



MANUFACTURING, CO.

**F17
DOUBLE OFFSET TANDEM**

OPERATIONMAINTENANCE**SET-UP
INSTRUCTIONS**



AMCO MANUFACTURING COMPANY

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TO THE PURCHASER

The care you give your new AMCO F17 Double Offset Tandem Disk Harrow will greatly determine Satisfaction and service you will obtain from it. By observing the instructions and suggestions in this manual, your AMCO F17 Harrow will serve you well for many years.

As an Authorized AMCO Dealer, we stock Genuine AMCO Parts, which are manufactured with the same precision and skill as the original equipment. For best performance and lower life use only Genuine AMCO replacement parts. Our factory trained staff is kept fully informed of the most efficient methods of servicing AMC[®] equipment and is ready and able to assist you.

When you sell your F17 Harrow you should pass this manual to the new owner.

If you should require additional aid or information, contact us.

YOUR AUTHORIZED AMCO DEALER

OSHA requires that as a farm employer you meet certain safety requirements. Become familiar, with and comply, with those requirements. Be sure anyone who operates this equipment understands all safety related items. If this harrow is repainted, be certain new decals are ordered. Decal pertaining to personal safety must be replaced.



Look for this symbol to point out important safety precautions. It means — ATTENTION! Become alert! Your safety is involved.

To insure efficient and prompt service, please provide the model number and serial number of your AMCO Harrow in all correspondence or contacts. Remember, the right- and left-hand sides of the harrow are determined by standing at the rear of the harrow and facing the direction of travel.

MODEL NUMBER

SERIAL NUMBER

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Rev. 9/26/2023

SAFETY SUGGESTIONS



THIS SAFETY ALERT SYMBOL INDICATES IMPORTANT SAFETY MESSAGES IN THIS MANUAL. WHEN YOU SEE THIS SYMBOL, CAREFULLY READ THE MESSAGE THAT FOLLOWS AND BE ALERT TO THE POSSIBILITY OF PERSONAL INJURY.



CAUTION *Never stand between tractor and disk harrow when hitching unless all controls are in neutral and the brakes are locked*



CAUTION *Park or block the disk harrow so it will not roll when disconnected from the tractor drawbar.*



CAUTION *When working on disk harrows, care should be exercised in handling or tightening bolts near disk blades to avoid injury.*



CAUTION *Always secure for transport by using the lock pin and wing lock pins.*



CAUTION *Never clean, adjust or lubricate a disk harrow that is in motion.*



CAUTION *When transporting machinery over public roads, comply with your local and state laws regarding length, width and lighting.*



CAUTION *When trailing the harrow over public roads, the SMV Emblem must be used, for protection of tractor and motor vehicle operators*



CAUTION *When transporting farm implements on public roads after dusk it is the responsibility of the operator to provide lighting and reflectors on the rear of the implement in accordance with your state law.*



CAUTION *All hydraulically or mechanically elevated components must be blocked to prevent accidental lowering or must be lowered to the ground when making adjustments or when the equipment is idle.*

DOUBLE OFFSET TANDEM

Model "F17"

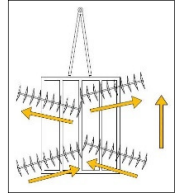
9" Spacing

(F) Series

General Purpose

STANDARD SPECIFICATIONS

(Metrics in Parentheses)

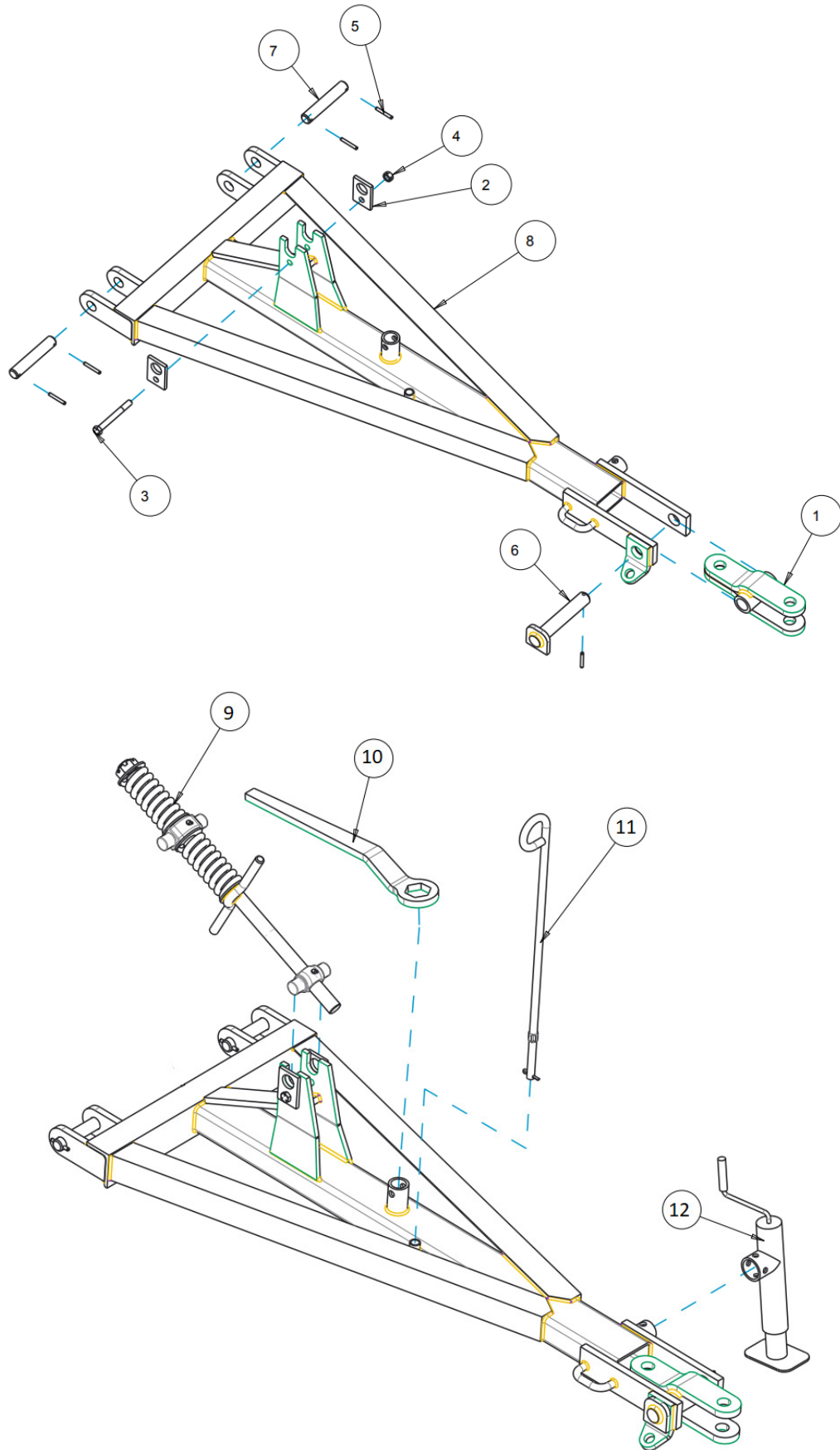


| | | | |
|-----------------------------|--|-------------------------|--|
| Axles: | Four 1-1/2" square, high carbon cold rolled steel | Gang Bearings: | Maintenance-Free gang bearings, 1-1/2" (38mm) square bore, toggle mounted with wear guards to protect the bearing housing. |
| Blades: | 22" x 1/4"(6mm) Plain diminishing with two feathering blades on rear gang | Bearing Risers: | Fabricated steel |
| Scrapers: | Includes 3/16" x 6 1/2" x 8", high-carbon steel, replaceable, adjustable scraper blades mounted on bars of 2 1/2" x 2 1/2" square tubing. The scrapers are attached to the 2 1/2" x 1/2" thick arms with heavy duty u-bolts. | Wheels: | 2 - 15x8" w/ 9.5Lx15 Tires, 8ply on 9'3", 10'6", & 12'0" *4 - 15x8" w/ 9.5Lx15 Tires, 8ply (13'6", 15'0", & 16'6") |
| Tongue: | 70" long with tongue jack and base hitch clevis | Hubs: | Std. 6 lug hubs on 15x8" wheel |
| Hydraulic Cylinders: | 4"x8"x 1/2" w/stroke control (3000 PSI). Includes hose bundle to tractor | Wrench: | 1 for gang bolt |
| | | Disc Spacing: | 9 Inches (229mm) |
| | | Gang Angle: | Adjustable 18° to 22° Front, 17° to 21° Rear |
| | | Weight: | 106 to 120 lbs per blade 296 to 337 lbs. per foot |
| | | Transport Width: | Width of cut plus 18" |

| | Model No. | Cutting Width | No. of Discs | No. of Bearings | Approximate Engine HP Required (kW) | Approximate Weight lbs (kg) | | | |
|--|---------------------------------------|--|--------------|-----------------|-------------------------------------|-----------------------------|--|--|--|
| | F17-2622 | 9'3" (2.82m) | 26 | 8 | 68-101 (50-75) | 3414 (1548) | | | |
| | F17-3022 | 10'6" (3.20m) | 30 | 8 | 81-108 (60-80) | 3698 (1677) | | | |
| | F17-3422 | 12'0" (3.66m) | 34 | 8 | 95-122 (70-90) | 3982 (1806) | | | |
| | F17-3822* | 13'6" (4.12m) | 38 | 12 | 108-135 (80-100) | 4816 (2184) | | | |
| | F17-4222* | 15'0" (4.68m) | 42 | 12 | 122-155 (90-115) | 5130 (2326) | | | |
| | F17-4622* | 16'6" (5.15m) | 46 | 12 | 142-176 (105-130) | 5644 (2560) | | | |
| | *Includes 2 outrigger bars and clamps | | | | | | | | |
| | OPTIONAL EQUIPMENT | | | | | | | | |
| | | Shock absorber gang risers in lieu of Std. cast gang risers - Add per bearing | | | | Add 18 (8) ea | | | |
| | | (Note: AMCO recommends 1/4"(6mm) blades for use with shock absorber gangs) | | | | | | | |
| | BR-14-0001 | Dual wheels with 9.5L in lieu of single on 9'3", 10'6", & 12'0" | | | | Add 106.0 (2.8)ea. | | | |
| | BR-14-0006 | Dual wheels with 11L in lieu of single on 9'3", 10'6", & 12'0" | | | | Add 106.0 (2.8)ea. | | | |
| | | 22" x 1/4"(6mm) Cutout blades in lieu of standard | | | | Ded 1.9 (0.9)ea. | | | |
| | | 24" x 1/4"(6mm) Cutout blades in lieu of standard | | | | Add 4.0 (1.8)ea. | | | |
| | | 24" x 1/4"(6mm) Plain blades in lieu of standard | | | | Add 6.0 (2.8)ea. | | | |

Use of Disk on tractors with higher than recommended drawbar horsepower will cause excessive maintenance cost and may void your warranty.

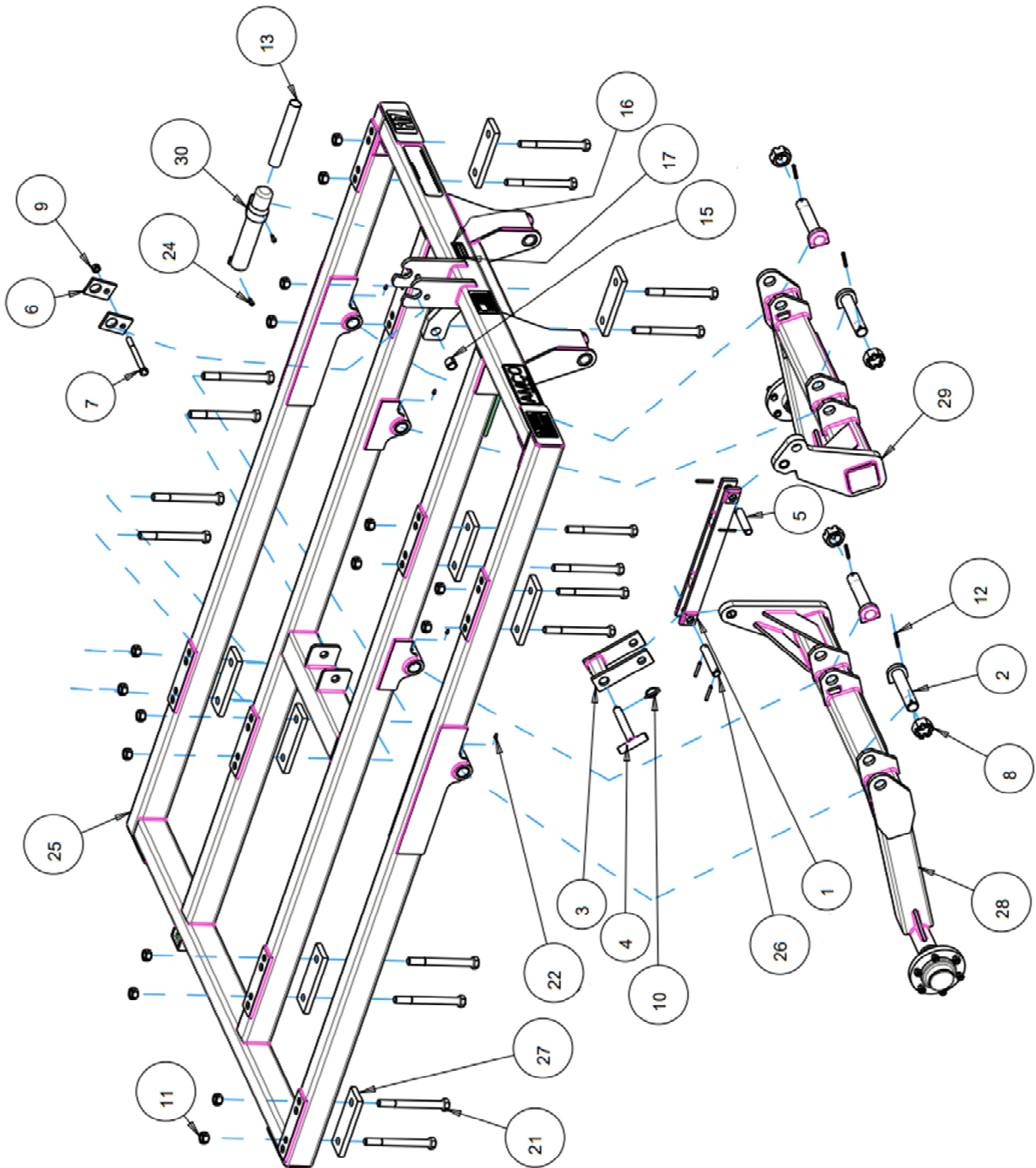
PULL TONGUE



PULL TONGUE

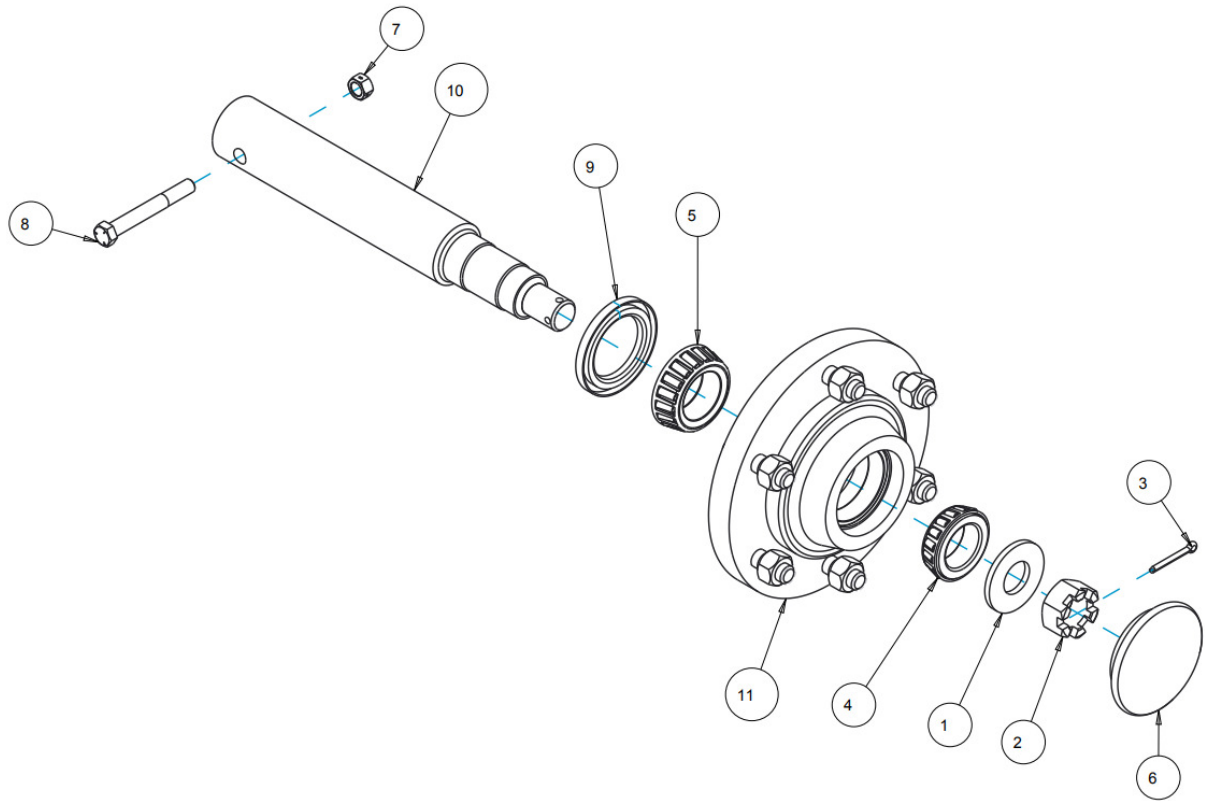
| Ref No. | Part No | Description | No Req'd. |
|---------|------------|--------------------------------------|-----------|
| 1 | 0623 | Clevis | 1 |
| 2 | 9628 | Trunion Clamp | 2 |
| 3 | 10067 | 5/8" x 5-1/2" HHCS, GR 5 | 1 |
| 4 | 10299 | 5/8" Lock Nut | 1 |
| 5 | 10910 | 5-16" x 2-1/4" Roll Pin | 5 |
| 6 | 20246 | Clevis Pin | 1 |
| 7 | 100574 | Pin 1.25" x 6.875" | 2 |
| 8 | 0833A | Pull Tongue | 1 |
| 9 | AN-05-0038 | Stabilizer Spring Assembly | 1 |
| | 10606 | 1/8" Pipe Thread Grease Fitting, 45° | 2 |
| | 10872 | 1-3/8" Flat Washer | 3 |
| | 10910 | 5/16" x 2-1/4" Roll Pin | 1 |
| | 11279 | 1-3/8" Slotted Nut | 1 |
| | 0635A | Stabilizer Rod | 1 |
| | 10460A | Spring | 2 |
| | 9892A | Swivel | 1 |
| | 9919A | Stabilizer Swivel (Threaded) | 1 |
| 10 | 100134 | Nut Wrench | 1 |
| 11 | AL-05-0001 | Hose Holder Assembly | 1 |
| | 10075 | Cotter Pin 1/4" x 1-1/2" | 1 |
| | 100061 | Hose Holder | 1 |
| 12 | 11261 | Tongue Jack | 1 |

MAIN FRAME



MAIN FRAME

| Ref No. | Part No. | Description | No Req'd. |
|---------|------------|---|-----------|
| 1 | 0802 | Rockshaft Tie Link | 1 |
| 2 | 0866 | Rockshaft Pivot Pin, 1.5" x 6.75" | 4 |
| 3 | 0912 | Transport Strap | 1 |
| 4 | 0941 | Transport T-Pin | 1 |
| 5 | 7397 | Connecting Pin, 1" x 4.375" | 1 |
| 6 | 9628 | Trunion Clamp | 2 |
| 7 | 10043 | 5/8" x 6-1/2" HHCS, GR 5 | 1 |
| 8 | 10232 | 1-1/2" Slotted Nut | 4 |
| 9 | 10299 | 5/8" Lock Nut | 1 |
| 10 | 10317 | Klik Pin 1/4" | 1 |
| 11 | 11691 | 7/8" Flange Lock Nut | 16 |
| 12 | 10910 | 5/16" x 2-1/4" Roll Pin | 8 |
| 13 | 11440 | Operator's Manual | 1 |
| 14 | 11465 | "AMCO" Decal (NOT SHOWN) | 3 |
| 15 | 11492 | Bushing, 1" long | 1 |
| 16 | 11713 | Serial Plate | 1 |
| 17 | 11714 | Drive Screw | 2 |
| 18 | 11716 | "Maintenance" Decal (NOT SHOWN) | 1 |
| 19 | 11741 | "Warning" Decal (NOT SHOWN) | 1 |
| 20 | 11767 | "F17" Decal (NOT SHOWN) | 3 |
| 21 | 12082 | 7/8" x 9" Hex Cap Screw, GR 5 | 16 |
| 22 | 12156 | 1/4" Straight Self-Tap Zerk | 4 |
| 23 | 19021 | "Made In USA" Decal (NOT SHOWN) | 1 |
| 24 | 19028 | Self-Tapping Screw | 2 |
| 25 | 20395 | F17 Main Frame | 1 |
| 26 | 100578 | Pin, 1" x 5.5" | 1 |
| 27 | 100583 | Strap | 8 |
| 28 | BC-05-0329 | Rockshaft Assembly, RH | 1 |
| | 20392 | Rockshaft | 1 |
| | 11492 | Bushing, 1" long | 1 |
| | BM-05-0082 | Hub & Spindle Assembly, 6-Bolt (qty 2 for 13', 15' & 16') | 1 |
| 29 | BC-05-0330 | Rockshaft Assembly, LH | 1 |
| | 20393 | Rockshaft | 1 |
| | 11492 | Bushing, 1" long | 2 |
| | BM-05-0082 | Hub & Spindle Assembly, 6-Bolt (qty 2 for 13', 15' & 16') | 1 |
| 30 | MT-01-0001 | Manual Tube | 1 |
| 31 | 18011 | Bronze Rockshaft Pivot Bushing, 4.25" long (NOT SHOWN) | 4 |



Spindle & Hub

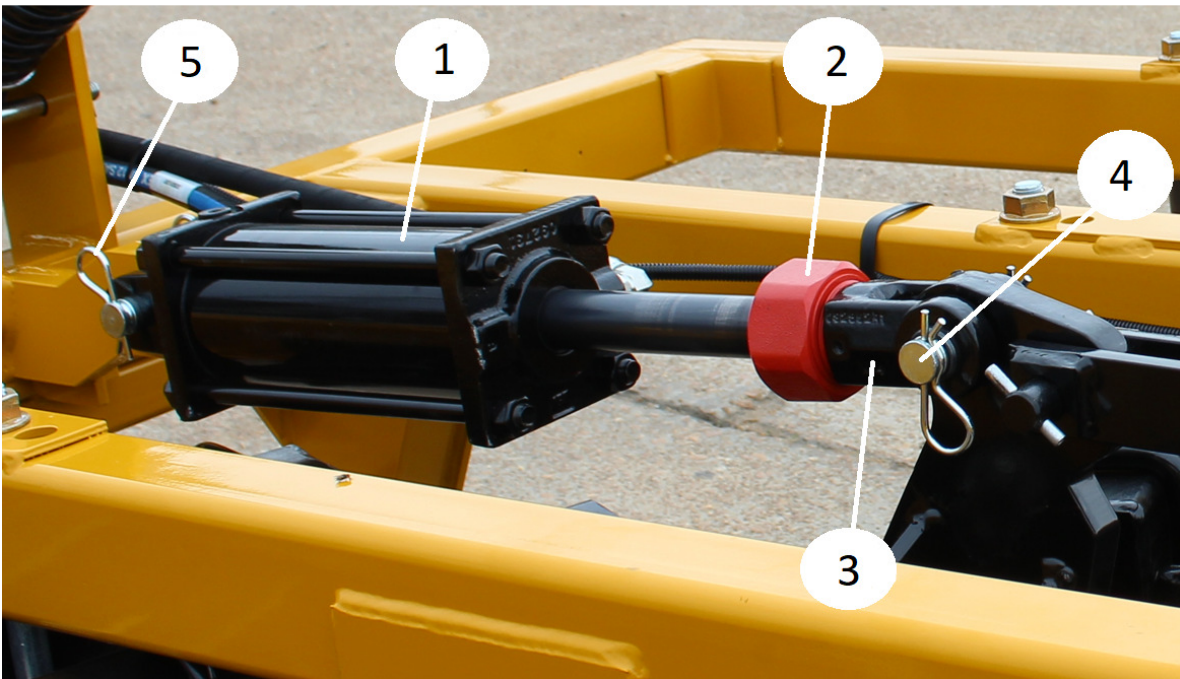
| Ref No. | Part No. | Description | No Req'd. |
|---|------------|--|-----------|
| 1 | 10263 | 7/8" Spindle Washer | 1 |
| 2 | 10264 | 7/8" Slotted Nut | 1 |
| 3 | 10291 | Cotter Pin 5/32" x 1-1/4" | 1 |
| 4 | 10295 | Cone, Outer | 1 |
| 5 | 10353 | Cone, Inner | 1 |
| 6 | 10356 | Hub Cap | 1 |
| 7 | 10509 | 3/8" Lock Nut | 1 |
| 8 | 10871 | 3/8" x 3" HHCS, GR 5 | 1 |
| 9 | 11017 | Grease Seal | 1 |
| 10 | 11643 | Spindle, 12" long | 1 |
| 11 | 11644 | Hub, 6-Bolt (includes 2 cups, 6 bolts, 6 nuts) | 1 |
| | 10293 | Bearing Cup, Inner | 1 |
| | 10352 | Bearing Cup, Outer | 1 |
| | 11657 | Hub Bolt | 6 |
| | 11046 | Hub Nut | 6 |
| 12 | 10936 | Wheel 15 x 8, 6-hole (NOT SHOWN) | 1 |
| 13 | BD-20-0001 | 15x8, 6-bolt wheel with 9.5Lx15, 8ply tire (NOT SHOWN) | 1 |
| BM-05-0082 Spindle & Hub Complete (Parts 1-11) | | | |

4 x 8 Hydraulic Cylinder

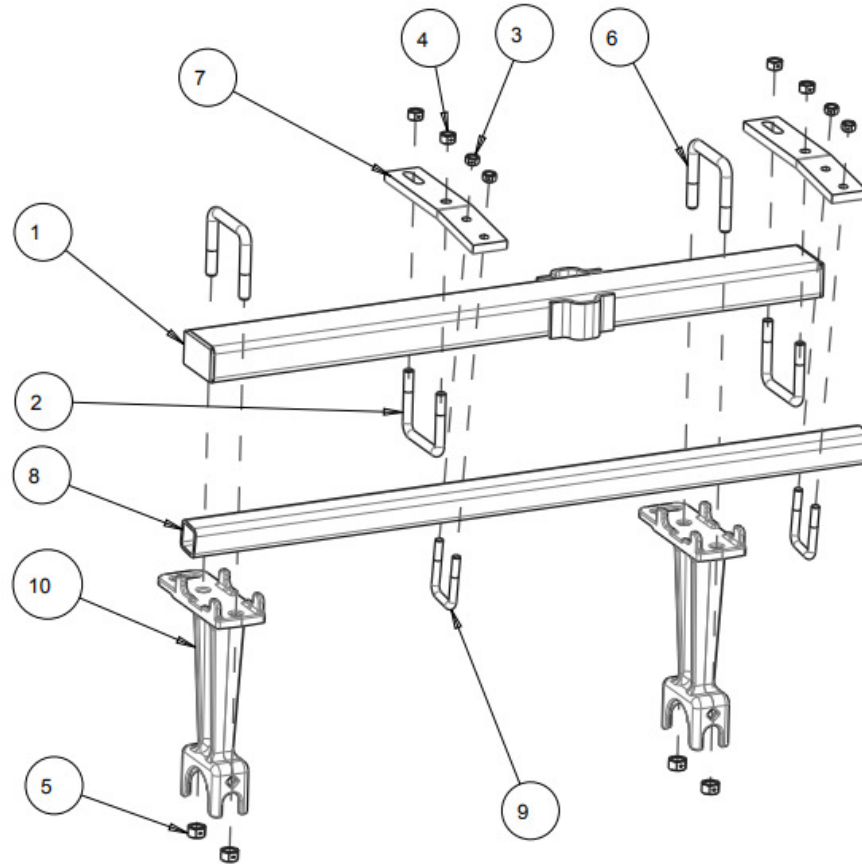
| Ref No. | Part No. | Description | No Req'd. |
|---------|----------|----------------------------|-----------|
| 1 | 12382 | 4x8 Cylinder, 3000 PSI | 1 |
| 2 | 10937 | Stroke Control | 1 |
| 3 | 11296 | Clevis | 1 |
| 4 | 10956 | Clevis Pin | 2 |
| 5 | 10957 | Hair Clip | 4 |
| 6 | 11492 | Clevis Bushing (NOT SHOWN) | 2 |

BD-20-0003 Cylinder Bundle (Parts 1-6)

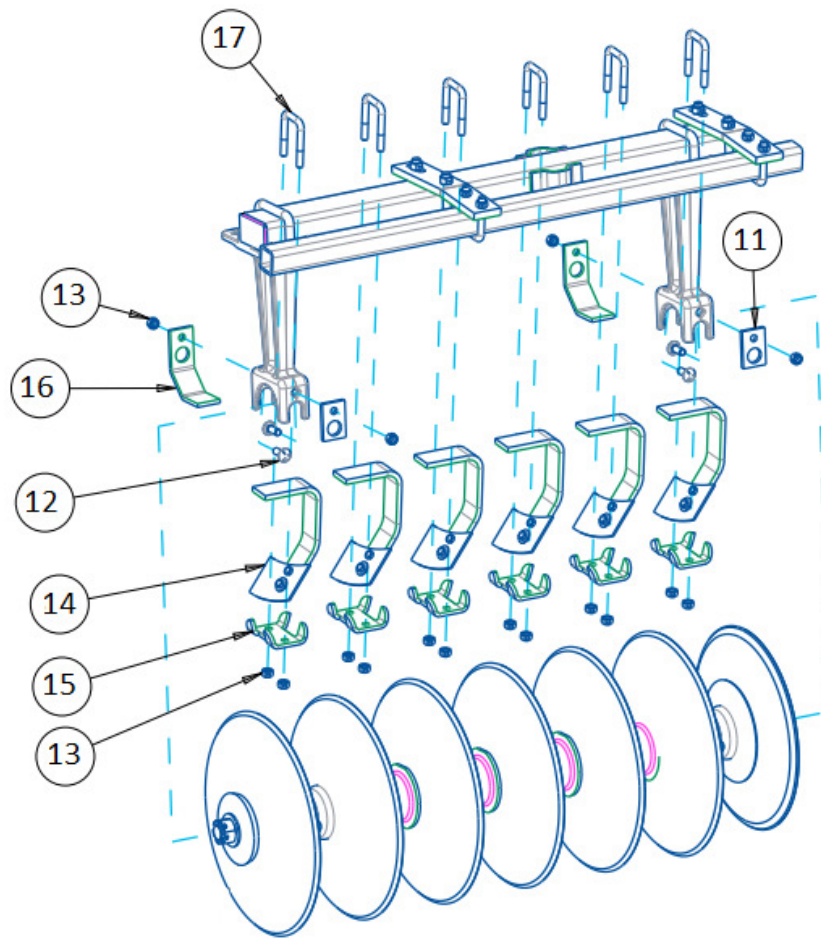
Note: Use these parts for s/n: #95110416 and after



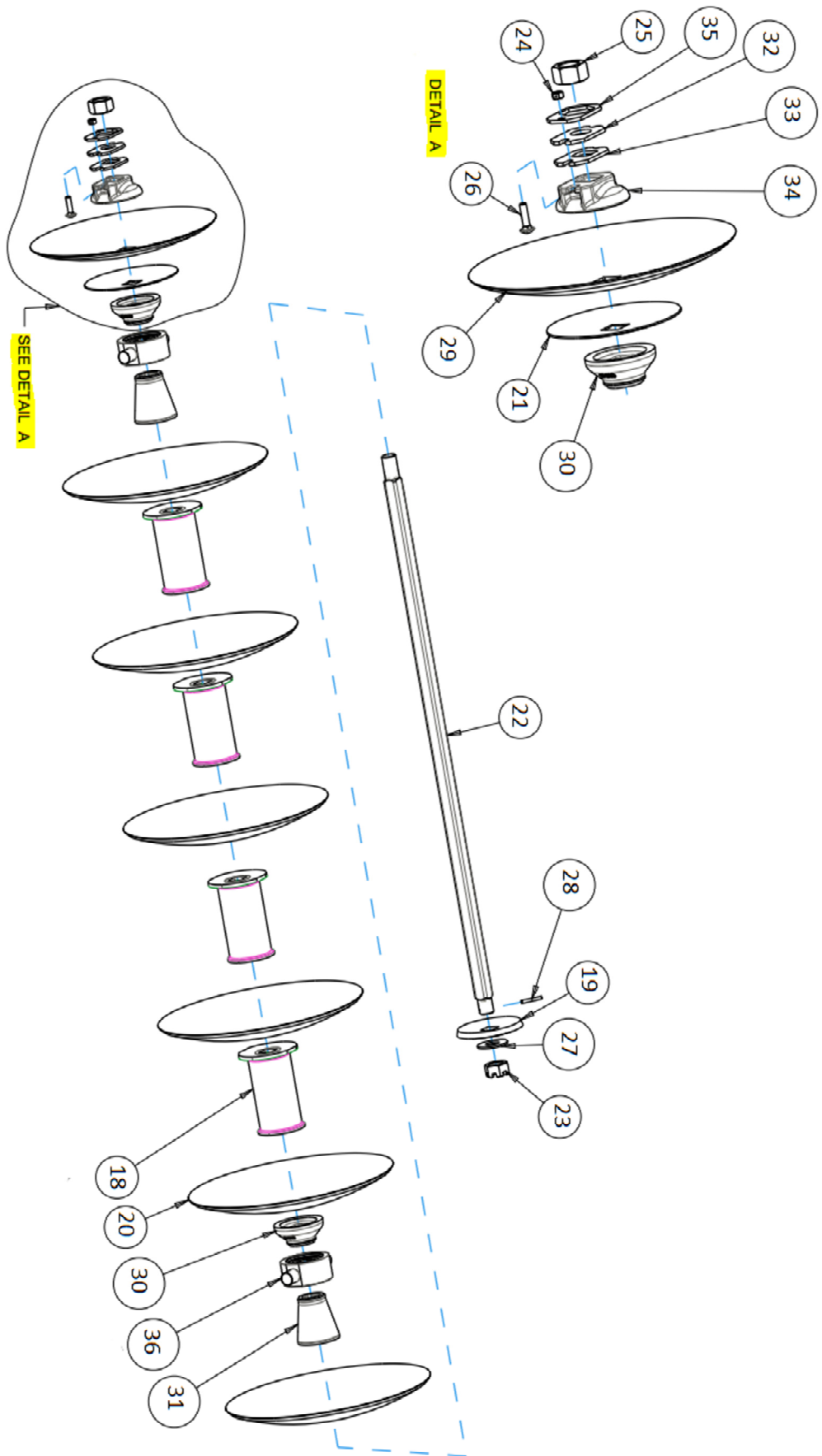
FRONT GANG COMPONENTS



| Ref No. | Part No. | Description | No Req'd. | | | | | |
|---------|----------|-------------------------------------|-----------|-------|-------|-------|-------|-------|
| | | | 9'3" | 10'6" | 12'0" | 13'6" | 15'0" | 16'6" |
| 1 | 0933 | Front Gang Frame, 3"x5"x44" | 1 | | | | | |
| 1 | 0921 | Front Gang Frame (shown), 3"x5"x53" | | 1 | | | | |
| 1 | 0923 | Front Gang Frame, 3"x5"x62.5" | | | 1 | | | |
| 1 | 0925 | Front Gang Frame, 3"x5"x72" | | | | 1 | | |
| 1 | 0927 | Front Gang Frame, 3"x5"x81.5" | | | | | 1 | |
| 1 | 0929 | Front Gang Frame, 3"x5"x90.75" | | | | | | 1 |
| 2 | 6513 | U-Bolt, 3/4" x 5-1/16" x 4.75" | 2 | 2 | 2 | 2 | 3 | 3 |
| 3 | 10299 | 5/8" Lock Nut | 4 | 4 | 4 | 4 | 6 | 6 |
| 4 | 10300 | 3/4" Lock Nut | 4 | 4 | 4 | 4 | 6 | 6 |
| 5 | 10396 | 7/8" Lock Nut | 4 | 4 | 4 | 6 | 6 | 6 |
| 6 | 11280 | U-Bolt, 7/8" x 5 x 3 | 2 | 2 | 2 | 3 | 3 | 3 |
| 7 | 103374 | Scraper Bar Support | 2 | 2 | 2 | 2 | 3 | 3 |
| 8 | 103539 | Scraper Bar, 2.5" x 2.5" x 50" | 1 | | | | | |
| 8 | 103460 | Scraper Bar, 2.5" x 2.5" x 59" | | 1 | | | | |
| 8 | 101909 | Scraper Bar, 2.5" x 2.5" x 65" | | | 1 | | | |
| 8 | 103465 | Scraper Bar, 2.5" x 2.5" x 72.25" | | | | 1 | | |
| 8 | 103459 | Scraper Bar, 2.5" x 2.5" x 80.50" | | | | | 1 | |
| 8 | 103452 | Scraper Bar, 2.5" x 2.5" x 97.625" | | | | | | 1 |
| 9 | 100002A | U-Bolt, 5/8" x 2.5" x 4.25" | 2 | 2 | 2 | 2 | 3 | 3 |
| 10 | 16012A | Bearing Riser | 2 | 2 | 2 | 3 | 3 | 3 |

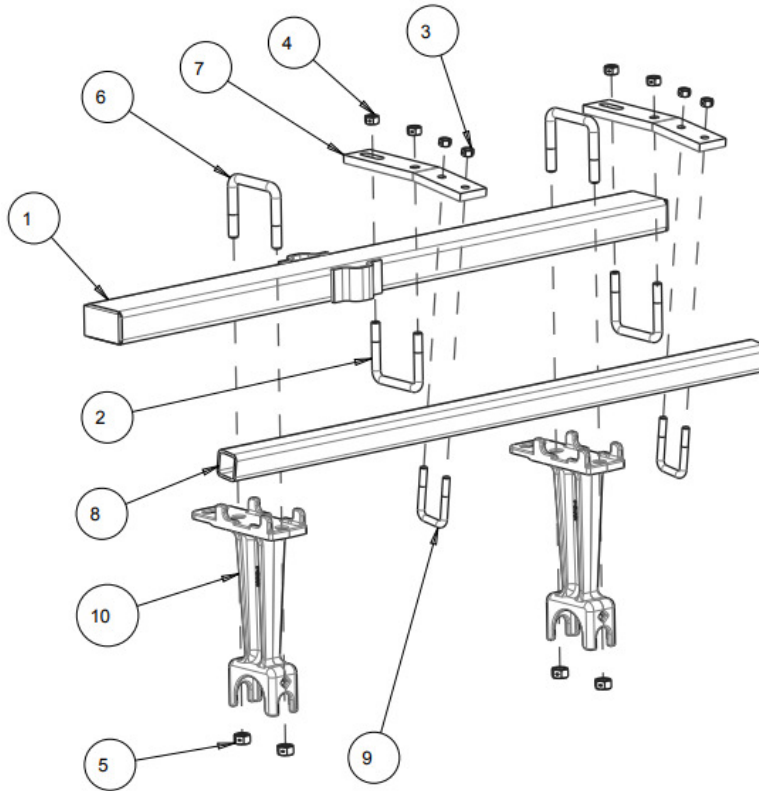


| Ref No. | Part No. | Description | No Req'd. | | | | | |
|---------|----------|-----------------------------------|-----------|-------|-------|-------|-------|-------|
| | | | 9'3" | 10'6" | 12'0" | 13'6" | 15'0" | 16'6" |
| 11 | 9628 | Trunion Clamp | 2 | 2 | 2 | 3 | 3 | 3 |
| 12 | 10135 | 5/8" x 1-3/4" Carriage Bolt, GR 5 | 4 | 4 | 4 | 6 | 6 | 6 |
| 13 | 10299 | 5/8" Lock Nut | 14 | 16 | 18 | 22 | 24 | 26 |
| 14 | 21040 | Scraper - RH (FRH) [SHOWN] | 5 | 6 | 7 | 8 | 9 | 10 |
| 14 | 21041 | Scraper - LH (FLH) | 5 | 6 | 7 | 8 | 9 | 10 |
| 15 | 101055 | Clamp Bracket | 5 | 6 | 7 | 8 | 9 | 10 |
| 16 | 102489 | Wear Guard | 2 | 2 | 2 | 3 | 3 | 3 |
| 17 | 100002A | U-Bolt, 5/8" x 2.5" x 4.25" | 5 | 6 | 7 | 8 | 9 | 10 |

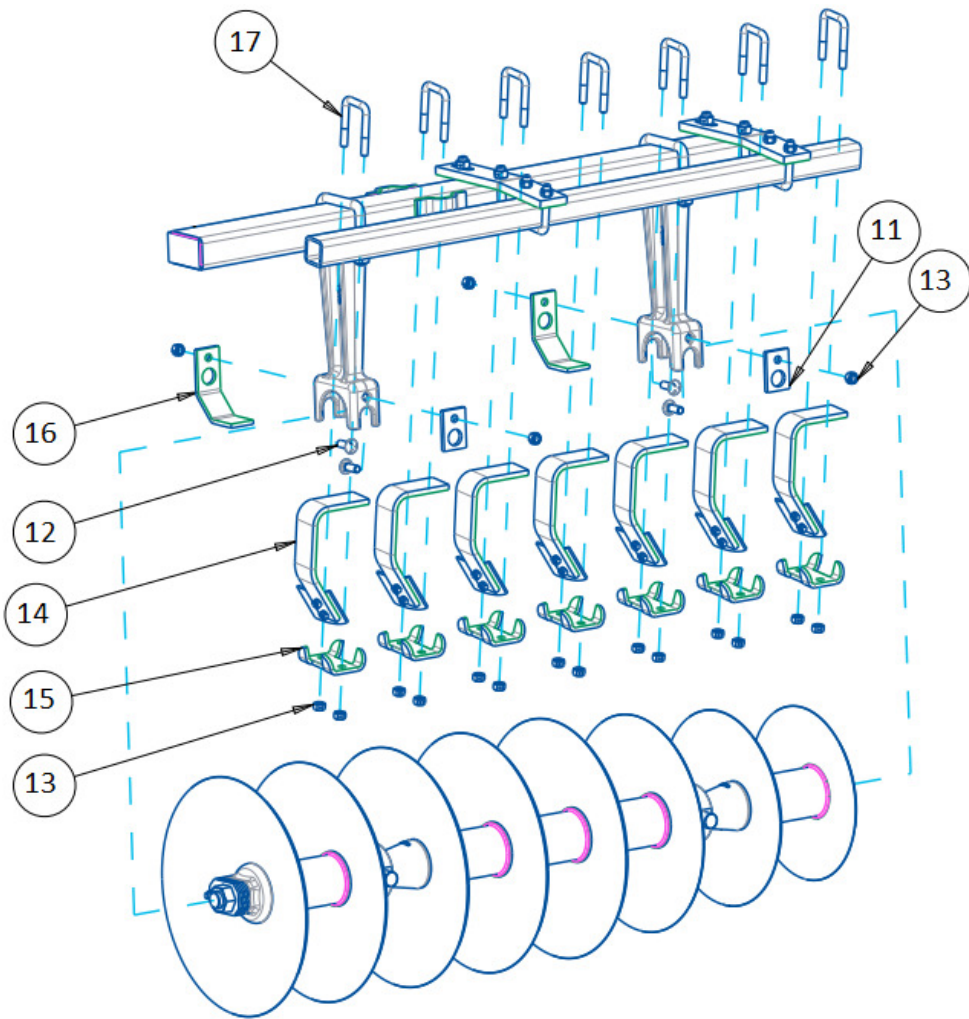


| Ref No. | Part No. | Description | No Req'd. | | | | | |
|---------|------------|---|-----------|-------|-------|-------|-------|-------|
| | | | 9'3" | 10'6" | 12'0" | 13'6" | 15'0" | 16'6" |
| 18 | 545 | Spacer Spool | 3 | 4 | 5 | 5 | 6 | 7 |
| 19 | 2404 | Bumper Washer | 1 | 1 | 1 | 1 | 1 | 1 |
| 20 | 3276 | 22" x 1/4" Disc Blade, Plain | 5 | 6 | 7 | 8 | 9 | 10 |
| 20 | 3275 | 22" x 1/4" Disc Blade, Cut-Out (Optional) | 5 | 6 | 7 | 8 | 9 | 10 |
| 20 | 3255 | 24" x 1/4" Disc Blade, Plain (Optional) | 5 | 6 | 7 | 8 | 9 | 10 |
| 20 | 3250 | 24" x 1/4" Disc Blade, Cut-Out (Optional) | 5 | 6 | 7 | 8 | 9 | 10 |
| 21 | 3278 | 10" Back-up blade | 1 | 1 | 1 | 1 | 1 | 1 |
| 22 | 9442 | 1.50" x 52.375" Square Axle, 6-blade | 1 | | | | | |
| 22 | 9443 | 1.50" x 61.375" Square Axle, 7-blade | | 1 | | | | |
| 22 | 9444 | 1.50" x 70.625" Square Axle, 8-blade | | | 1 | | | |
| 22 | 9445 | 1.50" x 79.875" Square Axle, 9-blade | | | | 1 | | |
| 22 | 9446 | 1.50" x 89.125" Square Axle, 10-blade | | | | | 1 | |
| 22 | 9447 | 1.50" x 98.375" Square Axle, 11-blade | | | | | | 1 |
| 23 | 10226 | 1-1/2" Slotted Nut | 1 | 1 | 1 | 1 | 1 | 1 |
| 24 | 10395 | 1/2" Lock Nut | 1 | 1 | 1 | 1 | 1 | 1 |
| 25 | 10489 | 1-1/2" Hex Nut, GR 8 | 1 | 1 | 1 | 1 | 1 | 1 |
| 26 | 10710 | 1/2" x 2" Carriage Bolt, GR 5 | 1 | 1 | 1 | 1 | 1 | 1 |
| 27 | 10872 | 1-3/8" Flat Washer | 1 | 1 | 1 | 1 | 1 | 1 |
| 28 | 10910 | 5/16" x 2-1/4" Roll Pin | 1 | 1 | 1 | 1 | 1 | 1 |
| 29 | 11588 | 20" x 1/4" Disc Blade, Plain | 1 | 1 | 1 | 1 | 1 | 1 |
| 30 | 17010 | End Bell, Large | 2 | 2 | 2 | 3 | 3 | 3 |
| 31 | 17014 | End Bell, Small | 2 | 2 | 2 | 3 | 3 | 3 |
| 32 | 100098 | Bearing Plate | 1 | 1 | 1 | 1 | 1 | 1 |
| 33 | 100099 | Spacer Plate | 1 | 1 | 1 | 1 | 1 | 1 |
| 34 | 1222A | End Washer | 1 | 1 | 1 | 1 | 1 | 1 |
| 35 | 5622A | Lock Plate | 1 | 1 | 1 | 1 | 1 | 1 |
| 36 | FB-09-0021 | Bearing Assembly (Maintenance-Free) | 2 | 2 | 2 | 3 | 3 | 3 |

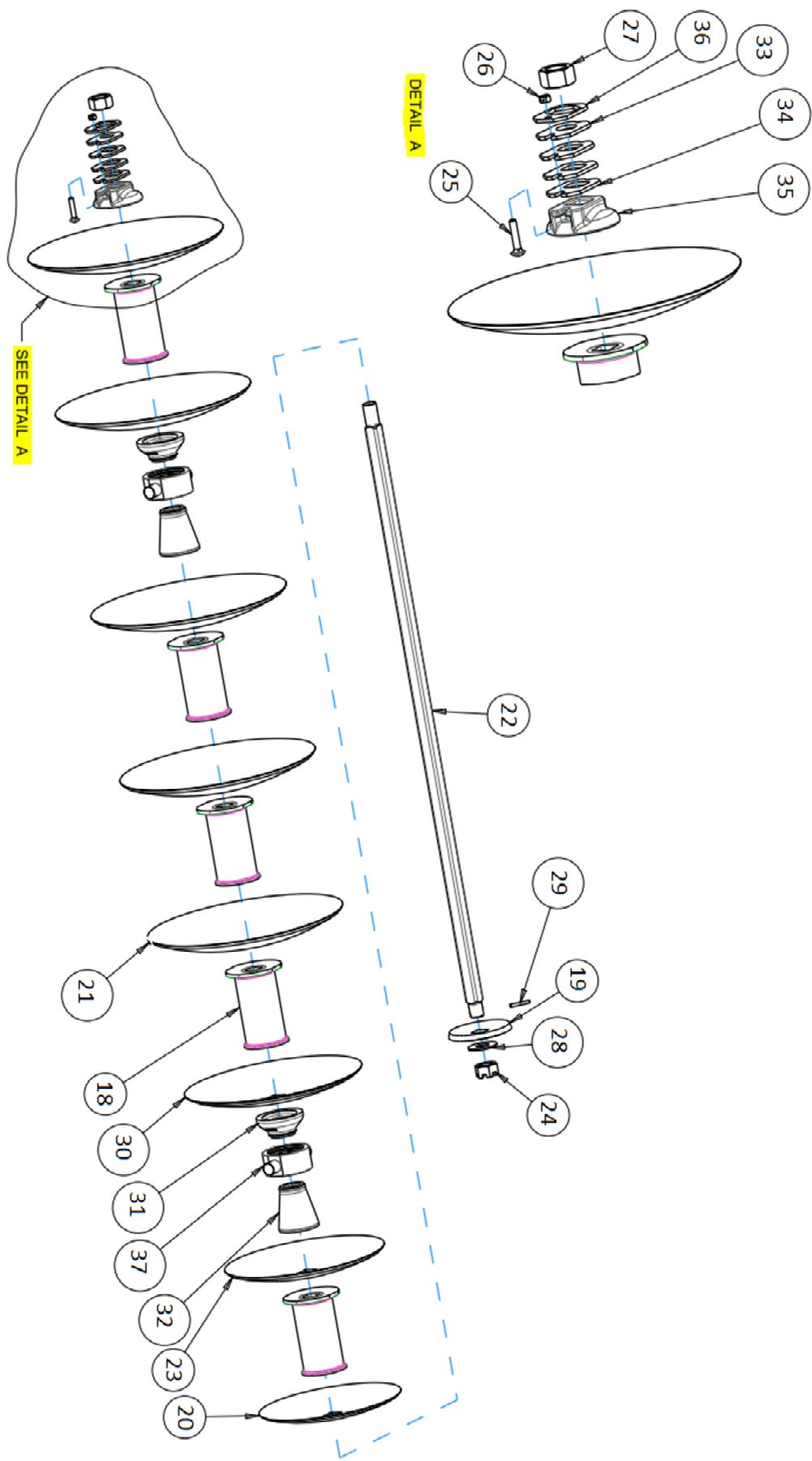
REAR GANG COMPONENTS



| Ref No. | Part No. | Description | No Req'd. | | | | | |
|---------|----------|---------------------------------------|-----------|-------|-------|-------|-------|-------|
| | | | 9'3" | 10'6" | 12'0" | 13'6" | 15'0" | 16'6" |
| 1 | 0934 | Rear Gang Frame, 3"x 5"x53" | 1 | | | | | |
| 1 | 0922 | Rear Gang Frame (shown), 3"x5"x62.50" | | 1 | | | | |
| 1 | 0924 | Rear Gang Frame, 3"x5"x72" | | | 1 | | | |
| 1 | 0926 | Rear Gang Frame, 3"x5"x81.50" | | | | 1 | | |
| 1 | 0928 | Rear Gang Frame, 3"x5"x91" | | | | | 1 | |
| 1 | 0930 | Rear Gang Frame, 3"x5"x100.50" | | | | | | 1 |
| 2 | 6513 | U-Bolt, 3/4" x 5-1/16" x 4.75" | 2 | 2 | 2 | 2 | 3 | 3 |
| 3 | 10299 | 5/8" Lock Nut | 4 | 4 | 4 | 4 | 6 | 6 |
| 4 | 10300 | 3/4" Lock Nut | 4 | 4 | 4 | 4 | 6 | 6 |
| 5 | 10396 | 7/8" Lock Nut | 4 | 4 | 4 | 6 | 6 | 6 |
| 6 | 11280 | U-Bolt, 7/8" x 5 x 3 | 2 | 2 | 2 | 3 | 3 | 3 |
| 7 | 103374 | Scraper Bar Support | 2 | 2 | 2 | 2 | 3 | 3 |
| 8 | 103478 | Scraper Bar, 2.5" x 2.5" x 53.375" | 1 | | | | | |
| 8 | 103450 | Scraper Bar, 2.5" x 2.5" x 60.875" | | 1 | | | | |
| 8 | 103449 | Scraper Bar, 2.5" x 2.5" x 70" | | | 1 | | | |
| 8 | 103459 | Scraper Bar, 2.5" x 2.5" x 80.25" | | | | 1 | | |
| 8 | 103451 | Scraper Bar, 2.5" x 2.5" x 88.50" | | | | | 1 | |
| 8 | 103567 | Scraper Bar, 2.5" x 2.5" x 106.25" | | | | | | 1 |
| 9 | 100002A | U-Bolt, 5/8" x 2.5" x 4.25" | 2 | 2 | 2 | 2 | 3 | 3 |
| 10 | 16012A | Bearing Riser | 2 | 2 | 2 | 3 | 3 | 3 |

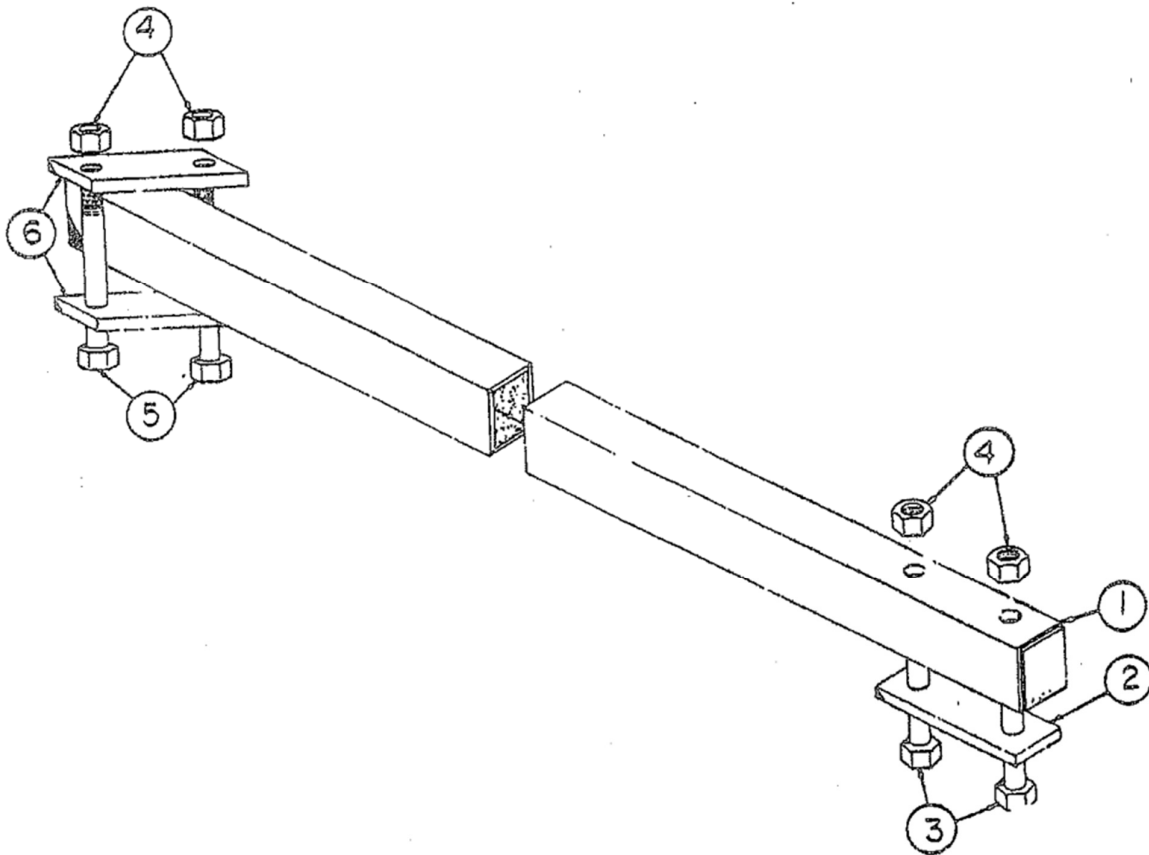


| Ref No. | Part No. | Description | No Req'd. | | | | | |
|---------|----------|-----------------------------------|-----------|-------|-------|-------|-------|-------|
| | | | 9'3" | 10'6" | 12'0" | 13'6" | 15'0" | 16'6" |
| 11 | 9628 | Trunion Clamp | 2 | 2 | 2 | 3 | 3 | 3 |
| 12 | 10135 | 5/8" x 1-3/4" Carriage Bolt, GR 5 | 4 | 4 | 4 | 6 | 6 | 6 |
| 13 | 10299 | 5/8" Lock Nut | 16 | 18 | 20 | 24 | 26 | 28 |
| 14 | 21040 | Scraper - RH (RLH) | 6 | 7 | 8 | 9 | 10 | 11 |
| 14 | 21041 | Scraper - LH (RRH) [SHOWN] | 6 | 7 | 8 | 9 | 10 | 11 |
| 15 | 101055 | Clamp Bracket | 6 | 7 | 8 | 9 | 10 | 11 |
| 16 | 102489 | Wear Guard | 2 | 2 | 2 | 3 | 3 | 3 |
| 17 | 100002A | U-Bolt, 5/8" x 2.5" x 4.25" | 6 | 7 | 8 | 9 | 10 | 11 |



| Ref No. | Part No. | Description | No Req'd. | | | | | |
|---------|------------|---|-----------|-------|-------|-------|-------|-------|
| | | | 9'3" | 10'6" | 12'0" | 13'6" | 15'0" | 16'6" |
| 18 | 545 | Spacer Spool | 4 | 5 | 6 | 6 | 7 | 8 |
| 19 | 2404A | Bumper Washer, Drilled & Tapped | 1 | 1 | 1 | 1 | 1 | 1 |
| 20 | 3055 | 16" x 1/4" Disc Blade, Plain | 1 | 1 | 1 | 1 | 1 | 1 |
| 21 | 3276 | 22" x 1/4" Disc Blade, Plain | 4 | 5 | 6 | 7 | 8 | 9 |
| 21 | 3275 | 22" x 1/4" Disc Blade, Cut-Out (Optional) | 4 | 5 | 6 | 7 | 8 | 9 |
| 21 | 3255 | 24" x 1/4" Disc Blade, Plain (Optional) | 4 | 5 | 6 | 7 | 8 | 9 |
| 21 | 3250 | 24" x 1/4" Disc Blade, Cut-Out (Optional) | 4 | 5 | 6 | 7 | 8 | 9 |
| 22 | 9443 | 1.50" x 61.375" Square Axle, 7-blade | 1 | | | | | |
| 22 | 9444 | 1.50" x 70.625" Square Axle, 8-blade | | 1 | | | | |
| 22 | 9445 | 1.50" x 79.875" Square Axle, 9-blade | | | 1 | | | |
| 22 | 9446 | 1.50" x 89.125" Square Axle, 10-blade | | | | 1 | | |
| 22 | 9447 | 1.50" x 98.375" Square Axle, 11-blade | | | | | 1 | |
| 22 | 9448 | 1.50" x 107.625" Square Axle, 12-blade | | | | | | 1 |
| 23 | 9482 | 18" x 1/4" Disc Blade, Plain | 1 | 1 | 1 | 1 | 1 | 1 |
| 24 | 10226 | 1-1/2" Slotted Nut | 1 | 1 | 1 | 1 | 1 | 1 |
| 25 | 10710 | 1/2" x 2" Carriage Bolt, GR 5 | 1 | 1 | 1 | 1 | 1 | 1 |
| 26 | 10395 | 1/2" Lock Nut | 1 | 1 | 1 | 1 | 1 | 1 |
| 27 | 10489 | 1-1/2" Hex Nut, GR 8 | 1 | 1 | 1 | 1 | 1 | 1 |
| 28 | 10872 | 1-3/8" Flat Washer | 1 | 1 | 1 | 1 | 1 | 1 |
| 29 | 10910 | 5/16" x 2-1/4" Roll Pin | 1 | 1 | 1 | 1 | 1 | 1 |
| 30 | 11588 | 20" x 1/4" Disc Blade, Plain | 1 | 1 | 1 | 1 | 1 | 1 |
| 31 | 17010 | End Bell, Large | 2 | 2 | 2 | 3 | 3 | 3 |
| 32 | 17014 | End Bell, Small | 2 | 2 | 2 | 3 | 3 | 3 |
| 33 | 100098 | Bearing Plate | 1 | 1 | 1 | 1 | 1 | 1 |
| 34 | 100099 | Spacer Plate | 1 | 1 | 1 | 1 | 1 | 1 |
| 35 | 1222A | End Washer | 1 | 1 | 1 | 1 | 1 | 1 |
| 36 | 5622A | Lock Plate | 1 | 1 | 1 | 1 | 1 | 1 |
| 37 | FB-09-0021 | Bearing Assembly (Maintenance-Free) | 2 | 2 | 2 | 3 | 3 | 3 |

OUTRIGGER BARS



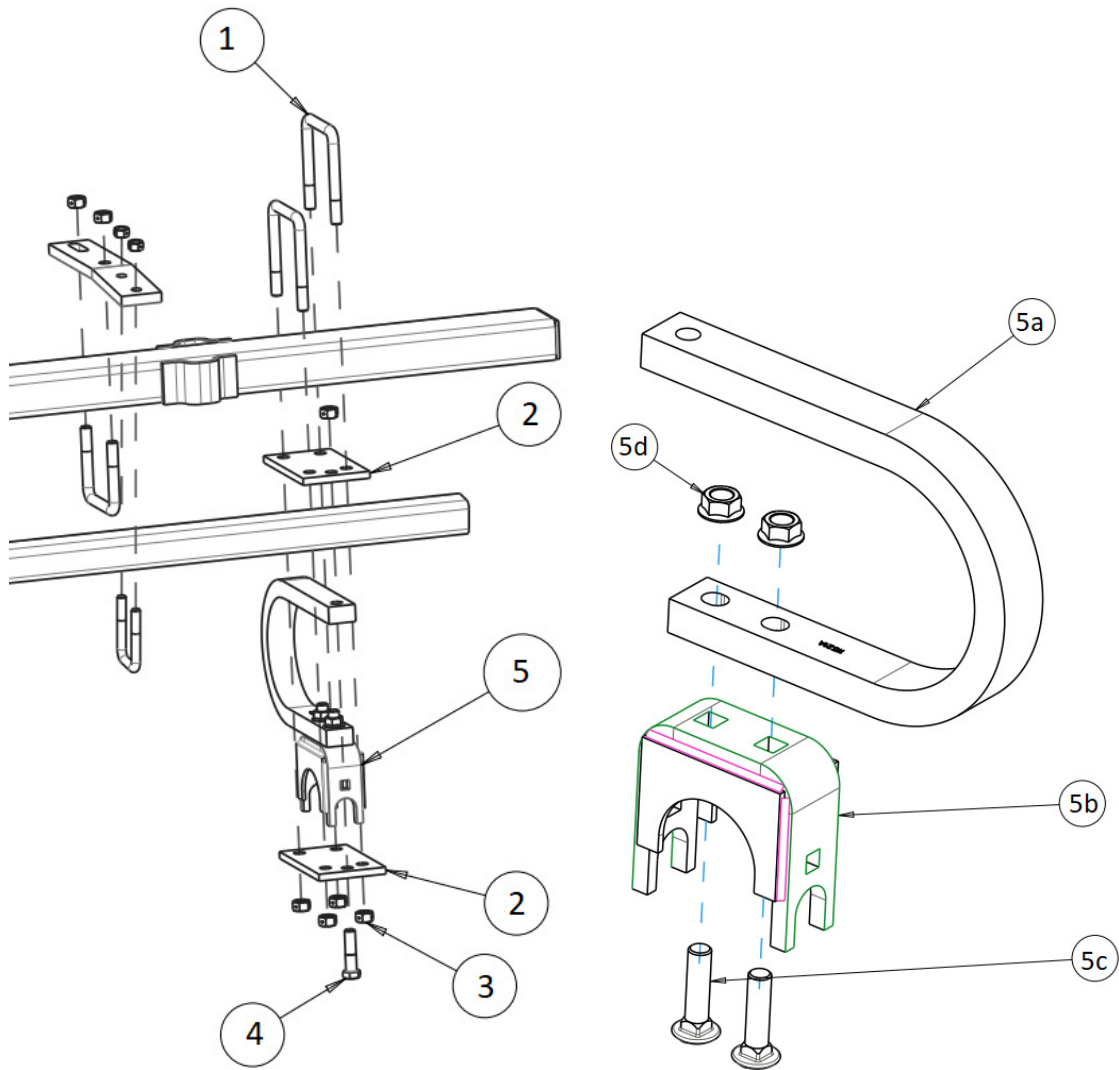
OUTRIGGER BARS 13'6" - 16'6" (F17-3822, 4222, 4622)

| Ref. No. | Part No. | Description | No. Req'd |
|----------|----------|--------------------------------------|-----------|
| 1 | 20394 | Assy. Outrigger Bar | 2 |
| 2 | 100583 | Strap - 3/4 x 3 x 9-1/8 Long | 2 |
| 3 | 12082 | Machine Bolt - 7/8 x 9 NC, PL, Gr. 5 | 4 |
| 4 | 11691 | Flange Lock Nut 7/8 | 8 |
| 5 | 11102 | Machine Bolt - 7/8 x 10 NC, PL | 4 |
| 6 | 9855 | Bracket - Angel Set 3/4 x 3 x 9-14/4 | 4 |

FLEX GANG BEARING RISER

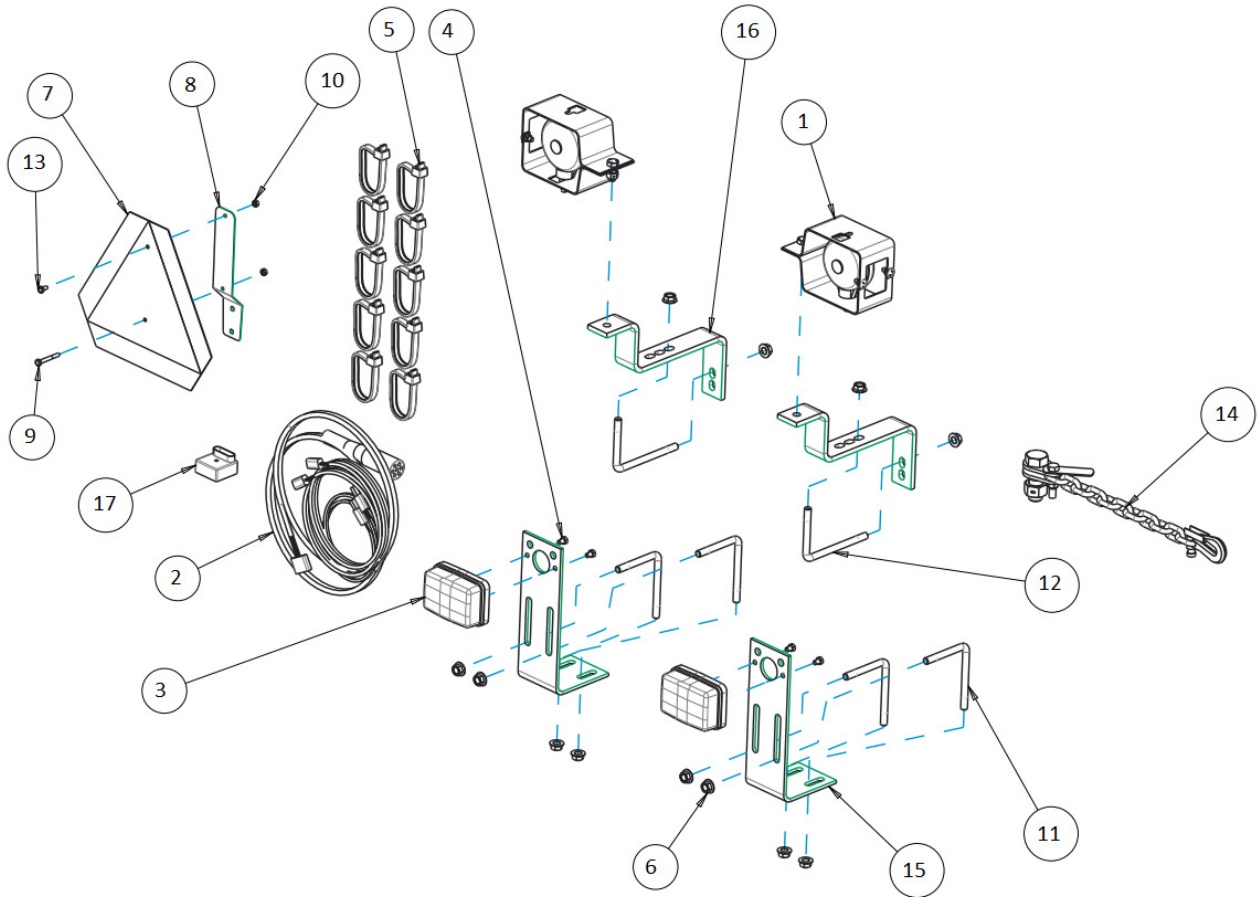
| Ref No. | Part No. | Description | No Req'd. |
|---------|------------|-------------------------------|-----------|
| 1 | 11647 | 3/4" x 5" x 6.25" U-Bolt | 2 |
| 2 | 100802 | Bottom Plate | 2 |
| 3 | 10300 | 3/4" Lock Nut | 5 |
| 4 | 10727 | 3/4" x 3" Hex Cap Screw, GR 5 | 1 |
| 5 | BC-09-0001 | Bearing Riser Bundle | 1 |
| 5a | 11521A | RockFlex Shank | 1 |
| 5b | 0944A | Trunion Mount | 1 |
| 5c | 10579 | 3/4" x 3" Carriage Bolt, GR 5 | 2 |
| 5d | 12069 | 3/4" Flange Lock Nut | 2 |

Note: Parts 1-5 are required to convert bearing riser #16012A to a Shock Absorber.



OPTIONAL SHOCK ABSORBER BEARING RISER

F17 LIGHT KIT & SAFFETY CHAIN










| Ref No. | Part No. | Description | No Req'd. |
|---------|----------|-------------------------------|-----------|
| 1 | 1300-137 | Amber Light Assembly | 2 |
| 2 | 1300-446 | Wiring Harness | 1 |
| 3 | 1300-447 | Red Lamp | 2 |
| 4 | 2502-195 | M8 x 12MM HHCS, GR 5 | 4 |
| 5 | 2515-405 | Cable Tie, 1/2" x 40.5" | 10 |
| 6 | 11646 | 1/2" Flange Lock Nut | 12 |
| 7 | 12466 | SMV | 1 |
| 8 | 12467 | Spade, SMV | 1 |
| 9 | 12519 | 1/4" x 2" HHCS, GR 5 | 1 |
| 10 | 12520 | 1/4" Hex Nut | 2 |
| 11 | 19033 | 1/2" x 4" x 5" L-Bolt | 4 |
| 12 | 19052 | 1/2" x 4" x 6" L-Bolt | 2 |
| 13 | 19073 | 1/4" x 1/2" HHCS, GR 5 | 1 |
| 14 | 21045 | Safety Chain | 1 |
| 15 | 103399 | Light Bracket for Red Lamp | 2 |
| 16 | 103427 | Light Bracket for Amber Light | 2 |
| 17 | RE152269 | Module, Implement Turn Signal | 1 |

GENERAL TORQUE SPECIFICATION TABLE

USE THE FOLLOWING TORQUES WHEN SPECIAL TORQUES ARE NOT GIVEN

Note: These values apply to fasteners as received from supplier, dry, or when lubricated with normal engine oil. They do not apply if special graphited or moly-disulphide greases or other extreme pressure lubricants are used. This applies to both UNF and UNC threads.

| SAE Grade No. | | 2 | | 5 | | 8* | |
|--|-------------|---|------|--|------|---|------|
| Bolt head identification marks as per grade NOTE: Manufacturing Marks Will Vary | |  | |    | |    | |
| | | Torque Foot Pounds | | Torque Foot Pounds | | Torque Foot Pounds | |
| Bolt Size | | | | | | | |
| inches | Millimeters | Min. | Max. | Min. | Max. | Min. | Max. |
| 1/4 | 6.35 | 5 | 6 | 9 | 11 | 12 | 15 |
| 5/16 | 7.94 | 10 | 12 | 17 | 20.5 | 24 | 29 |
| 3/8 | 9.53 | 20 | 23 | 35 | 42 | 45 | 54 |
| 7/16 | 11.11 | 30 | 35 | 54 | 64 | 70 | 84 |
| 1/2 | 12.70 | 45 | 52 | 80 | 96 | 110 | 132 |
| 9/16 | 14.29 | 65 | 75 | 110 | 132 | 160 | 192 |
| 5/8 | 15.88 | 95 | 105 | 150 | 180 | 220 | 264 |
| 3/4 | 19.05 | 150 | 185 | 270 | 324 | 380 | 456 |
| 7/8 | 22.23 | 160 | 200 | 400 | 480 | 600 | 720 |
| 1 | 25.40 | 250 | 300 | 580 | 696 | 900 | 1080 |
| 1-1/8 | 25.58 | | | 800 | 880 | 1280 | 1440 |
| 1-1/4 | 31.75 | | | 1120 | 1240 | 1820 | 2000 |
| 1-3/8 | 34.93 | | | 1460 | 1680 | 2380 | 2720 |
| 1-1/2 | 38.10 | | | 1940 | 2200 | 3160 | 3560 |
| | | | | *Thick nuts must be used with Grade 8 bolts | | | |

ALL BOLTS SHOULD BE TIGHTENED TO THE
RECOMMENDED TORQUES SHOWN IN THE
"GENERAL TORQUE SPECIFICATION TABLE"

ASSEMBLY INSTRUCTIONS

The AMCO F17B Harrow is shipped from the factory with maximum preassembly. The following bundles are required for a complete harrow.

- A. Bundle Pull Tongue (with tongue jack)
- B. Bundle Main. Frame (with rockshafts)
- C. Bundle Front Right Hand Gang and Gang Frame
- D. Bundle Front Left Hand Gang and Gang Frame
- E. Bundle Rear Right Hand Gang and Gang Frame
- F. Bundle Rear Left Hand Gang and Gang Frame
- G. Two 15" Six Bolt Wheels

STEP 1. Select a clear level area to assemble the harrow. Place all parts and bundles where they will be readily accessible during assembly.

STEP 2. Place the center main frame "right side up" on *sturdy stands* at least 33" high.



CAUTION Use sturdy stands to prevent frame from falling.

STEP 3. Attach the two front gangs to the main frame. Clamp in place with the 7/8" bolts and straps. The gangs should be located to throw soil away from the center of the harrow, Tighten the 7/8" bolts to specified torque.



STEP 4. Attach the two rear gangs to the main frame. Clamp in place with the 7/8" bolts and straps. The gangs should be located to throw soil toward the center of the harrow. Tighten the 7/8" bolts to the specified torque.



STEP 5. Mount 9.5LX15 or 11Lx15 tires on rockshafts. Inflate to 40-50 PSI. Tighten hub bolts tight.



CAUTION When working on disk harrows, care should be exercised in handling or tightening bolts near disk blades to avoid injury.

9'3", 10'6", & 12'0"



13'6", 15'0", & 16'6"



STEP 6. Install the 4" x 8" hydraulic cylinder on the main frame and the front rockshaft. The rod end should be attached to the rockshaft. NOTE: Remove the straps that clamp the rockshafts to the main frame.



STEP 7. Install pull tongue. Install tongue adjusting rod sub assembly.



STEP 8. Attach two 1/2" x 12' or 3/8" x 12' SAE 100 R2 or SAE 100 R8 Double Braid Hydraulic hoses to the hydraulic cylinder on the main frame. Attach quick couplers. (Hoses and Couplers are standard equipment)



STEP 9. Install outriggers on 13'6", 15'0", & 16'6" Models. Tighten all bolts to the specified torque.

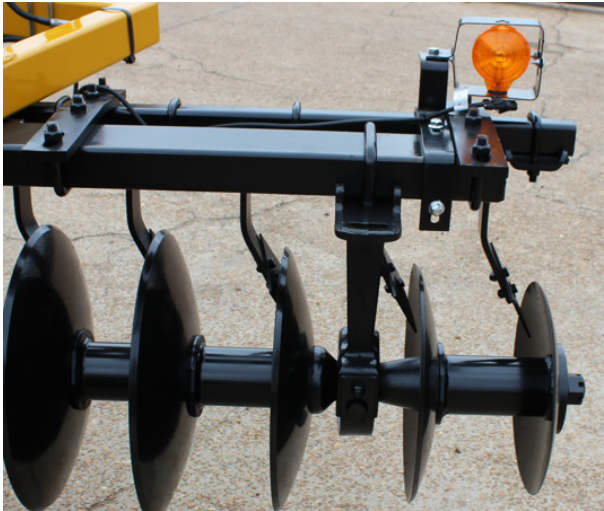
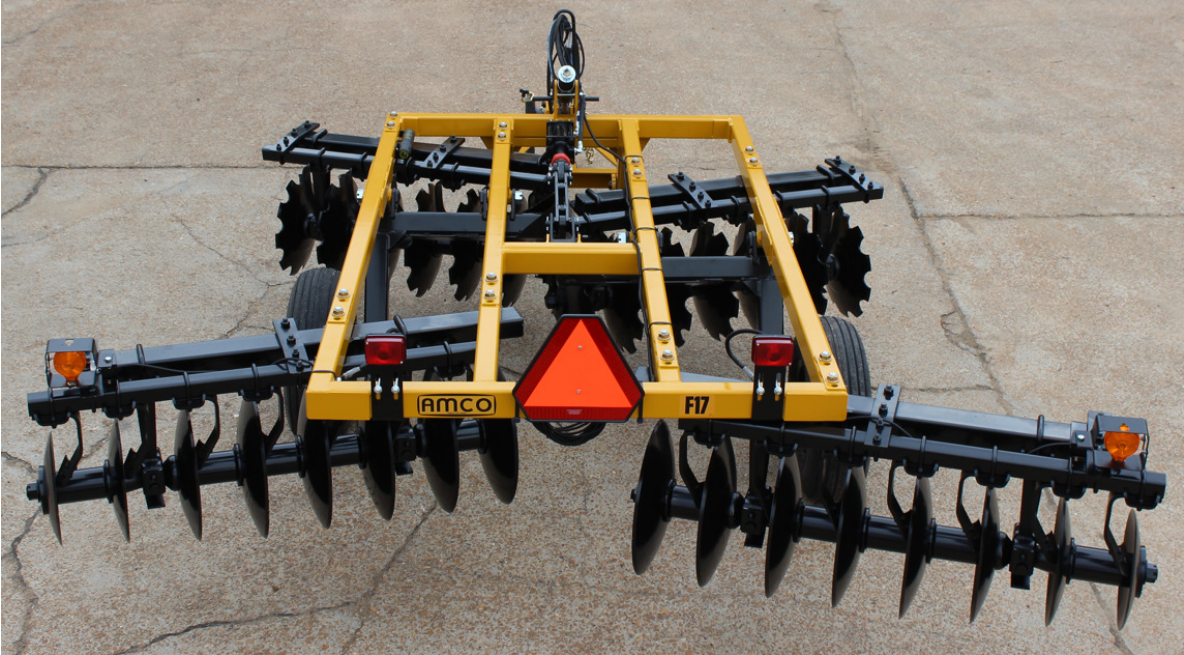
FRONT



REAR



STEP 10. Install Light Kit and Safety Chain. (See components on pg.22)



STEP 11. Final Grooming and check points.

- A. Check inside front gangs. They should overlap in the center about 2-1/2" to 3-1/2". (Front tips of inside blades should be 1-1/2" to 2" over center line of harrow.) This can be adjusted by shifting the gangs on the gang frames. It is important that center blades clear by at least 3/4".
- B. Check inside rear gangs. They should be 26" to 30" apart. (The front tip of the inside blades should be 13" to 15" from the harrow centerline.) Shift gangs as required to obtain this spacing.
- C. Check scraper adjustment. Scrapers should be adjusted to run 1/8" to 1/4" from disk blades.
- D. Tighten all bolts to proper torque.
- E. Raise and lower harrow 4 or 5 times with heavy duty 4" x 8" hydraulic cylinder. Check transport lock to be sure it functions properly.
- F. Raise harrow for transport as described above. Use a good grade of clean Lithium soap base chassis grease to lubricate the entire harrow. This is very important if the harrow will be kept in inventory for several weeks before being placed in service, Grease the harrow as follows:
 - (1) Grease the four rockshaft pivot pins until grease appears at the ends of the pivot journals.
 - (2) Grease the two fittings on the tongue adjusting rod.
- G. If the harrow is in storage for four to six months, the entire harrow should again be lubricated before placing in service. It should also be greased every 50 hours while in use, at the end of each season and at the start of each season.
- H. Check decals to be certain they are in place and in good condition. Touch up paint as required before delivery. Place Operators Manual in the heavy plastic shipping bag. Tape bag to main frame so the Operators Manual will be delivered to your customer along with the harrow.

STEP 12. Review all steps of the assembly process to be certain the harrow is properly assembled. Check all bolts to be sure they are properly torqued. Visually inspect the harrow for any missing, damaged, or defective parts. Repaint any areas that need improvement.

Remember, a little extra attention to details at this time can prevent problems after the harrow is placed in service.

LUBRICATION

Careful and regular attention to lubrication will greatly increase the life of the harrow. For economical and efficient operation, the proper lubrication of frame fittings and wheel bearings is essential.

Be sure fittings are free of dirt before greasing. If a fitting is lost or damaged, replace it immediately. Lubricate all parts thoroughly with a good grade No. 2 gun grease (Lithium Base).

Miscellaneous working parts not provided with lubrication fittings should be oiled occasionally with a good grade of lubrication oil.

ROCKSHAFT PIVOT PINS

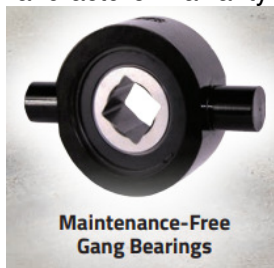
A high carbon steel pin with a grease fitting joins each rockshaft to the main frame in two places. These 4 pins should be greased every 50 hours of operation. They should also be greased at the beginning and end of the disking season. A good grade of Lithium soap base grease is recommended.



WARNING Lower or block elevated components before servicing or when leaving the machine. Elevated components can fall and cause serious injury.

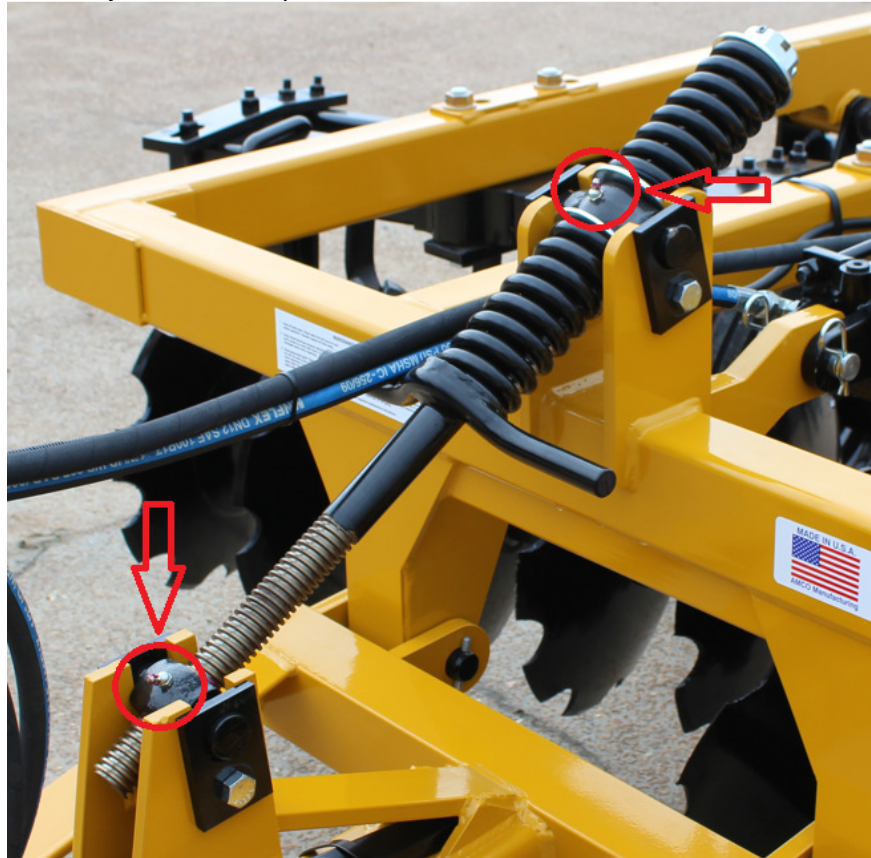
GANG BEARINGS

The AMCO F17 Harrow Gangs are equipped Maintenance-Free bearings. No lubrication needed. Bearings come with 3-year manufacturer warranty.



TONGUE ADJUSTING ROD:

The two swivels on the tongue adjusting rod should be greased every 50 hours of operation, also, at the beginning and end of each disking season. The threads on the rod should be cleaned and oiled occasionally for smooth operation.



WHEEL HUB BEARINGS

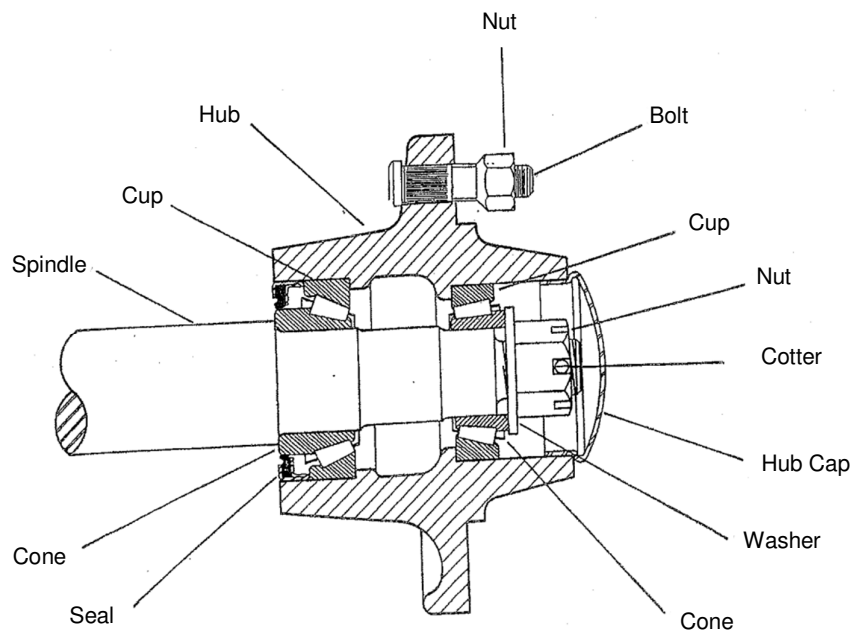
The wheel hubs are equipped with tapered roller bearings. These hubs are packed with grease and adjusted at the factory. They should be repacked and the spindle nut properly adjusted each disking season or every 300 hours of operation. Use a good grade of clean lithium soap base grease.

MAINTENANCE

WHEEL BEARING REPAIR

Wheel bearings should be repacked with grease and adjusted annually. Under extreme conditions, they should be serviced more frequently. Check occasionally for excessive end play. Adjust as required to eliminate excessive end play.

To disassemble the hub, remove the dust cap by prying around it. Remove the cotter pin, slotted nut and spindle washer. Carefully remove the hub and bearings from the spindle. Inspect all parts for wear and replace if necessary.



Use the following procedure when repairing or servicing wheel hubs:

1. Clean all parts that are to be re-used.
2. Carefully inspect the metal case on the grease seal. Discard seal if case is bent or damaged. Check seal lips for cuts, tears or excessive wear. Seal must fit snugly on extended inner race of bearing.
3. Carefully inspect both sets of bearing cones. Bearing bore and rollers must be smooth and free of nicks and scratches. Replace cones if damaged.
4. Inspect hub to make sure that hub bolts have a good thread. Bearing cups must be smooth and free of surface blemishes. Cups must be removed from the hub and replaced if damaged. Cups should be fully pressed into the hub and rest squarely against the shoulder inside the hub. Hub cap and grease seal should fit snugly inside the hub. Severely damaged hubs should be replaced.

5. Threads on spindle must be in good condition. Bearing cone seats must be smooth and free of blemishes. Bearing cones must fit squarely on spindle.
6. Spindle washer, slotted nut, cotter pin and hub cap must be in good condition. Replace if worn or damaged.

To reassemble the hub, repack each bearing cone with grease and fill the hub cavity 1/3 full of grease. Place inner bearing in hub, press grease seal into hub and carefully install the hub on the spindle. Install the outer bearing assembly into the hub, and replace the spindle washer and slotted nut. Tighten the slotted nut until the hub binds when rotated.

Back the slotted nut off to the nearest slot. Rotate the hub five or six revolutions in each direction to seat all parts. Re-tighten the slotted nut while rotating the hub. When the hub binds, back the slotted nut off to the nearest slot and secure with a cotter pin. Install dust cap and mount wheel on hub.

GANG REPAIR

1. With the harrow in its "down" or working position, loosen the gang bolt nut. It is helpful to clean the threads of all bolts with a wire brush and apply penetrating oil before removing the nuts.
2. Remove the nuts that secure the gang to the bearing riser.
3. Remove the trunion clamps and wear guards.
4. Raise the harrow on its wheels, the entire gang can then be rolled away from the harrow. In most cases time can be saved by removing the scraper bars and scrapers.
5. Remove the gang bolt nut and end-washer.
6. Remove the blades, spacer spools and bearings being careful not to damage the threads on the gang bolt.
7. Tear the entire gang down and clean all parts. Check disk axle for straightness. Bowed, bent or worn axles must be replaced.
8. Check spacer spools for damage caused by running disk with loose gangs or hitting underground obstructions. Replace spools if they are damaged.
9. Carefully check all end bells. The large end must contact the disk blade around the entire circumference of the end bell. The small end must be smooth and perpendicular to the axle. The end bells must be replaced if they are cracked or worn on the surface adjacent to the bearing.
10. Check all the bearings on the gang. Running a harrow for one hour or more after a bearing failure will seriously damage other bearings on the gang. These damaged bearings will then fail within a few hours after the failed bearing has been replaced. Continued operation with this failed bearing will damage the new bearing thus it will fail after a few hours use. In most cases it will be best to replace all bearings on a gang when it is torn down for repairs. A triple lip sealed bearing should always be used for bearing replacement.
11. To replace a bearing, the snap ring must be removed. The old bearing and "Protect-O-Shield Washers" should then be pressed out of the housing. Clean and wash out old grease and carefully check the housing. Replace the housing if it is damaged. Check the Protect-O-Shield washers. They should fit snug in the bearing housing requiring a few light taps with a hammer to remove or install them. If they are loose, bent, or show signs wear near the inner race of the bearing, they should be replaced. Do not use the harrow without the washers being installed. Press the new bearing straight into the housing. Always press

- against the outer race of the bearing. Rotate the bearing in the housing after it is pressed in to be sure it turns freely. Install the snap ring in the housing.
12. Check all disk blades for cracks, breaks, wear and other damage. Replace worn or damaged disk blades.
 13. After cleaning, checking and replacing all damaged parts, the gang should be assembled. Be sure the snap ring in the bearing housing is turned toward the convex (back) side of the disk blades. The 1-1/2" square gang bolt nut should be torqued to 1200 FT/LBS. The axle nut should be locked in place with the lock plate.
 14. After the gang is assembled it should be attached to the harrow. The bearing risers should be carefully spaced to match the bearing housing. Poorly spaced bearing risers will overload the bearings and cause premature failure. The gang should be rotated 4 or 5 complete revolutions to be sure that all parts are aligned and the gang turns freely. Replace the scraper bar and scrapers.
 15. The bearings are maintenance-free and do not require greasing.
 16. It is essential that gang bolts be kept tight to prevent axle bending, blade breakage, spacer spool breakage and damage to other -gang parts. Gang parts tend to wear on a bevel when the harrow is operated with a loose gang bolt. This reduces the area of contact between mating gang parts. Therefore, it is often difficult to keep a gang bolt tight if it has been operated in a loose condition. After such a gang bolt has been properly torqued it should be re-torqued after about 30 minutes of operation, again after 4 or 5 hours of operation and again after 8 to 10 hours of use. This will assure that proper gang bolt tension is maintained while the mating components are resenting. If the gang bolt will not stay tight, the gang should be completely disassembled and all parts carefully inspected. All damage pans should be replaced before reassembling the gangs.



CAUTION: When working on disk harrows care should be exercised in handling or tightening bolts near disk blades to avoid injury. All hydraulically or mechanically elevated components must be blocked or lowered to prevent accidents when servicing the harrow.

SCRAPER REPAIR

Bent scraper bars or shanks should be replaced or straightened if possible. The blades can be replaced when they wear to the extent they are not performing properly. Keep the blades adjusted from 1/8" to 1/4" from the disk blades. The scrapers can be adjusted by loosening the mount bolt and sliding the scraper to the proper position then tightening the mount bolt. Additional adjustment can be obtained by loosening the scraper bar mount bolts and shifting the entire scraper bar. Do not allow the scraper blades to run on the spacer spools as immediate damage to the spool will occur.

ROCKSHAFT PIVOT PIN REPAIR

The rockshafts are equipped with replaceable, regreasable bronze bushings, #18011. If properly lubricated they should last for several seasons. The bushings should be checked each disking season for excessive pivot pin or bushing wear. Worn bushings and pivot pins should be replaced, Failure to replace worn or damaged parts will damage other parts.

GENERAL

Keep all bolts tight, Check all bolts after 50 hours operation and each season thereafter. Visually inspect all bogs daily. **DO NOT** run with loose gang bolts. Keep the gang bolts torqued to 1200 ft. lbs.

STORAGE

Proper storage will add to the life of your disk harrow, and assure its being in good condition for the next season. The following procedure is recommended.

Clean off all foreign matter, and *thoroughly* lubricate the harrow. (See lubrication instructions)

Tighten loose bolts and replace any damaged or missing parts.

Repaint the harrow where the original paint has worn off.

Coat the disk blades and hydraulic cylinder rod with a good rust preventative.

Store in a dry place, with the gangs resting on boards to remove weight from the tires.

Carefully rotate each gang and check for worn or damaged blades, bent gang shafts, worn scrapers, damaged bearings and other parts which may need replacing.

Whenever disk blades or bearings are replaced, the gang shaft nuts must be torqued to 1200 foot pounds.



CAUTION *All hydraulically or mechanically elevated operating components must be blocked to prevent accidental lowering or must be lowered to the ground when making adjustments or when the equipment is idle.*



CAUTION *Hydraulic systems are highly pressurized. Escaping hydraulic oil, even an invisible pinhole leak, can penetrate body tissues causing serious injury. Use a piece of wood or cardboard when looking for leaks - never use the hands or other parts of the body.*

Relieve hydraulic pressure before disconnecting circuits. When reassembling, make absolutely certain that all connections are tight.

If injured by hydraulic oil escaping under pressure, see a doctor immediately. Serious infection or reaction may occur if medical attention is not given at once.

OPERATING INSTRUCTIONS AND PROCEDURES

Disk as deep as necessary to do a thorough job, but do not try to disk to an excessive depth. In most conditions the AMCO harrow has sufficient weight for good penetration, in other conditions you have a little more weight than you really need. For these conditions, your harrow should be equipped with flotation tires. 9.5L x 15 tires will be adequate for most conditions: You also need a good heavy duty 4 x 8 hydraulic cylinder with depth control. This will allow you to control cutting depth.

Never allow soil to "bulldoze" ahead or flow over the spacer spools. Cutting depth should be controlled to avoid this situation. Maintaining proper cutting depth will have the following advantages.

1. Increased gang bearing life.
2. Reduced strain on harrow frame and related parts.
3. Reduced load on tractor engine and drive train.
4. Lower fuel consumption due to less load on tractor engine.
5. Reduced wheel slippage and rear tractor tire wear due to lower load.
6. Increased travel speeds due to less wheel slippage.

By properly controlling cutting depth, gang bearing life will be increased with more acres covered per day at a lower cost.



CAUTION *Never clean, adjust or lubricate a disk that is in motion. Disk blades could cause severe injury.*

ADJUSTMENTS FOR LEVEL DISKING

Six factors must be considered when level disking is required. They are (1) depth of cut, (2) tractor speed, (3) tongue adjusting rod length, (4) gang angle adjustments, (5) lateral gang adjustments, and (6) soil conditions.

CENTER RIDGE

If a ridge of soil is left behind the center of the harrow, decrease the weight on the rear gangs by shortening the tongue adjusting rod, decrease the angle of the rear gangs, increase the angle of the front gangs, or move the rear gangs farther apart, or do a combination of all four.

CENTER FURROW

If a furrow is left behind the center of the harrow, increase the weight on the rear gangs by lengthening the tongue adjusting rod, increase the angle of the rear gangs, decrease the angle of the front gangs, or move the rear gangs closer together, or do a combination of all four.

OUTER RIDGES OR FURROWS

If ridges or furrows are left behind the outer ends of the harrow, change the weight on the rear gangs by adjusting the length of the tongue adjusting rod, or change the front or rear gang cutting angle. You may have to change tractor speeds.

TRACTOR SPEED

Speeds above 6 MPH may result in forming ridges and furrows. Lateral adjustment of the rear gangs and reducing gang angle helps overcome this problem.

CAUTION: When adjusting gang angle make sure the 7/8" gang frame mount bolts are torqued properly before use, Refer to the torque chart on page 17. After operating the disk harrow for a few hours the bolts should be rechecked for proper torque.

ROAD TRANSPORT

Extreme caution must be exercised when the disk is transported on roads or highways. Remember you are responsible for compliance with state and local laws regarding lighting, reflectors, and SMV emblems, as well as length and width.



CAUTION *When transporting machinery over public roads, comply with your local and state laws regarding length, width and lighting*



CAUTION *When trailing the disk over public roads, the SMV Emblem must be used, for protection of tractor and motor vehicle operators*



CAUTION *When transporting farm implements on public roads after dusk, it is the responsibility of the operator to provide lighting and reflectors on the rear of the implement in accordance with your state law.*

Prior to road transport, it is wise to check tire pressure making sure they are properly inflated. Also, be sure all hub bolts and nuts are tight. Hub bearings should be properly adjusted. The drawbar pin must be in good condition and secured in place to withstand shock loads. The drawbar must also be secured to prevent swinging from side to side.



CAUTION *Always secure for transport by using the transport lock pin*

The transport pin should be used to secure the disk in the raised position. The transport pin must be secured in place.

Remove Transport pin before use in working position.



When the disk is in use or being transported. The tongue jack should be stored on the tongue. This will prevent loss of the gang bolt wrench and damage to the tongue jack.

OPERATING TIPS FOR LONG LIFE AND SATISFACTORY PERFORMANCE

1. Match the harrow with the proper size tractor. Too much horsepower and speed will result in excessive maintenance cost.
2. Lubricate with clean grease at the recommended intervals.
3. Use good quality tires, hoses, and hydraulic cylinders.
4. Use the tongue adjusting rod, gang angle adjustment, proper cutting depth, and travel speed to get level disking and smooth fields.
5. Wash corrosive materials such as fertilizer and herbicides from the disk when it is not in use.
6. Insist on genuine AMCO replacement parts. Items such as bearings and blades look alike but are not as reliable as original equipment.
7. Never allow unsafe conditions or operating practices. Your safety is of prime importance.
8. Raise the disk harrow on its transport wheels when turning. Failure to do so will result in broken blades, bent axles, and excessive strain on the tongue and main frame.
9. Reduce operating speed in areas containing stumps or rocks to reduce blade breakage.

MOST OFTEN ENCOUNTERED DISC BLADE FAILURES

Most disk blade failures can be prevented by selecting the correct blade size and thickness for individual conditions when buying a disk. Reduction of gang cutting angle and speed in areas containing rocks and stumps will greatly lengthen the blade life. Keeping gang bolts properly torqued and raising the harrow while turning will also reduce disk blade breakage.

FIGURE 1 - Laminated Disc-defective steel.
Eligible for warranty consideration

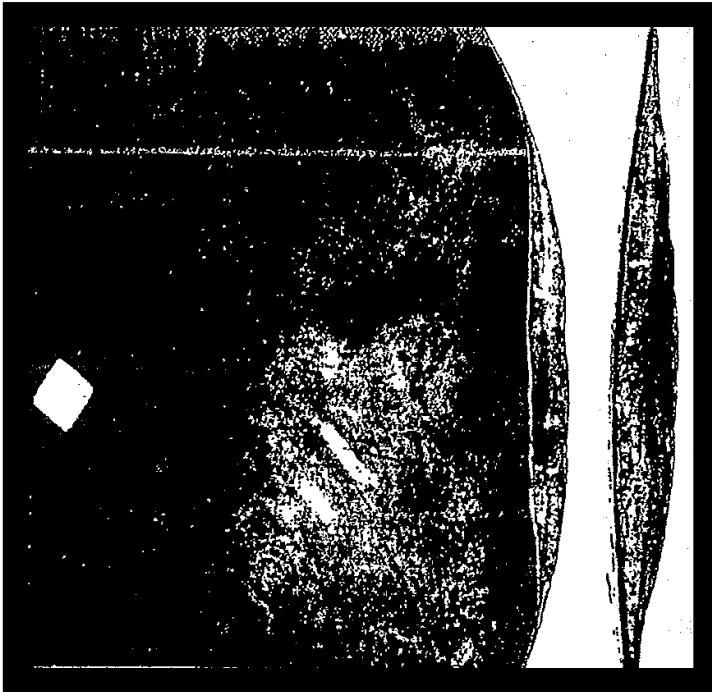


FIGURE 2 - Straight directional break caused by defective steel,
Eligible for warranty consideration



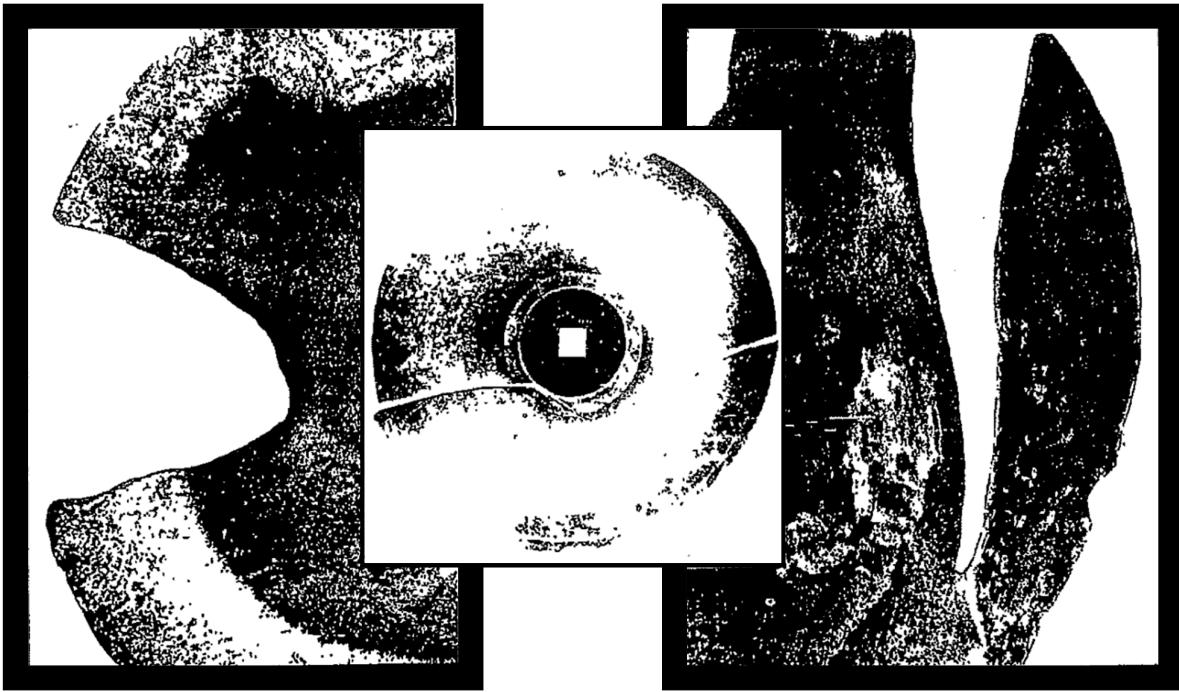


FIGURE 3,4,5 - Irregular breaks caused by contact against rocks or stumps. Not covered by warranty.



FIGURE 6 - Chipped or dented edges resulting from use in areas containing rocks or stumps. Not covered by warranty.

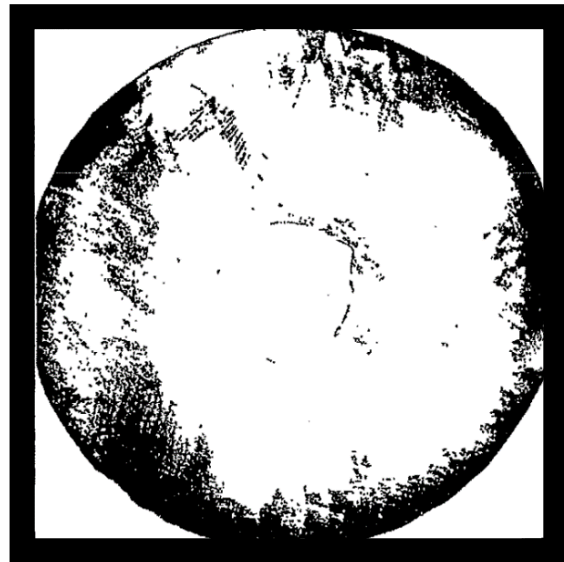
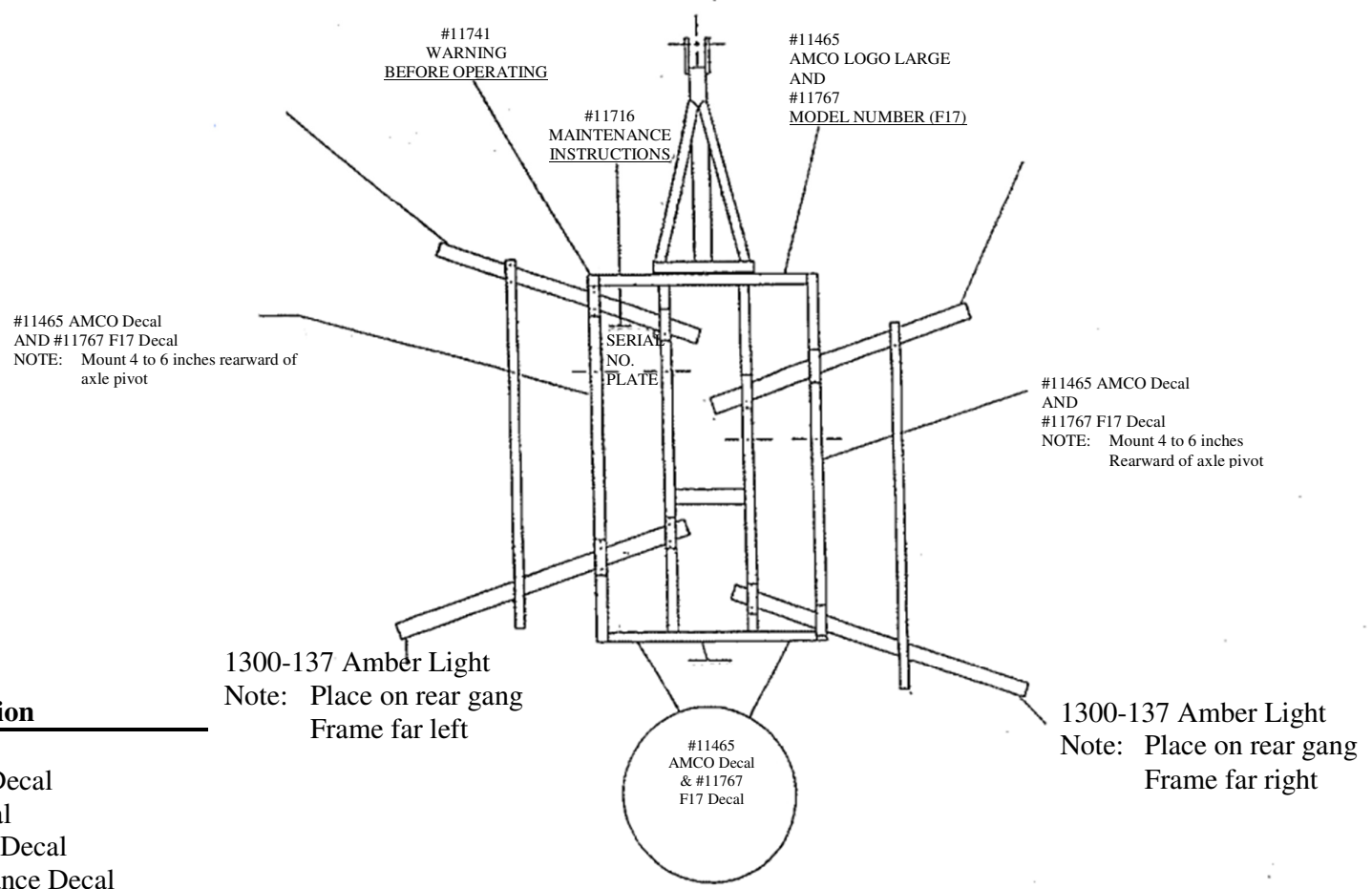


FIGURE 7 - Center broken out. Experience has shown that this is usually caused by loose bolts, excesses flexing, or by contact with rocks and stumps. covered by warranty.



| Qty. | Part No. | Description |
|------|----------|-------------------|
| 5 | 11465 | AMCO Decal |
| 5 | 11767 | F17 Decal |
| 1 | 11741 | Warning Decal |
| 1 | 11716 | Maintenance Decal |
| 2 | 1300-447 | Red Lamp |
| 2 | 1300-137 | Amber Light |
| 1 | 11713 | Serial Plate |

