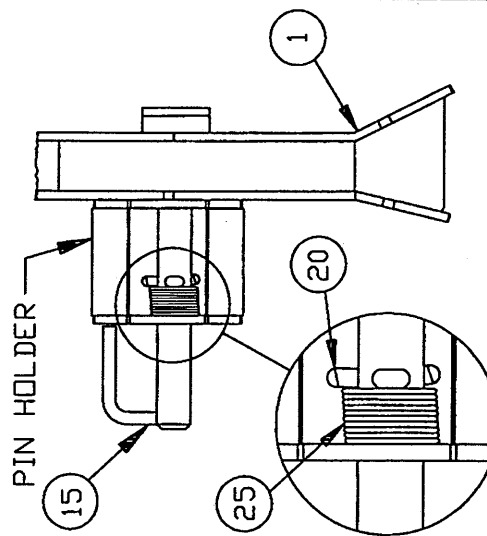
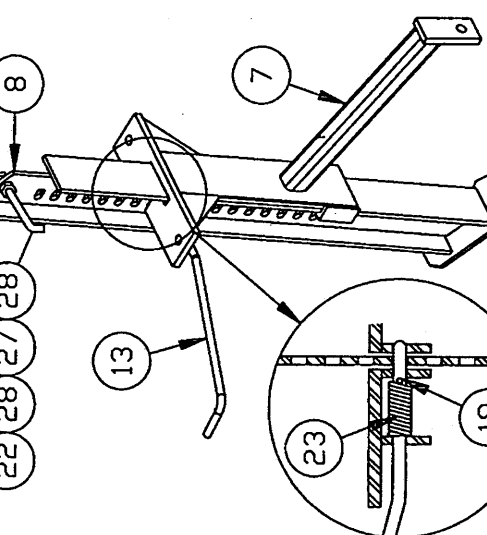
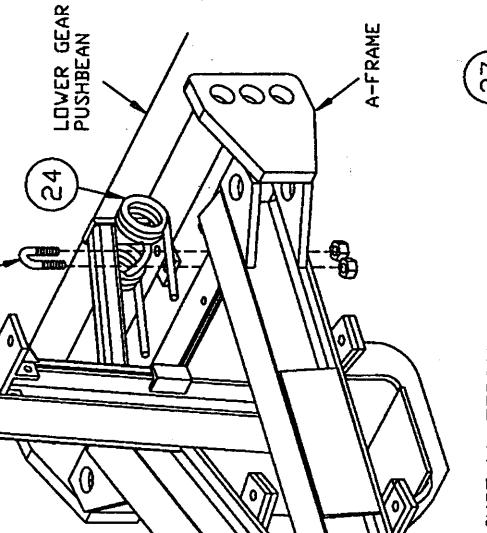
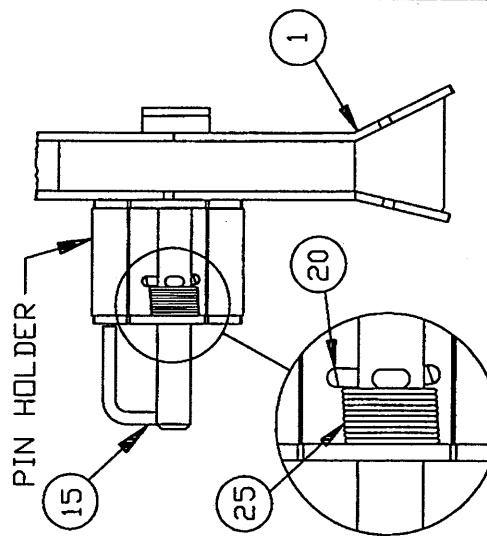
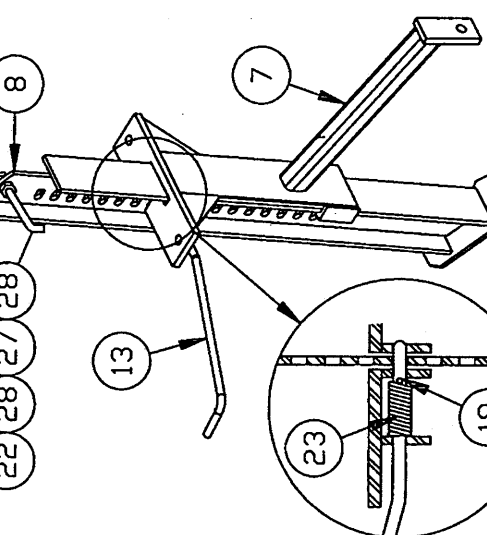
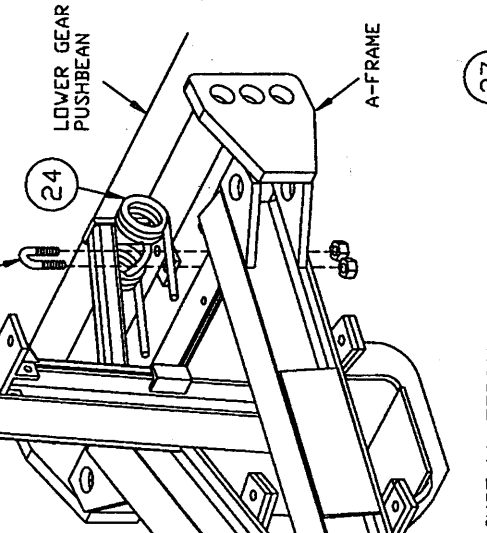


Commercial
Common Attachments



CONNECTING PIN VIEW FROM TOP	 <p>PIN HOLDER (15)</p> <p>1</p> <p>20</p> <p>25</p>	JACK SUPPORT	 <p>7</p> <p>8</p> <p>13</p> <p>19</p> <p>22</p> <p>23</p> <p>27</p> <p>28</p>	TORSION SPRING	 <p>9</p> <p>11</p> <p>24</p> <p>37</p> <p>LOWER GEAR PUSHBEAN</p> <p>A-FRAME</p> <p>INSTALL TORSION SPRING STOP KIT IF TOP HOLE OF A-FRAME IS USED. DO NOT INSTALL OTHERWISE.</p>
LIFT/CARRYING CHAIN	 <p>6</p> <p>26</p> <p>27</p> <p>28</p> <p>29</p>	A-FRAME TO ANGLE FRAME	 <p>37</p> <p>38</p> <p>39</p> <p>40</p> <p>41</p> <p>42</p> <p>43</p> <p>44</p> <p>45</p> <p>46</p> <p>47</p> <p>48</p> <p>49</p> <p>50</p> <p>51</p> <p>52</p> <p>53</p> <p>54</p> <p>55</p> <p>56</p> <p>57</p> <p>58</p> <p>59</p> <p>60</p> <p>61</p> <p>62</p> <p>63</p> <p>64</p> <p>65</p> <p>66</p> <p>67</p> <p>68</p> <p>69</p> <p>70</p> <p>71</p> <p>72</p> <p>73</p> <p>74</p> <p>75</p> <p>76</p> <p>77</p> <p>78</p> <p>79</p> <p>80</p> <p>81</p> <p>82</p> <p>83</p> <p>84</p> <p>85</p> <p>86</p> <p>87</p> <p>88</p> <p>89</p> <p>90</p> <p>91</p> <p>92</p> <p>93</p> <p>94</p> <p>95</p> <p>96</p> <p>97</p> <p>98</p> <p>99</p> <p>100</p> <p>ANGLE FRAME</p> <p>A-FRAME</p> <p>INSTALL TORSION SPRING STOP KIT IF TOP HOLE OF A-FRAME IS USED. DO NOT INSTALL OTHERWISE.</p>	DEFLECTOR	 <p>37</p> <p>38</p> <p>39</p> <p>40</p> <p>41</p> <p>42</p> <p>43</p> <p>44</p> <p>45</p> <p>46</p> <p>47</p> <p>48</p> <p>49</p> <p>50</p> <p>51</p> <p>52</p> <p>53</p> <p>54</p> <p>55</p> <p>56</p> <p>57</p> <p>58</p> <p>59</p> <p>60</p> <p>61</p> <p>62</p> <p>63</p> <p>64</p> <p>65</p> <p>66</p> <p>67</p> <p>68</p> <p>69</p> <p>70</p> <p>71</p> <p>72</p> <p>73</p> <p>74</p> <p>75</p> <p>76</p> <p>77</p> <p>78</p> <p>79</p> <p>80</p> <p>81</p> <p>82</p> <p>83</p> <p>84</p> <p>85</p> <p>86</p> <p>87</p> <p>88</p> <p>89</p> <p>90</p> <p>91</p> <p>92</p> <p>93</p> <p>94</p> <p>95</p> <p>96</p> <p>97</p> <p>98</p> <p>99</p> <p>100</p> <p>OPTIONAL RUBBER DEFLECTOR</p> <p>BOLTING BARS</p> <p>BLADE</p>

Parts List

Ref #	Part #	Qty	Description	Ref #	Part #	Qty	Description
1	20759	1	Lower Gear	21	*90013	2	1/4 x 2" Cotter Pin
2	20758	1	Head Gear	22	*8173	1	Jack Handle
3	21920	1	Lift Arm	23	*7794	1	Spring - 1/2 OD x 2"
4	20703	1	Comrl A-Frame w/ Hardware	24	!20182	1	Torsion Spring—3-coil
5	8514	2	Head Gear Brace (19-3/4 OAL)	25	*821	2	Spring - 1 ID x 3-1/2"
6	21851	1	Chain 3/8 x 108"	26	*90453	2	3/8"-16 U-bolt, RD bend yellow
7	20488	1	Jack Support - HD	27	*90361	5	3/8" Lock Washer
8	20491	1	Jack Leg - HD	28	*90334	6	3/8"-16 Nut
9		1	3/8"-16 U-bolt RD Bend Gr. 2 install only	29	*90210	5	1/2-13 x 1-1/2" Gr. 5 Cap Screw
11	!90352	2	3/8"-16 Locknut	30	*90572	5	1/2" Gr. 8 Flat Washer
12	8551	1	Release Rod - HD & RD	32	20185	1	Torsion Spring Kit
13	8499	1	Jack Lever - HD & RD	33	*90575	6	1/2-13 x 1-1/4" Gr. 5 Cap Screw
14	20795	2	Flexible Blade Guide - 26"	34	*90364	6	1/2" Lock Washer
15	*6815	2	Connecting Pin w/ Handle	35	*90337	7	1/2"-13 Nut
16	20789	1	Pivot Pin—packed w/ A-frame	36	8498	2	Bolting Bar
17	5150	2	Anchor Pin	37	20244	1	Torsion Spring Stop Kit
18	4289K	2	3/4 x 1-7/8" Machine Pin	26,27	A6148K	2	U-Bolt Assembly
19	*90658	3	5/32 x 1-1/4" Cotter Pin	,28			
20	*90601	2	1/4 x 1-1/2" Cotter Pin	15,25	6920K	2	Connecting Pin Assembly
				,20			

! Part of 20185 Torsion Spring Kit * Part of 20786 Bolt Bag




Note: This kit is packed in two boxes – PN 8445 & 8446.

Installation Instructions

NOTE: Installation of angle cylinders to blade and A-Frame are covered in the hydraulic instructions, Section 1.

1. Attach the angle frame to blade according to the instructions. Use the fasteners shipped with the angle frame.
2. Attach the A-frame (4) to the blade and angle frame according the instructions. Use the fasteners shipped with the A-frame. After installing the A-Frame to blade, place a 1-1/2" block under the center of the A-frame rear cross member. **The A-frame cross member should be parallel to the blade.**
3. Install a 3/8 yellow U-bolt (26) through a link in the lift/carrying chain (6) 32" from the end—see lift/carrying chain illustration. Attach U-bolt and chain to the two 13/32" holes on driver side of the blade with two 3/8" lock washers (27) and nuts (28). **Do not fully tighten. The other end of the lift chain will be attached to passenger side of blade after lift arm is installed.**
4. To assemble connecting pins (15) to lower gear (1) insert springs (25) in pin holders—see connecting pin illustration. Then insert the connecting pin through all three holes with the pin handles toward the vehicle. Position cotter pin hole flush with inside plate. Pull back on the spring and install 1/4 x 1-1/2" cotter pins (20). **Bend both legs of cotter pins around connecting pins for proper clearance.**
5. Place bolting bar (36) inside head gear narrow end in first—see assembly illustrations. Place upper gear (2) on front end of lower gear (1). Insert four 1/2 x 1-1/4" cap screws (33) with Gr. 8 flat washers (30) through the holes in lower gear and head gear into the head gear bolting bar. **Do not fully tighten.**

6. Insert jack leg (8) up through jack support (7) and engage jack lever when four slots are visible. Install one 3/8" nut (28) on jack handle (22) and insert into top round hole on jack leg. Fasten with one 3/8" lock washer (27) and nut (28).
7. Using the jack lever (13), insert the lever through the three holes on jack stand (7) to clean out paint before assembling. Place jack lever spring (23) between ear and guide on jack stand (7)—see jack stand illustration. Insert jack lever (13) through ear until cotter pin hole is flush with jack guide. Pull back on spring and install 5/32 x 1-1/4" cotter pin (19).
8. Install head gear braces (5) to each side of head gear—bent end on top—and to lower gear tab—bottom of braces to rear of tab—using four 1/2 x 1-1/2" cap screws (29), lock washers (34) and nuts (35). Tighten all fasteners on the head gear/lower gear assembly.
9. Align holes in head gear/lower gear assembly with holes in the blocked up A-frame. Insert anchor pins (17) through ears and secure with two 1/4 x 2" cotter pins (21).
10. Pivot the upper and lower gear assembly away from the blade. Place torsion spring (24) in center of lower gear angle. Place 3/8" silver U-bolt (9) over the loop on the spring and through holes in the angle and the tab under the angle. Fasten with two 3/8" locknuts (11). See torsion spring illustration on page 2. Tighten both down evenly.
- If the top holes in the A-frame pushers are being used, the Torsion Spring Stop Kit—PN 20244—must be installed according to the instructions in the kit.
11. Attach jack support (7) under the tabs on rear of head gear with two 1/2 x 1-1/4" cap screws (33), lock washers (34) and nuts (35). Attach the jack support stiffener to the lower gear beam with one 1/2 x 1-1/2" cap screw (29), Gr. 8 flat washer (30) and nut (35). Tighten all fasteners.
12. Check to be certain all fasteners are tight. Attach lift arm (3) to head gear (2) with two machine pins (18) and cotter pins (19). **After hydraulic lift package has been installed tip the head gear assembly forward until stops hit A-frame.** Insert long end of chain through the loop on the lift arm and fasten end link to the two 13/32" holes in the passenger side of the blade using a 3/8" yellow U-bolt (26), lock washer (27) and nut (28). Tighten. When the plow is lifted, the A-frame should hit upper gear just before lift cylinder is fully extended (10"). Adjust chain on driver-side if needed to accomplish the above and tighten the U-bolt. Hook 32" chain in chain plate on head gear.
13. Attach bolting bar to blade using fasteners supplied with the blade.
14. Install the blade guides (14) on each end of the top bar on the blade.
15. See the release rod instructions attached to the release rod regarding its use.
16. Attach to vehicle according to the installation decal located in the upper, driver-side corner of blade.

NC FASTENER TORQUE (FT-LB)			
DIAMETER- THREADS PER INCH	GRADE		
	 G2	 G5	 G8
1/4 - 20	6	9	13
5/16 - 18	11	18	28
3/8 - 16	19	31	46
7/16 - 14	30	50	75
1/2 - 13	45	75	115
9/16 - 12	66	110	165
5/8 - 11	93	150	225
3/4 - 10	150	250	370
7/8 - 9	150	378	591
1 - 8	220	583	893

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