

EIGHT Series Air Cart

Specifications

8240 Specifications and Options

Model	8240	8240
Configuration	Tow Between	Tow Behind
Length without auger (with auger)	23' 4" (7.14m) (24' 7" (7.49m))	23' 4" (7.14m) (24' 7" (7.49m))
Height	13' 4" (4.06)	13' 4" (4.06)
Width	12' 5" (3.78)	12' 5" (3.78)
Weight (Hydraulic Drive)	11,766 lbs. (5,348 kg)	9,595 lbs. (4,361 kg)
Safety Lights	Standard	Standard
Safety Chain	Standard	Standard
Tank Capacity	Optional 64 bu (2,249 <i>l</i>)	Optional 64 bu (2,249 <i>l</i>)
- Front Tank		
- Middle Tank	89 bu (3,129 <i>l</i>)	89 bu (3,129 <i>l</i>)
- Rear Tank	150 bu (5,278 <i>l</i>)	150 bu (5,278 <i>l</i>)
- Total	239 bu (8,407 <i>l</i>)	239 bu (8,407 <i>l</i>)
Tank Screens	Standard	Standard
Tank Access Ladder R.H.S.	Standard	Standard
Rated Fan Speed	13" fan - up to 5,500 r.p.m. 17" fan - up to 5,000 r.p.m.	13" fan - up to 5,500 r.p.m. 17" fan - up to 5,000 r.p.m.
Fan Impeller Diameter	Standard 13" (33 cm) Optional 17" (43 cm)	Standard 13" (33 cm) Optional 17" (43 cm)
Hydraulic Drive - piston type orbit motor (Closed Centre or Closed Centre Load Sensing systems required) Hydraulic requirements for Air Cart only at Rated Fan Speed.	12cc (Standard) 18 U.S. gal./min. (68 l/min) at 2,750 p.s.i. (18,960 kpa) VRT requires an additional 5.5 U.S. gal/min (21 l/min) 16cc (Optional) (Standard on 17" Fan) 21 U.S. gal./min. (80 l/min) at 2,750 p.s.i. (18,960 kpa) VRT requires an additional 5.5 U.S. gal/min (21 l/min)	12cc (Standard) 18 U.S. gal./min. (68 l/min) at 2,750 p.s.i. (18,960 kpa) VRT requires an additional 5.5 U.S. gal/min (21 l/min) 16cc (Optional) (Standard on 17" Fan) 21 U.S. gal./min. (80 l/min) at 2,750 p.s.i. (18,960 kpa) VRT requires an additional 5.5 U.S. gal/min (21 l/min)
Loading Auger	Standard (10" Dia x 21' Lg.) (0.25m Dia x 6.4m Lg.)	Standard (10" Dia x 21' Lg.) (0.25m Dia x 6.4m Lg.)
Tires		
- Standard (Front)	N/A	(2) 21.5 x 16.1 - 10 ply rating Soft Trac
- Optional (Front)	N/A	(2) 21.5 x 16.1 - 12 ply rating Lug (2) 560/65 D24 LI 140 Soft Trac (2) 500/70 R24 Lug
- Standard (Rear)	(2) 23.1 x 26 - 12 ply rating AWT	(2) 23.1 x 26 - 12 ply rating AWT
- Optional (Rear)	(2) 23.1 x 26 - 10 ply rating Rice (2) 30.5 x 32 - 12 ply rating AWT (2) 30.5 x 32 - 14 ply rating Lug (2) 800/65 R32 - LI 172 Lug	(2) 23.1 x 26 - 10 ply rating Rice (2) 30.5 x 32 - 12 ply rating AWT (2) 30.5 x 32 - 14 ply rating Lug (2) 800/65 R32 - LI 172 Lug
Metering		
- Ground Driven	Standard	Standard
- Variable Rate (VRT)	Optional	Optional
- GPS Compatible VRT	Optional - FarmScan Monitor	Optional - FarmScan Monitor
Meter Shut Off	Electric	Electric
Number Secondary Runs - Single Shoot	21 to 90	21 to 90
Number Secondary Runs - Double Shoot	42 to 180	42 to 180
Primary Hose - Diameter	2 1/2" (6.4 cm)	2 1/2" (6.4 cm)
Secondary Hose - Diameter	15/16" (2.4 cm)	15/16" (2.4 cm)
Frame	Formed heavy wall 4" x 10" (10 cm x 25.4 cm) tubing	Formed heavy wall 4" x 10" (10 cm x 25.4 cm) tubing
Walk Through Tank	Standard	Standard
Easy Clean Out System	Standard	Standard
Meter Drive Options:		
- Second Clutch (For spot fertilizing on the go)	Standard	Standard
Monitor		
- (Shaft Motion (3), Bin Level (3), Fan Speed, Acre Tally, Ground Speed)	Standard Optional Seed Flow	Standard Optional Seed Flow
Work Switch (Mounted to Seeding Machine)	Optional (Ground Drive Only)	Optional (Ground Drive Only)
Rear Tow Hitch	Standard (Max 26,000 lb Draft Load) (Max 11,818 kg Draft Load)	Optional (Max 15,000 lb Draft Load) (Max 6,818 kg Draft Load)
Mechanical Acre Meter	Optional (Ground Drive Only)	Optional (Ground Drive Only)
Hitch Stand	N/A	Optional

Specifications

8300 Specifications and Options

Model	8300	8300
Configuration	Tow Between	Tow Behind
Length without auger (with auger)	23' 4" (7.14m) (24' 7" (7.49m))	23' 4" (7.14m) (24' 7" (7.49m))
Height	13' 4" (4.06)	13' 4" (4.06)
Width	13' 4" (4.06)	12' 5" (3.78)
Weight (Hydraulic Drive)	11,986 lbs. (5,448 kg)	9,815 lbs. (4,461 kg)
Safety Lights	Standard	Standard
Safety Chain	Standard	Standard
Tank Capacity	Optional 64 bu (2,249 <i>ℓ</i>)	Optional 64 bu (2,249 <i>ℓ</i>)
- Front Tank		
- Middle Tank	113 bu (3,991 <i>ℓ</i>)	113 bu (3,991 <i>ℓ</i>)
- Rear Tank	186 bu (6,537 <i>ℓ</i>)	186 bu (6,537 <i>ℓ</i>)
- Total	299 bu (10,528 <i>ℓ</i>)	299 bu (10,528 <i>ℓ</i>)
Tank Screens	Standard	Standard
Tank Access Ladder R.H.S.	Standard	Standard
Rated Fan Speed	13" fan - up to 5,500 r.p.m. 17" fan - up to 5,000 r.p.m.	13" fan - up to 5,500 r.p.m. 17" fan - up to 5,000 r.p.m.
Fan Impeller Diameter	Standard 13" (33 cm) Optional 17" (43 cm)	Standard 13" (33 cm) Optional 17" (43 cm)
Hydraulic Drive - piston type orbit motor (Closed Centre or Closed Centre Load Sensing systems required) Hydraulic requirements for Air Cart only at Rated Fan Speed.	12cc (Standard) 18 U.S. gal./min. (68 l/min) at 2,750 p.s.i. (18,960 kpa) VRT requires an additional 5.5 U.S. gal/min (21 l/min)	12cc (Standard) 18 U.S. gal./min. (68 l/min) at 2,750 p.s.i. (18,960 kpa) VRT requires an additional 5.5 U.S. gal/min (21 l/min)
	16cc (Optional) (Standard on 17" Fan) 21 U.S. gal./min. (80 l/min) at 2,750 p.s.i. (18,960 kpa) VRT requires an additional 5.5 U.S. gal/min (21 l/min)	16cc (Optional) (Standard on 17" Fan) 21 U.S. gal./min. (80 l/min) at 2,750 p.s.i. (18,960 kpa) VRT requires an additional 5.5 U.S. gal/min (21 l/min)
Loading Auger	Standard (10" Dia x 21' Lg.) (0.25m Dia x 6.4m Lg.)	Standard (10" Dia x 21' Lg.) (0.25m Dia x 6.4m Lg.)
Tires		
- Standard (Front)	N/A	(2) 21.5 x 16.1 - 10 ply rating Soft Trac
- Optional (Front)	N/A	(2) 21.5 x 16.1 - 12 ply rating Lug (2) 560/65 D24 LI 140 Soft Trac (2) 500/70 R24 Lug
- Standard (Rear)	(2) 30.5 x 32 - 12 ply rating AWT	(2) 23.1 x 26 - 12 ply rating AWT
- Optional (Rear)	(2) 30.5 x 32 - 14 ply rating Lug (2) 800/65 R32 - LI 172 Lug	(2) 23.1 x 26 - 10 ply rating Rice (2) 30.5 x 32 - 12 ply rating AWT (2) 30.5 x 32 - 14 ply rating Lug (2) 800/65 R32 - LI 172 Lug
Metering		
- Ground Driven	Standard	Standard
- Variable Rate (VRT)	Optional	Optional
- GPS Compatible VRT	Optional - FarmScan Monitor	Optional - FarmScan Monitor
Meter Shut Off	Electric	Electric
Number Secondary Runs - Single Shoot	21 to 90	21 to 90
Number Secondary Runs - Double Shoot	42 to 180	42 to 180
Primary Hose - Diameter	2 1/2" (6.4 cm)	2 1/2" (6.4 cm)
Secondary Hose - Diameter	15/16" (2.4 cm)	15/16" (2.4 cm)
Frame	Formed heavy wall 4" x 10" (10 cm x 25.4 cm) tubing	Formed heavy wall 4" x 10" (10 cm x 25.4 cm) tubing
Walk Through Tank	Standard	Standard
Easy Clean Out System	Standard	Standard
Meter Drive Options:		
- Second Clutch (For spot fertilizing on the go)	Standard	Standard
Monitor		
- (Shaft Motion (3), Bin Level (3), Fan Speed, Acre Tally, Ground Speed)	Standard Optional Seed Flow	Standard Optional Seed Flow
Work Switch (Mounted to Seeding Machine)	Optional (Ground Drive Only)	Optional (Ground Drive Only)
Rear Tow Hitch	Standard (Max 26,000 lb Draft Load) (Max 11,818 kg Draft Load)	Optional (Max 15,000 lb Draft Load) (Max 6,818 kg Draft Load)
Mechanical Acre Meter	Optional (Ground Drive Only)	Optional (Ground Drive Only)
Hitch Stand	N/A	Optional

Specifications

8336 Specifications and Options

Model	8336	8336
Configuration	Tow Between	Tow Behind
Length without auger (with auger)	23' 4" (7.14m) (24' 7" (7.49m))	23' 4" (7.14m) (24' 7" (7.49m))
Height	13' 4" (4.06)	13' 4" (4.06)
Width	13' 4" (4.06)	12' 5" (3.78)
Weight (Hydraulic Drive)	12,611 lbs. (5,732 kg)	10,440 lbs. (4,745 kg)
Safety Lights	Standard	Standard
Safety Chain	Standard	Standard
Tank Capacity		
- Front Tank	96 bu (3,386 ℓ)	96 bu (3,386 ℓ)
- Middle Tank	89 bu (3,129 ℓ)	89 bu (3,129 ℓ)
- Rear Tank	150 bu (5,278 ℓ)	150 bu (5,278 ℓ)
- Total	335 bu (11,793 ℓ)	335 bu (11,793 ℓ)
Tank Screens	Standard	Standard
Tank Access Ladder R.H.S.	Standard	Standard
Rated Fan Speed	13" fan - up to 5,500 r.p.m. 17" fan - up to 5,000 r.p.m.	13" fan - up to 5,500 r.p.m. 17" fan - up to 5,000 r.p.m.
Fan Impeller Diameter	Standard 13" (33 cm) Optional 17" (43 cm)	Standard 13" (33 cm) Optional 17" (43 cm)
Hydraulic Drive - piston type orbit motor (Closed Centre or Closed Centre Load Sensing systems required) Hydraulic requirements for Air Cart only at Rated Fan Speed.	12cc (Standard) 18 U.S. gal./min. (68 l/min) at 2,750 p.s.i. (18,960 kpa) VRT requires an additional 5.5 U.S. gal/min (21 l/min) 16cc (Optional) (Standard on 17" Fan) 21 U.S. gal./min. (80 l/min) at 2,750 p.s.i. (18,960 kpa) VRT requires an additional 5.5 U.S. gal/min (21 l/min)	12cc (Standard) 18 U.S. gal./min. (68 l/min) at 2,750 p.s.i. (18,960 kpa) VRT requires an additional 5.5 U.S. gal/min (21 l/min) 16cc (Optional) (Standard on 17" Fan) 21 U.S. gal./min. (80 l/min) at 2,750 p.s.i. (18,960 kpa) VRT requires an additional 5.5 U.S. gal/min (21 l/min)
Loading Auger	Standard (10" Dia x 21' Lg.) (0.25m Dia x 6.4m Lg.)	Standard (10" Dia x 21' Lg.) (0.25m Dia x 6.4m Lg.)
Tires		
- Standard (Front)	N/A	(2) 21.5 x 16.1 - 10 ply rating Soft Trac
- Optional (Front)	N/A	(2) 21.5 x 16.1 - 12 ply rating Lug (2) 560/65 D24 LI 140 Soft Trac (2) 500/70 R24 Lug
- Standard (Rear)	(2) 30.5 x 32 - 12 ply rating AWT	(2) 23.1 x 26 - 12 ply rating AWT
- Optional (Rear)	(2) 30.5 x 32 - 14 ply rating Lug (2) 800/65 R32 - LI 172 Lug	(2) 23.1 x 26 - 10 ply rating Rice (2) 30.5 x 32 - 12 ply rating AWT (2) 30.5 x 32 - 14 ply rating Lug (2) 800/65 R32 - LI 172 Lug
Metering		
- Ground Driven	Standard	Standard
- Variable Rate (VRT)	Optional	Optional
- GPS Compatible VRT	Optional - FarmScan Monitor	Optional - FarmScan Monitor
Meter Shut Off	Electric	Electric
Number Secondary Runs - Single Shoot	21 to 90	21 to 90
Number Secondary Runs - Double Shoot	42 to 180	42 to 180
Primary Hose - Diameter	2 1/2" (6.4 cm)	2 1/2" (6.4 cm)
Secondary Hose - Diameter	15/16" (2.4 cm)	15/16" (2.4 cm)
Frame	Formed heavy wall 4" x 10" (10 cm x 25.4 cm) tubing	Formed heavy wall 4" x 10" (10 cm x 25.4 cm) tubing
Walk Through Tank	Standard	Standard
Easy Clean Out System	Standard	Standard
Meter Drive Options:		
-Second Clutch (For spot fertilizing on the go)	Standard	Standard
Monitor - (Shaft Motion (3), Bin Level (3), Fan Speed, Acre Tally, Ground Speed)	Standard Optional Seed Flow	Standard Optional Seed Flow
Work Switch (Mounted to Seeding Machine)	Optional (Ground Drive Only)	Optional (Ground Drive Only)
Rear Tow Hitch	Standard (Max 26,000 lb Draft Load) (Max 11,818 kg Draft Load)	Optional (Max 15,000 lb Draft Load) (Max 6,818 kg Draft Load)
Mechanical Acre Meter	Optional (Ground Drive Only)	Optional (Ground Drive Only)
Hitch Stand	N/A	Optional

8370 Specifications and Options

Model	8370	8370
Configuration	Tow Between	Tow Behind
Length without auger (with auger)	23' 4" (7.14m) (24' 7" (7.49m))	23' 4" (7.14m) (24' 7" (7.49m))
Height	13' 4" (4.06)	13' 4" (4.06)
Width	13' 4" (4.06)	13' 4" (4.06)
Weight (Hydraulic Drive)	13,618 lbs. with 3rd tank	10,440 lbs. (4,745 kg)
Safety Lights	Standard	Standard
Safety Chain	Standard	Standard
Tank Capacity	Optional 64 bu (2,249 <i>ℓ</i>)	Optional 64 bu (2,249 <i>ℓ</i>)
- Front Tank		
- Middle Tank	174 bu (6,184 <i>ℓ</i>)	174 bu (6,184 <i>ℓ</i>)
- Rear Tank	186 bu (6,537 <i>ℓ</i>)	186 bu (6,537 <i>ℓ</i>)
- Total	360 bu (12,721 <i>ℓ</i>)	360 bu (12,721 <i>ℓ</i>)
Tank Screens	Standard	Standard
Tank Access Ladder R.H.S.	Standard	Standard
Rated Fan Speed	13" fan - up to 5,500 r.p.m. 17" fan - up to 5,000 r.p.m.	13" fan - up to 5,500 r.p.m. 17" fan - up to 5,000 r.p.m.
Fan Impeller Diameter	Standard 13" (33 cm) Optional 17" (43 cm)	Standard 13" (33 cm) Optional 17" (43 cm)
Hydraulic Drive - piston type orbit motor (Closed Centre or Closed Centre Load Sensing systems required) Hydraulic requirements for Air Cart only at Rated Fan Speed.	12cc (Standard) 18 U.S. gal./min. (68 l/min) at 2,750 p.s.i. (18,960 kpa) VRT requires an additional 5.5 U.S. gal/min (21 l/min)	12cc (Standard) 18 U.S. gal./min. (68 l/min) at 2,750 p.s.i. (18,960 kpa) VRT requires an additional 5.5 U.S. gal/min (21 l/min)
	16cc (Optional) (Standard on 17" Fan) 21 U.S. gal./min. (80 l/min) at 2,750 p.s.i. (18,960 kpa) VRT requires an additional 5.5 U.S. gal/min (21 l/min)	16cc (Optional) (Standard on 17" Fan) 21 U.S. gal./min. (80 l/min) at 2,750 p.s.i. (18,960 kpa) VRT requires an additional 5.5 U.S. gal/min (21 l/min)
Loading Auger	Standard (10" Dia x 21' Lg.) (0.25m Dia x 6.4m Lg.)	Standard (10" Dia x 21' Lg.) (0.25m Dia x 6.4m Lg.)
Tires		
- Standard (Front)	N/A	(2) 560/65 D24 - LI 140 Soft Trac
- Optional (Front)	N/A	(2) 500/70 R24 Lug
- Standard (Rear)	(2) 800/65 R32 - LI 172 Lug	(2) 30.5 x 32 - 12 ply rating AWT
- Optional (Rear)	N/A	(2) 30.5 x 32 - 14 ply rating Lug (2) 800/65 R32 - LI 172 Lug
Metering		
- Ground Driven	Standard	Standard
- Variable Rate (VRT)	Optional	Optional
- GPS Compatible VRT	Optional - FarmScan Monitor	Optional - FarmScan Monitor
Meter Shut Off	Electric	Electric
Number Secondary Runs - Single Shoot	21 to 90	21 to 90
Number Secondary Runs - Double Shoot	42 to 180	42 to 180
Primary Hose - Diameter	2 1/2" (6.4 cm)	2 1/2" (6.4 cm)
Secondary Hose - Diameter	15/16" (2.4 cm)	15/16" (2.4 cm)
Frame	Formed heavy wall 4" x 10" (10 cm x 25.4 cm) tubing	Formed heavy wall 4" x 10" (10 cm x 25.4 cm) tubing
Walk Through Tank	Standard	Standard
Easy Clean Out System	Standard	Standard
Meter Drive Options:		
- Second Clutch (For spot fertilizing on the go)	Standard	Standard
Monitor - (Shaft Motion (3), Bin Level (3), Fan Speed, Acre Tally, Ground Speed)	Standard Optional Seed Flow	Standard Optional Seed Flow
Work Switch (Mounted to Seeding Machine)	Optional (Ground Drive Only)	Optional (Ground Drive Only)
Rear Tow Hitch	Standard (Max 26,000 lb Draft Load) (Max 11,818 kg Draft Load)	Optional (Max 15,000 lb Draft Load) (Max 6,818 kg Draft Load)
Mechanical Acre Meter	Optional (Ground Drive Only)	Optional (Ground Drive Only)
Hitch Stand	N/A	Optional

Specifications

8425 Specifications and Options

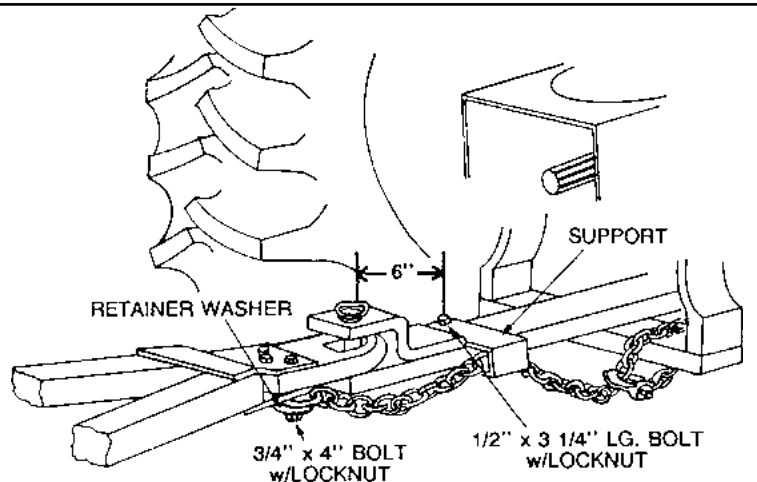
Model	8425	8425
Configuration	Tow Between	Tow Behind
Length without auger (with auger)	23' 4" (7.14m) (24' 7" (7.49m))	23' 4" (7.14m) (24' 7" (7.49m))
Height	13' 4" (4.06)	13' 4" (4.06)
Width	13' 4" (4.06)	13' 4" (4.06)
Weight (Hydraulic Drive)		11,500 lbs. (5,227 kg)
Safety Lights	Standard	Standard
Safety Chain	Standard	Standard
Tank Capacity	- Front Tank	120 bu (4,236 <i>ℓ</i>)
	- Middle Tank	113 bu (3,991 <i>ℓ</i>)
	- Rear Tank	186 bu (6,537 <i>ℓ</i>)
	- Total	419 (14,764 <i>ℓ</i>)
Tank Screens	Standard	Standard
Tank Access Ladder R.H.S.	Standard	Standard
Rated Fan Speed	13" fan - up to 5,500 r.p.m. 17" fan - up to 5,000 r.p.m.	13" fan - up to 5,500 r.p.m. 17" fan - up to 5,000 r.p.m.
Fan Impeller Diameter	Standard 13" (33 cm) Optional 17" (43 cm)	Standard 13" (33 cm) Optional 17" (43 cm)
Hydraulic Drive - piston type orbit motor (Closed Centre or Closed Centre Load Sensing systems required) Hydraulic requirements for Air Cart only at Rated Fan Speed.	12cc (Standard) 18 U.S. gal./min. (68 l/min) at 2,750 p.s.i. (18,960 kpa) VRT requires an additional 5.5 U.S. gal/min (21 l/min)	12cc (Standard) 18 U.S. gal./min. (68 l/min) at 2,750 p.s.i. (18,960 kpa) VRT requires an additional 5.5 U.S. gal/min (21 l/min)
	16cc (Optional) (Standard on 17" Fan) 21 U.S. gal./min. (80 l/min) at 2,750 p.s.i. (18,960 kpa) VRT requires an additional 5.5 U.S. gal/min (21 l/min)	16cc (Optional) (Standard on 17" Fan) 21 U.S. gal./min. (80 l/min) at 2,750 p.s.i. (18,960 kpa) VRT requires an additional 5.5 U.S. gal/min (21 l/min)
Loading Auger	Standard (10" Dia x 21' Lg.) (0.25m Dia x 6.4m Lg.)	Standard (10" Dia x 21' Lg.) (0.25m Dia x 6.4m Lg.)
Tires	- Standard (Front)	(2) 560/65 D24 - LI 140 Soft Trac
	- Optional (Front)	(2) 500/70 R24 Lug
	- Standard (Rear)	(2) 30.5 x 32 - 12 ply rating AWT
	- Optional (Rear)	(2) 30.5 x 32 - 14 ply rating Lug (2) 800/65 R32 - LI 172 Lug
Metering - Ground Driven - Variable Rate (VRT) - GPS Compatible VRT	Standard	Standard
	Optional	Optional
	Optional - FarmScan Monitor	Optional - FarmScan Monitor
Meter Shut Off	Electric	Electric
Number Secondary Runs - Single Shoot	21 to 90	21 to 90
Number Secondary Runs - Double Shoot	42 to 180	42 to 180
Primary Hose - Diameter	2 1/2" (6.4 cm)	2 1/2" (6.4 cm)
Secondary Hose - Diameter	15/16" (2.4 cm)	15/16" (2.4 cm)
Frame	Formed heavy wall 4" x 10" (10 cm x 25.4 cm) tubing	Formed heavy wall 4" x 10" (10 cm x 25.4 cm) tubing
Walk Through Tank	Standard	Standard
Easy Clean Out System	Standard	Standard
Meter Drive Options: - Second Clutch (For spot fertilizing on the go)	Standard	Standard
Monitor - (Shaft Motion (3), Bin Level (3), Fan Speed, Acre Tally, Ground Speed)	Standard Optional Seed Flow	Standard Optional Seed Flow
Work Switch (Mounted to Seeding Machine)	Optional (Ground Drive Only)	Optional (Ground Drive Only)
Rear Tow Hitch	Standard (Max 26,000 lb Draft Load) (Max 11,818 kg Draft Load)	Optional (Max 15,000 lb Draft Load) (Max 6,818 kg Draft Load)
Mechanical Acre Meter	Optional (Ground Drive Only)	Optional (Ground Drive Only)
Hitch Stand	N/A	Optional

Hitching



Caution

A safety chain will help control towed machines should it accidentally separate from the drawbar while transporting. A runaway machine could cause severe injury or death. Use a safety chain with a strength rating equal to or greater than the gross weight of the towed machines.



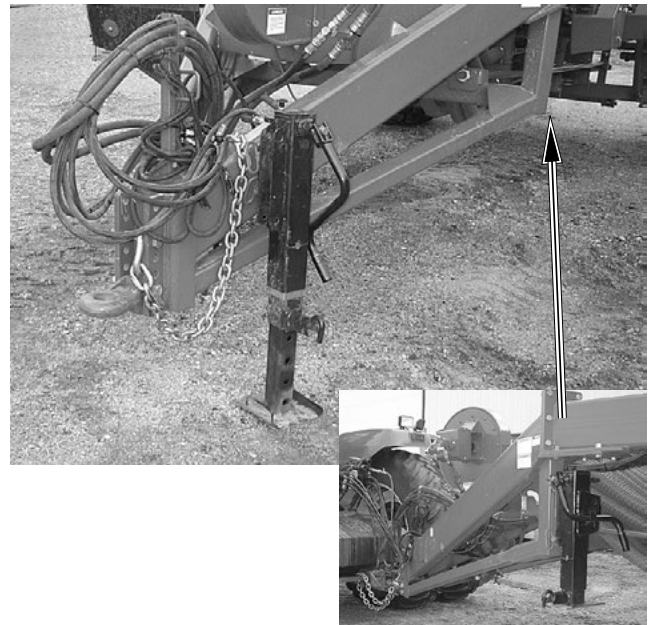
Attach safety chain to the tractor drawbar support or other specified anchor location with the appropriate parts.

Hitching to Tractor (Seeding Tool or Tow Between Cart)

- Ensure swinging drawbar is locked in the centre position.
- Ensure hitch pin is in good condition.
- Level clevis with tractor drawbar using hitch jack.
- Back tractor into position and attach hitch clevis to drawbar, using an adequate hitch pin.
- Lock hitch pin in place with a hairpin or other proper locking device.
- After tractor to implement connection is made, relieve pressure off the hitch jack.
- Place hitch jack in raised position.
- Route Safety Chain through chain support and drawbar support.
- Lock safety hook onto chain.

Note: Provide only enough slack in chain to permit turning.

- Ensure hydraulic hose quick couplers are dirt free.
- Inspect all fittings and hoses for leaks and kinks. Repair as necessary.
- Connect the hydraulic hoses to the tractor quick couplers.



Caution

Dirt in the hydraulic system could damage O-rings, causing leakage, pressure loss and total system failure.

Operation

Hitching to Tractor (Seeding Tool or Tow Between Cart) - continued

Tractor Drawbar Requirements

Tractor drawbar vertical load requirements for loaded Tow Between Air Carts are as follows:

8240.....	5,200 lbs (2,364 kg) minimum
8240/Third Tank.....	7,500 lbs (3,410 kg) minimum
8300.....	6,200 lbs (2,818 kg) minimum
8300/Third Tank.....	8,500 lbs (3,864 kg) minimum
8336.....	8,500 lbs (3,864 kg) minimum
8370.....	8,500 lbs (3,864 kg) minimum
8370/Third Tank.....	11,000 lbs (5,000 kg) minimum
8425.....	11,000 lbs (5,000 kg) minimum

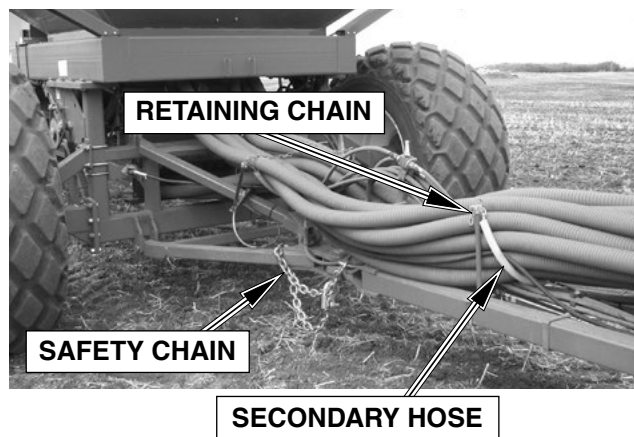


Hitching to Seeding Tool (Tow Between Cart)

- Connect Air Cart to tractor.
- Back Air Cart into position, aligning seeding tool hitch with seed cart.
- Attach hitch to Air Cart with 1 1/2" x 6 1/2" pin and retain with a 1/4" hair pin.
- Attach Safety Chain to Air Cart.

Note: Provide only enough slack in chain to permit turning.

- Connect hydraulic hose quick couplers.
- Connect the primary hose couplers.
- Loop retaining chain around the primary hoses with the secondary hose over the bottom half of the chain.



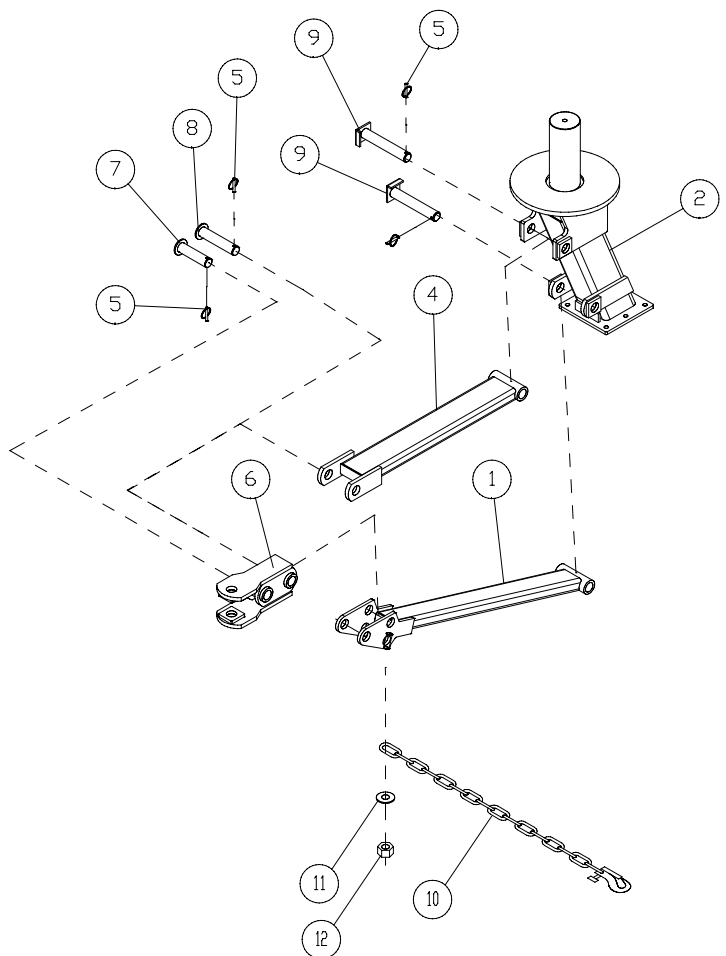
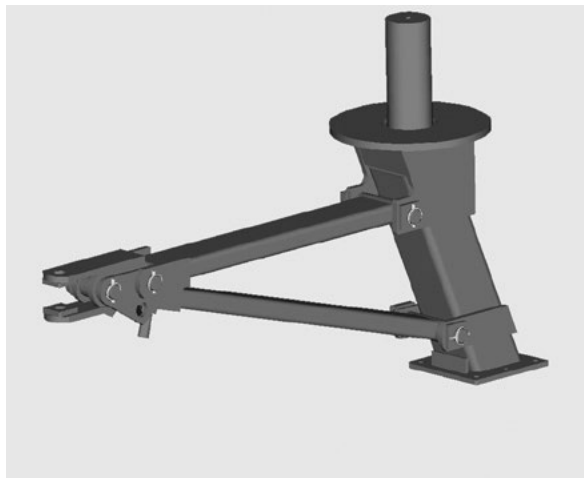
Hitching Front Castor (Tow Behind)

8336 and 8425

- Assemble hitch components to the front castor axle as shown in the accompanying diagram. Item (7) is 1 1/2" x 5 1/8" lg pin. Item (8) is 1 1/2" x 6 7/16" lg pin and Item (9) is 1 1/2" x 8 3/8" lg pin.

Note: Pin item (9) holding item (4) cannot be installed or removed with the wheel assembly mounted.

- Assemble safety chain to item (1) using 1" Unitorque nut and 1 1/16" ID Flat Washer.

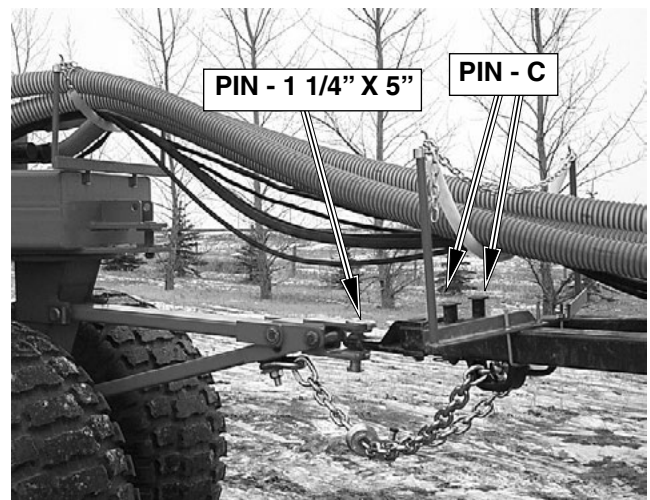
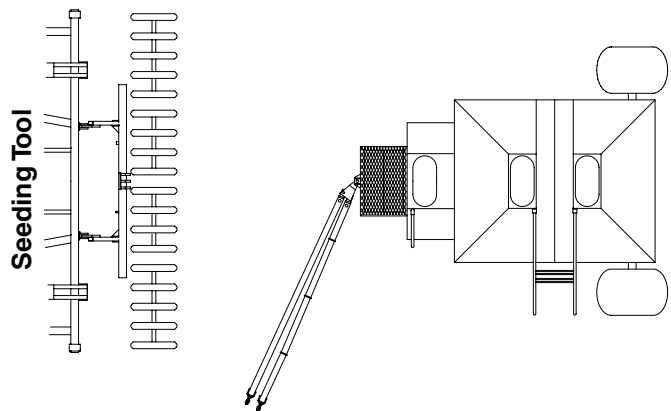


Operation

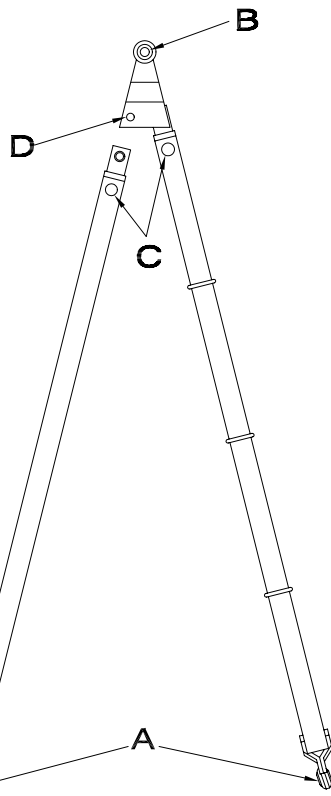
Hitching to Seeding Tool (Tow Behind Cart)

- Connect seeding tool to tractor.
- Attach hitch to Air Cart with 1 1/4" x 5" pin.
- Back seeding tool into position with Air Cart.
- Extend the telescopic hitch arms and connect the Air Cart to seeding tool using 1 1/8" x 3 11/16" pins.
- Block the tires of the Air Cart and insert the 1" x 5 13/32" pins into their bushings.
- Slowly back seeding tool toward Air Cart until the telescopic arms are fully retracted and the pins drop through the hitch tube locking the hitch poles.
- Retain the pins with Click Pins.
- Attach Safety Chain to seed cart.

Note: Provide only enough slack in chain to permit turning.

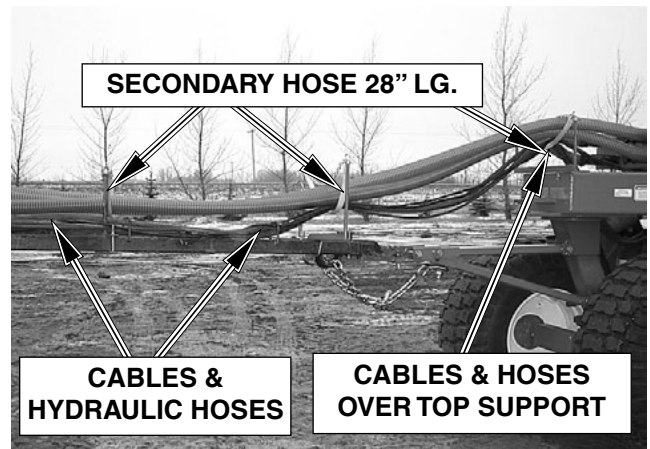


Pin Size	
A	1 1/8" x 3 11/16"
B	1 1/2" x 5 5/8"
C	1" x 5 13/32"
D	1" x 3 3/4"

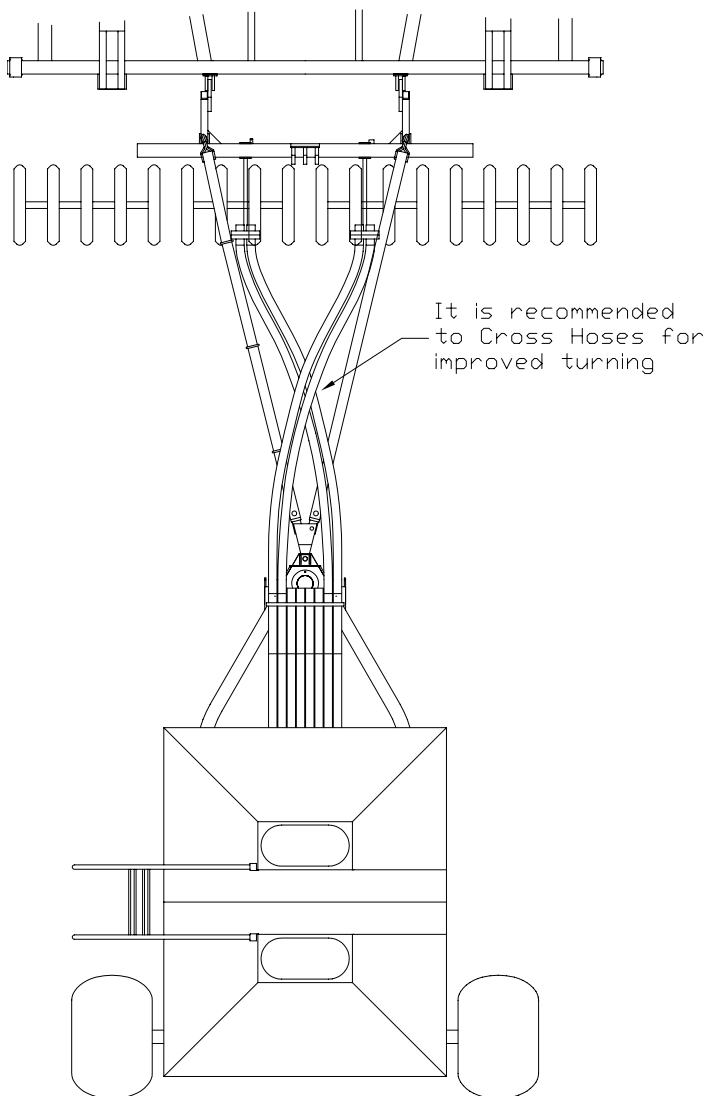


Hitching to Seeding Tool (Tow Behind Cart) - continued

- Route clutch and monitor wires and hydraulic lines through rear retaining chain with the secondary hose over the bottom half of the chain.
- Route clutch and monitor wires through the loops on the left hand hitch pole.
- Route the hydraulic lines (if any) through the loops on the left hand hitch pole.
- Connect the primary hose couplers.
- Loop retaining chain around the primary hoses with the secondary hose over the bottom half of the chain.
- Connect the monitor and clutch quick connectors at both the tractor/seeding tool and the seeding tool/air cart connections.



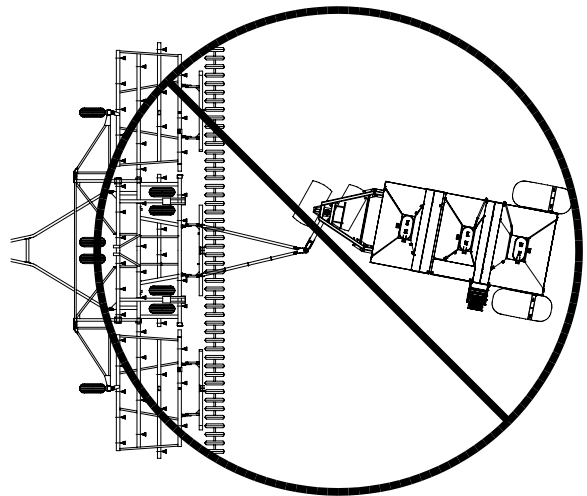
Hoses with correct amount of sag



Important

Extreme care is required when backing up unit.

Hitch damage will occur if castor jackknifes.



Primary Hose Coupler

Operation

Hitching to Seeding Tool (Tow Behind Cart) - continued

Hydraulic Connections

- Connect the monitor and clutch quick connectors at both the tractor/seeding tool and the seeding tool/air cart connections.
- **Hydraulic fan drive**, connect the fan hydraulic quick couplers at both the tractor/seeding tool and the seeding tool/air cart connections. Ensure couplers are clean and dirt free.

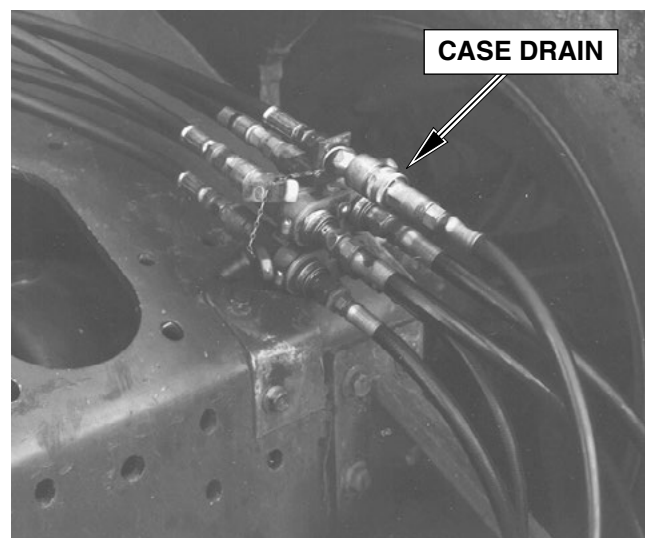


Seeding Tool Coupling

CAUTION

Hydraulic oil under pressure can penetrate the skin causing serious injury. Avoid personal injury by relieving all pressure, before disconnecting hydraulic hoses.

Note: The 3/8" diameter hose for fan motor case drain, must be run directly into the hydraulic tank otherwise damage will occur to the seal in the motor. If the hose is run through the filler cap then ensure the cap is **VENTED**. A quick coupler can still be used between the tractor and the seeding tool.



Hydraulic Coupling on Tractor

Unhitching from Tractor (Seeding Tool or Tow Between Cart)

- Pin hitch jack in working position.
- Lower hitch jack taking the weight off the air cart clevis.

Note: For added safety it is recommended to unload any material that may be in the tanks.

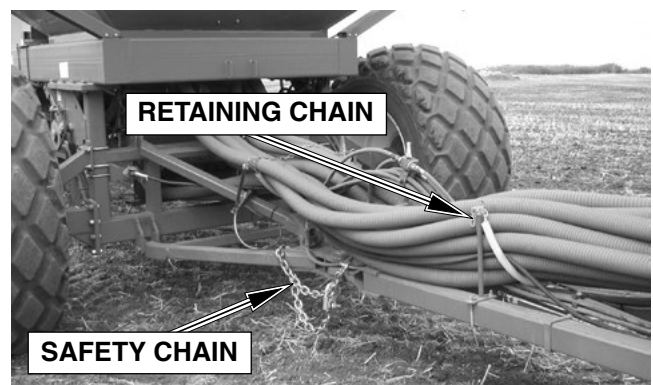
- Ensure all transport locks are properly secured. Refer to seeding tool manual for more details.
- Relieve pressure in the hydraulic hoses by positioning tractor hydraulic lever in “float” position or turn tractor engine off and cycle lever back and forth several times.
- Disconnect the hydraulic hoses.
- Disconnect the clutch and monitor cables.
- Remove the safety chain.
- Remove the drawbar pin.
- Slowly move tractor away from seeding tool or tow between cart.



Tow Between Cart

Unhitching from Seeding Tool (Tow Between Cart)

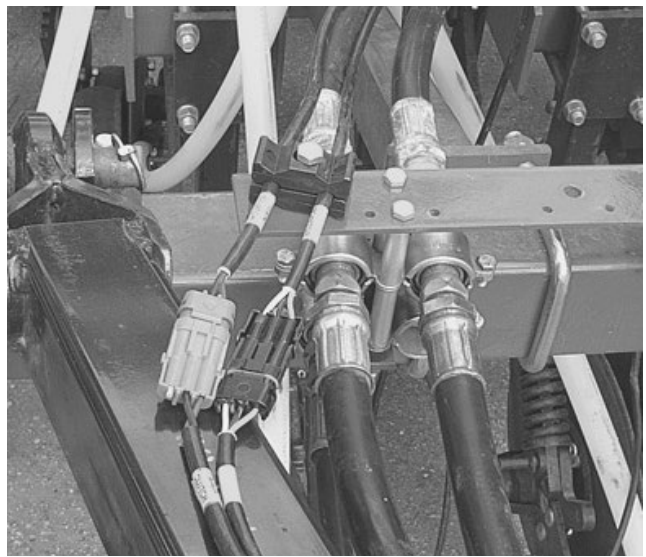
- Lower hitch jack taking the weight off the seeding tool hitch poles.
- Relieve pressure in the hydraulic hoses by positioning tractor hydraulic lever in “float” position or turn tractor engine off and cycle lever back and forth several times.
- Disconnect the primary hose couplers.
- Disconnect the hydraulic hoses.
- Remove the hitch pin.
- Slowly move seed cart away from seeding tool.



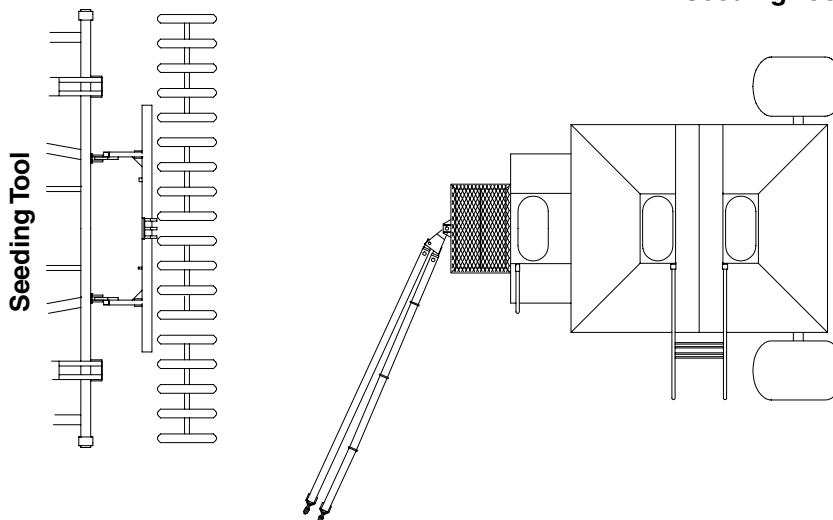
Operation

Unhitching from Seeding Tool (Tow Behind Cart)

- Lower hitch stands, if so equipped, taking the weight off the hitch poles.
- Relieve pressure in the hydraulic hoses by positioning tractor hydraulic lever in “float” position or turn tractor engine off and cycle lever back and forth several times.
- Disconnect the primary hose couplers.
- Disconnect the hydraulic hoses.
- Disconnect the clutch and monitor cables.
- Remove the hitch pins.
- Move hitch poles to the side of seed cart, if not equipped with hitch stands.
- Slowly move seeding tool away from seed cart.



Seeding Tool Coupling



Transport

Observe all of the safety precautions under transport heading in Safety, Section 1.

- Refer to Specifications, Section 2 for weight, transport height and width.
- Transport with tractor only!
- Use Tow Hitch when transporting without seeding tool. (Tow Behind Units)
- Always connect safety chain provided to the towing vehicle and the hitch of the seed cart.
- Do not transport with the fan running.
- Disconnect main drive chain when towing air cart a long distance.
- Ensure all transport pins are secured.

MORRIS INDUSTRIES LTD. WILL NOT BE RESPONSIBLE FOR ANY DAMAGES OR OPERATOR INJURY RESULTING FROM NON-USE OR IMPROPER USE OF TRANSPORT LOCKS.

Speed

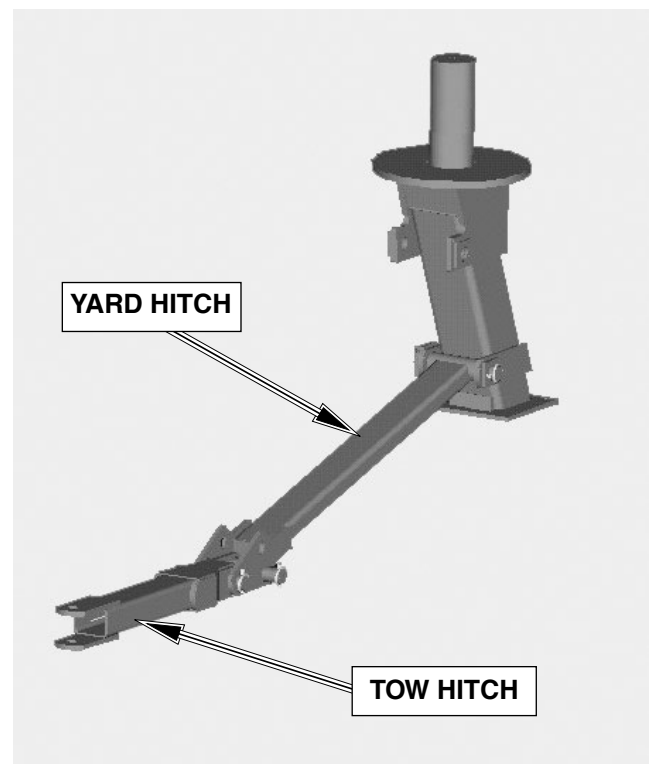
- Always travel at a safe speed. Do Not Exceed 20 M.P.H. (32 kph) with an empty air cart.
- The combined weight of the implements being towed, including material in tank, **must not exceed 1.5 times** the weight of towing vehicle.
- **REDUCE SPEED** with material in tank. **Do Not** Exceed a speed of 10 M.P.H. (16 kph).
- Use additional caution when towing loads under adverse surface conditions, when turning, and on inclines.

Lights

- Ensure proper reflectors are in place, refer to Safety Section 1.
- Be familiar with and adhere to local laws.

Tow Hitch (Tow Behind Units)

- Disconnect main hitch and remove the two pins connecting the hitch tube to the yard hitch tube.
- Attach hitch clevis to the yard hitch tube with two 1 1/2" x 5 1/8" and 1 1/2" x 6 7/16" pins.
- Retain the pins with klik-pins.
- Use tow hitch when towing without seeding tool.
- **Do not** use transport hitch with material in tank.



Tow Hitch

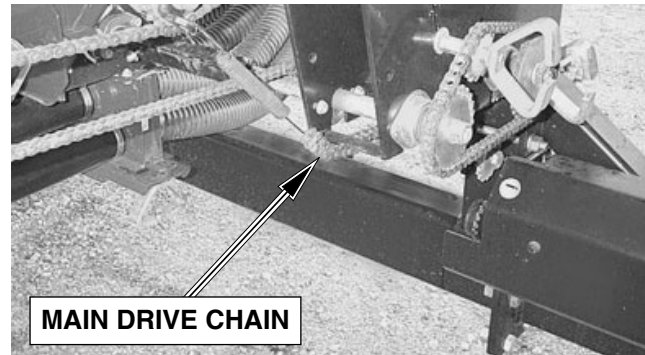
Operation

Transport - Continued

Disconnect Main Drive Chain

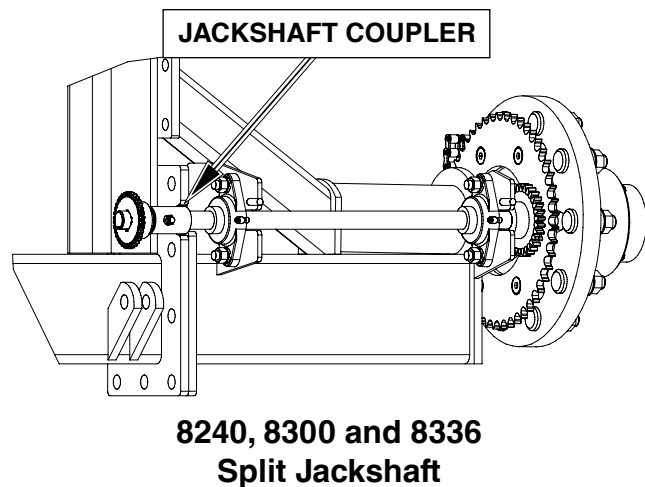
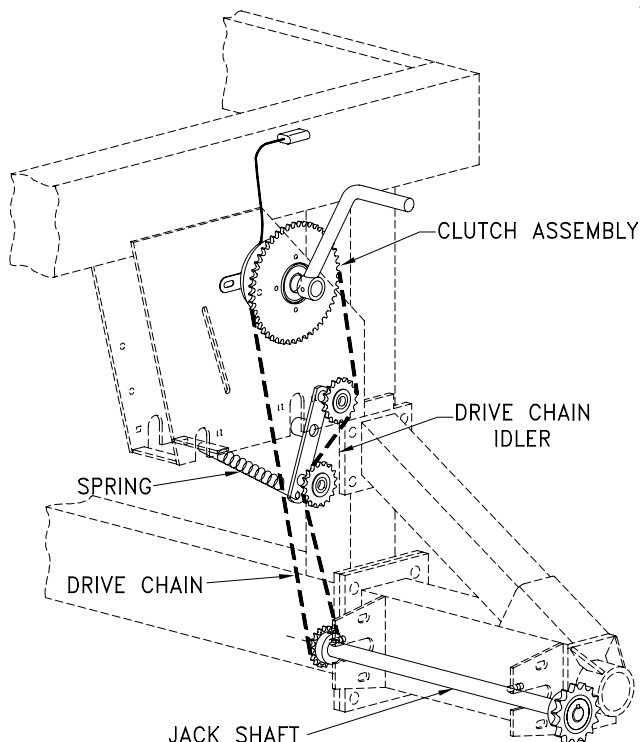
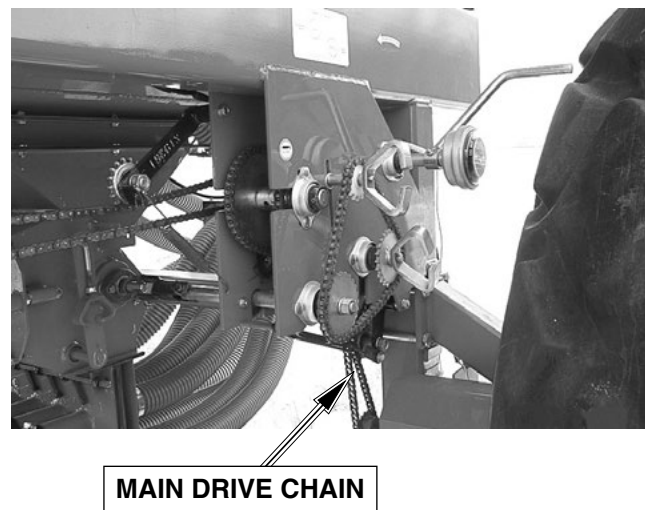
When traveling any distance the drive chain should be removed to prevent premature wear on the drive.

- Remove spring from the bottom idler.
- Remove chain from the jackshaft. Units equipped with 26" diameter rims will require the jackshaft to be split at coupler in order to remove chain.
- Insert end of spring through the chain and hook other end of spring to the top idler as shown.



Installation of Main Drive Chain

- Unhook idler spring.
- Position chain on the jackshaft and idler sprockets as shown. Units equipped with 26" diameter rims will require the jackshaft to be split at coupler in order to install chain.
- Connect idler spring to transmission brace with idlers as shown.



Metering System

The EIGHT Series Air Cart uses a combination of metering wheels and spacers shown below. The metering wheel is individually sized to correspond to the number of outlets at the connected secondary head and the spacers make up the space between the wheel and the body. Some openings may be blanked off depending on the number of secondary divider heads used on the seeding tool.

The EIGHT Series Air Cart can meter all types of seeds and fertilizers by simply installing the correct seed plate. See "Seed Plate Settings" for more details.

Different rates are easily obtained using the selection of quick change sprockets that attach to either of the two meter transmissions.

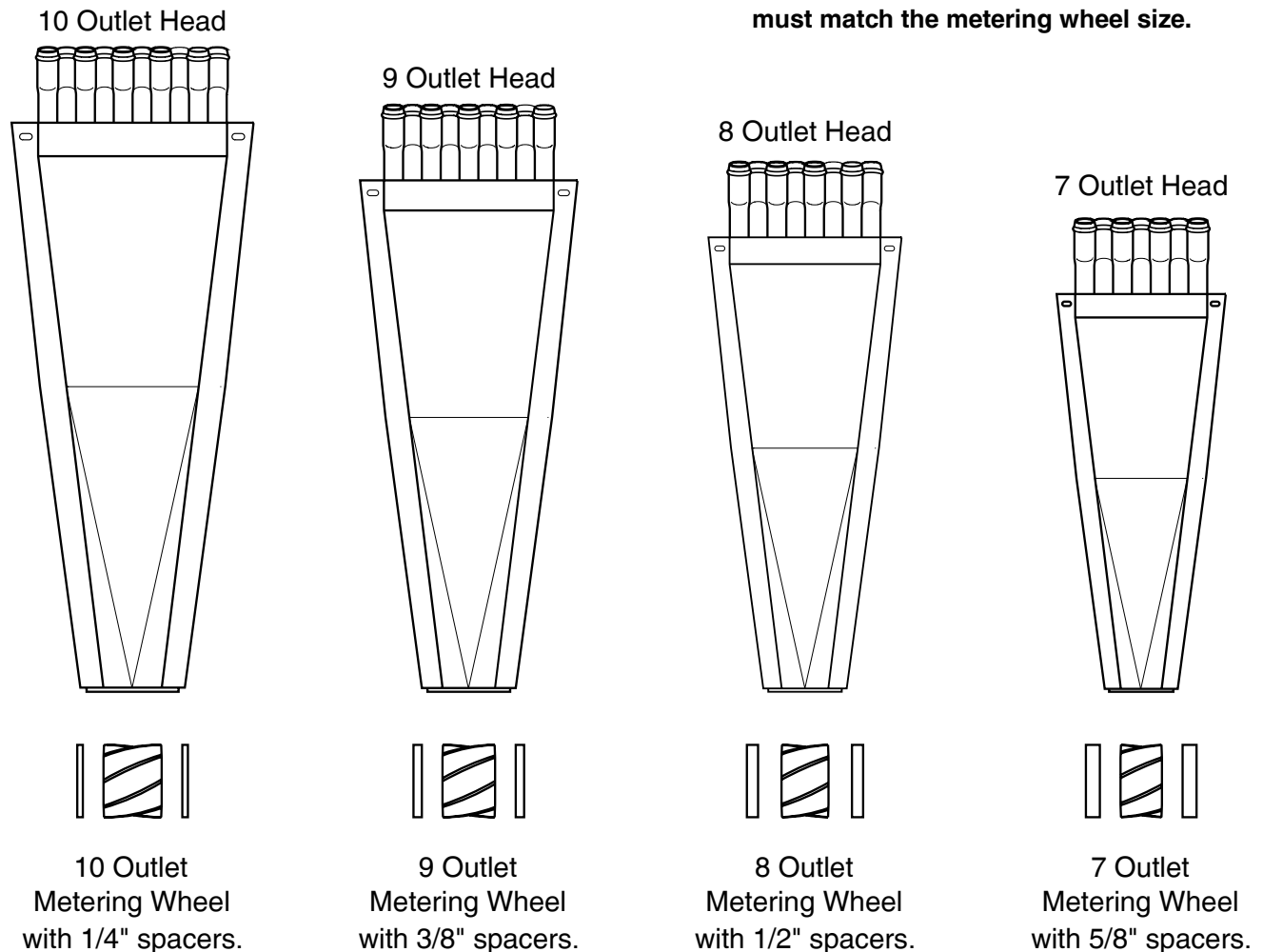
Note: Before putting product into the tanks check the following:

- (a) The correct Seed Plates are installed for the product being applied.
- (b) The Clean-out doors are fully closed and sealed.
- (c) The plastic bag covering the fan is removed.

Important

Ensure distribution system is balanced. It is very important that head outlets only vary by one . (i.e. use only 7 and 8 together, 8 and 9 together, 9 and 10 together)

Note: The number of outlets on the divider head must match the metering wheel size.



Operation

Metering System - Continued

Secondary Hose Installation

The lengths of the 15/16" (24 mm) diameter hoses are **very important**.

For Accurate distribution the secondary hoses have to be arranged by length symmetrically about the centre line.

The **longest** hoses **have to be** in the **centre** of the divider head. These hoses would normally feed the openers furthest away from the head.

- Ensure that the secondary hoses 15/16" (24 mm) diameter do not run higher than 3" (76 mm) above the height of the flat fan divider head.
- Allow an extra 3" (76 mm) of hose before cutting secondary hose for fitting in the seed boot.
- Always ensure that the secondary hoses are sufficiently long to accommodate tripping of trips.
- **Avoid sharp bends** in any of the hoses.
- Check for pinch points and clearances when folding in and out of transport.

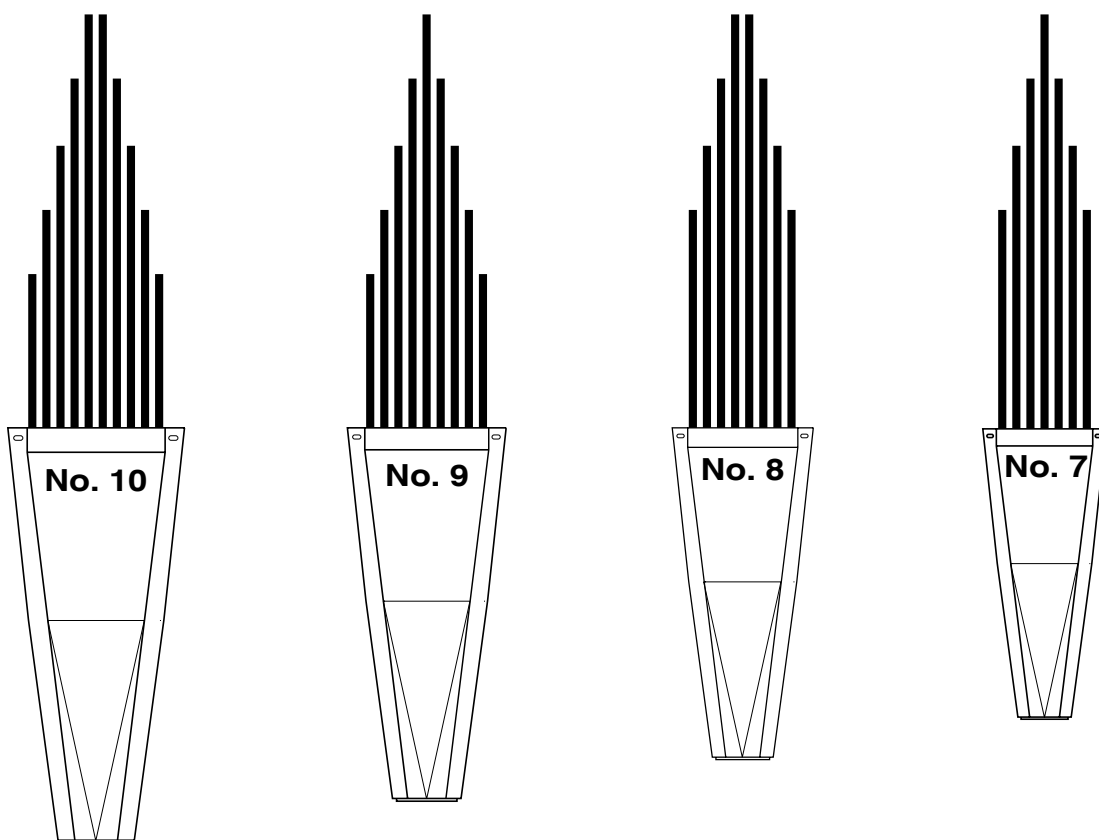
Important

Hot water is the only acceptable lubricant for the installation of the secondary hose.

The supplier advised MORRIS that WD-40 or any other lubricant (i.e. liquid detergent) will have a negative effect on the chemical stability of the hose, resulting in the degradation and failure of the hose due to Environmental Stress Cracking.

Important

Distribution uniformity will be adversely affected if hoses are incorrectly installed.



Metering System - continued

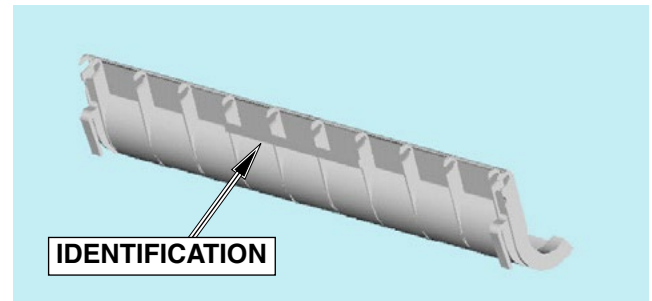
Seed Plate Sizes

The Seed Plate comes in 3 different sizes, fine, medium and coarse. Each Seed Plate is designed for use with specific product types. The coarse seed plate is offered in two versions - standard and coated. The coated seed plate is recommended for DAP fertilizers.

The three different Seed Plates allow all types of seeds and fertilizers to be metered.

The Seed Plate has only one position, fully closed against the back plates assembled to the metering body.

The Seed Plates are identified by an inscription (FINE, MEDIUM, or COARSE) on the back.



Seed Plate

Seed Plate Usage	
Product	Seed Plate
Canola Canary Seed Clover/Alfalfa Flax Mustard Nitragin Edge Fortress Rival	Fine
Barley Lentils Milo Oats Rice Wheat Safflower Nodulator Tag Team Fine Fertilizer (no Sulphur or Potash) 28-0-0 Fertilizer 46-0-0 Fertilizer 34-17-0 Fertilizer 20.5-0-0-24 Fertilizer	Medium
Beans Peas Soybeans Sunflowers 0-0-60 Fertilizer 0-45-0 Fertilizer 10-46-0-0 Fertilizer 11-51-0 Fertilizer Fertilizers containing Sulphur and/or Potash	Coarse

Operation

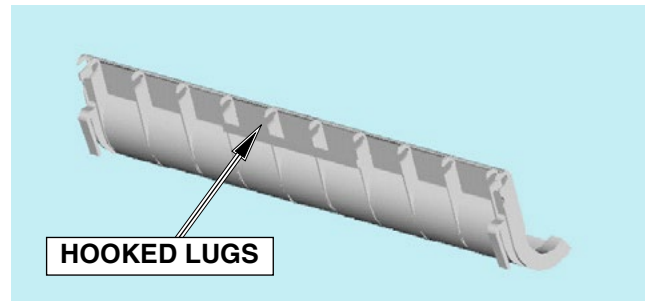
Metering System - continued

Seed Plate Installation

- Ensure Tank Shut-Offs are closed, if there is product in the tanks.

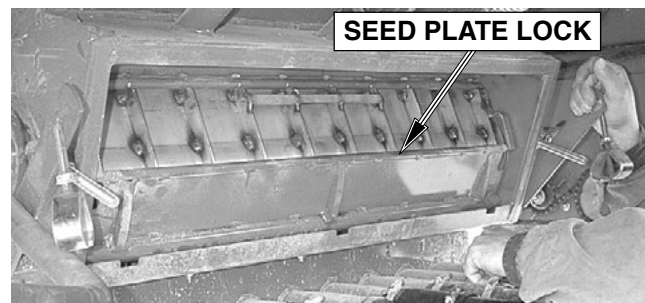
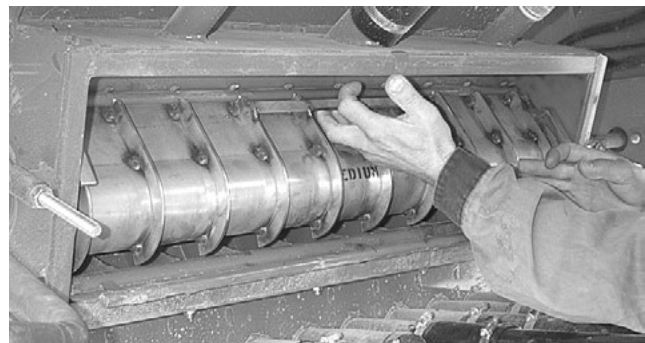
Note: Tank Shut-Offs are only for use when inspecting/servicing meter body with product in tank.

- Install Seed Plate with hooked lugs to the top of the metering body.
- Rotate Seed Plate towards the metershaft with top part of Seed Plate hooked to the shaft running through the top of the meterbody.
- Let the Seed plate hang in metering body.
- Rotate Seed Plate Locking Plate up to push seed plate against the back plate.
- Install the “J” Bolts into the slotted lug welded to the meterbody and tighten the wing nuts. **Do not** adjust the flange nuts on the “J” Bolts. These nuts are preset on assembly. Refer to Maintenance Section under “Seed Plate Adjustment” for details.
- Ensure Tank Shut-Offs are opened.



HOOKED LUGS

Seed Plate

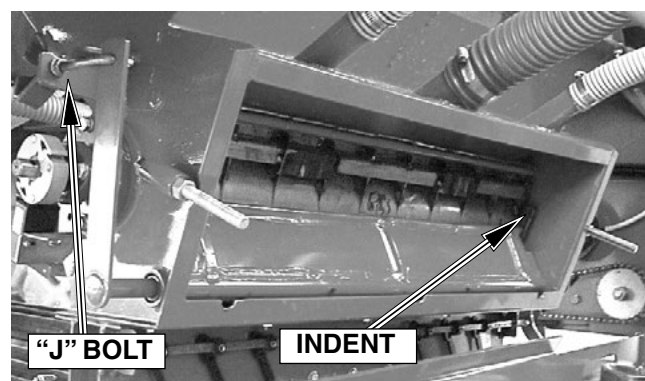


SEED PLATE LOCK

Important

Seed Plate Position

Once “J” Bolt wing nuts are tightened, indents in the side plates should just be visible in the slotted area of the hook.

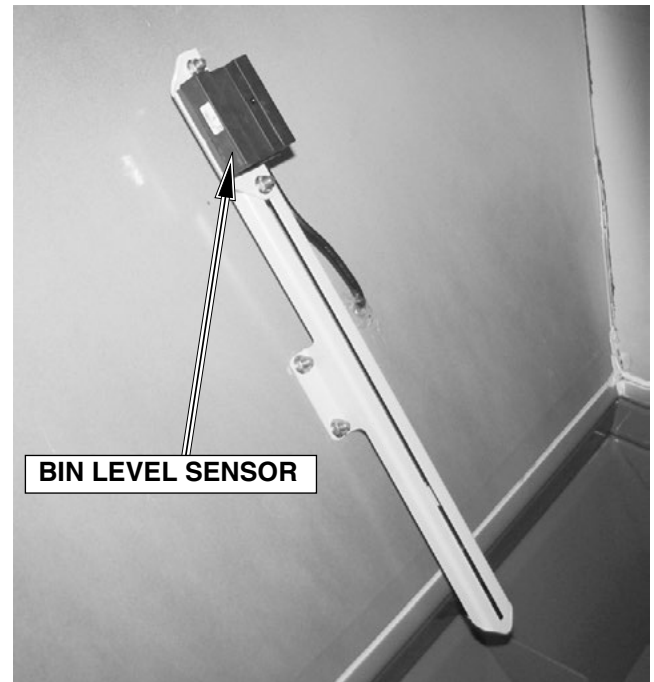


“J” BOLT

INDENT

Bin Level Adjustment

- Adjust bin level sensor to desired alarm point.
 - Top Position for large seeds, high rates of fertilizer.
 - Middle Position for cereal grains.
 - Lower Position for fine seeds.



Filling Tank

The Morris EIGHT Series Air Cart is equipped with 2 or 3 tanks. The front tank is for seed and the middle and rear tank is for fertilizer. However, ALL tanks can be used for the same product.

The capacity of the Air Cart Tanks are listed in the tank capacity chart.

Tank Capacity				
Model	Front Tank	Middle Tank	Rear Tank	Total Capacity
8240	Optional 64 bu 79 cu ft 2,249 litres	89 bu 110 cu ft 3,129 litres	150 bu 186 cu ft 5,278 litres	239 bu 296 cu ft 8,407 litres
8300	Optional 64 bu 79 cu ft 2,249 litres	113 bu 141 cu ft 3,991 litres	186 bu 231 cu ft 6,537 litres	299 bu 372 cu ft 10,528 litres
8336	96 bu 120 cu ft 3,386 litres	89 bu 110 cu ft 3,129 litres	150 bu 186 cu ft 5,278 litres	335 bu 416 cu ft 11,793 litres
8370	Optional 64 bu 79 cu ft 2,249 litres	174 bu 218 cu ft 6,184 litres	186 bu 231 cu ft 6,537 litres	360 bu 449 cu ft 12,721 litres
8425	120 bu 150 cu ft 4,236 litres	113 bu 141 cu ft 3,991 litres	186 bu 231 cu ft 6,537 litres	419 bu 522 cu ft 14,764 litres

Operation

Filling Tank - Continued

- Open lid fully on tank being filled.
- Check and remove any debris inside tank.
- Remove clean-out door.
- Remove Seed Plate.
- Check for debris inside metering body.
- Ensure Tank Shut-Offs work freely.

Note: Tank Shut-Offs are only for use when inspecting/servicing meter body with product in tank.

- Check that the correct Seed Plate is installed for the product being applied.
- Fully close and seal the Clean-out door.
- Ensure the auger screen is in place.
- Always use screen to filter debris when filling.
- Adjust bin level sensor to desired alarm point.

Note: Even small fertilizer lumps can cause problems with plugging. All possible precautions should be taken to prevent lumpy fertilizer from entering the tank.



Warning

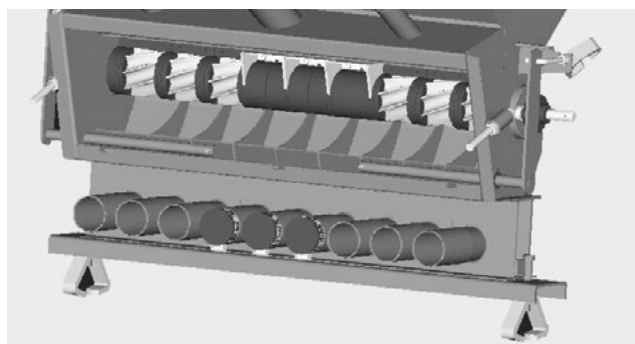
Do not enter tank unless another person is present.



Important

Before putting product into the tanks check the following:

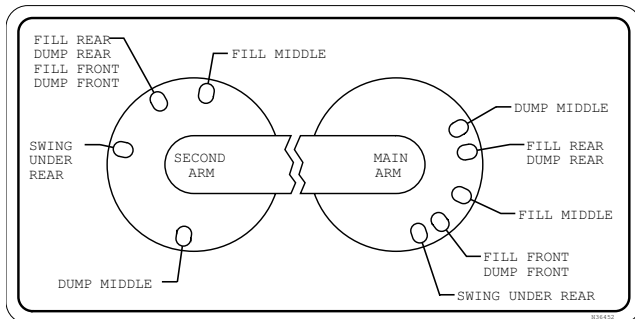
- (a) The correct seed plate is installed for product being applied.
- (b) The clean-out doors are fully closed and sealed.
- (c) The plastic bag covering the fan is removed.
- (d) Inspect all augers used in handling the products for seeding. Run augers to clean out any debris inside auger so it does not get transferred to air cart tanks.



Inspect Metering Body

Filling Tank - Continued

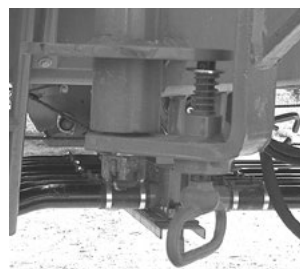
- Unlatch front auger lock.
- Unlatch Auger Arm lock.
- Refer to decal on auger arm for auger arm positions.
- Ensure lock pins are unlocked to allow free movement of the arm.
- Unlatch the auger from its transport position.
- Swing out the auger. Engage Auger Arm lock pins into position for the tank to be loaded.



Auger Arm Decal



Auger Arm Lock Pin - Unlocked



Auger Arm Lock Pin - Locked



Style 1 - Arm Lock



Style 2 - Arm Lock



Operation

Filling Tank - Continued

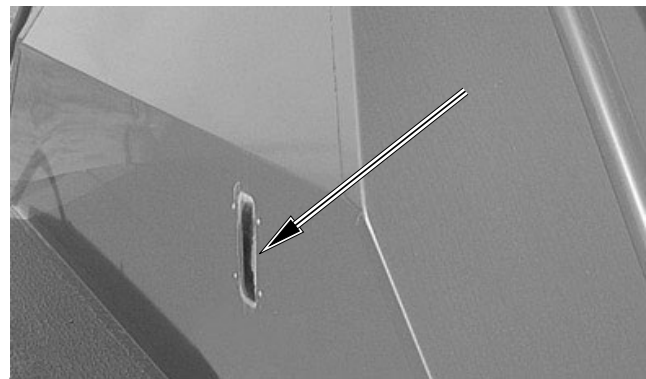
- Open lid on tank to be filled and place auger spout in tank.
- Back truck to the hopper and engage the hydraulic motor on the auger.
- Ensure selector valve is in correct position for auger operation and engage tractor hydraulics.
- Auger product into tank until product is visible in site glass.
- Stop the flow of product into the auger and allow auger to empty. The tank should be close to full.
- Auger operation can be controlled from either the top or bottom of the auger.



Remote Auger Control



Auger Positioned



Site Glass

Important

Do not exceed 10 m.p.h. with tanks full.



Selector Valve

Filling Tank - Continued

- Clean lid seal and ensure lid seal is positioned correctly before closing tank lid.
- Reverse auger flow to clean out the hopper, screen maybe removed for easier cleanout.



Auger screen removed



Auger screen installed

- Reinstall auger screen.
- Place ladder in transport position.
- Unlock auger arm locks.
- Secure auger in transport position.
- Lock auger arm lock and front auger lock.
- Remove the plastic bag covering fan.
- Check lid for air leaks with your hands once Air Cart fan is operational. See Maintenance Section 7.
- Check metering body for air leaks.

Note: Before seeding it is recommended that after a rain or dew that fan be run for a few minutes to eliminate moisture in the system.



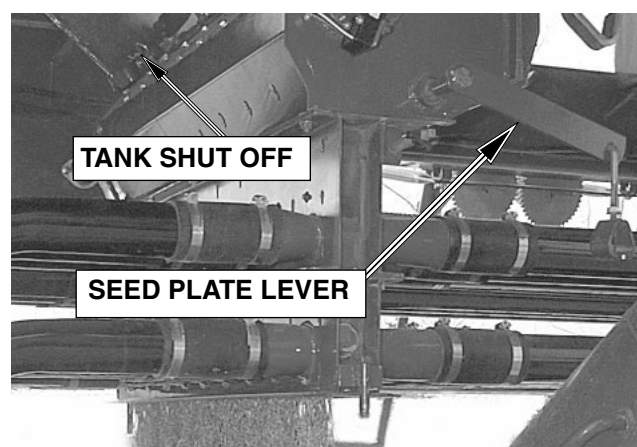
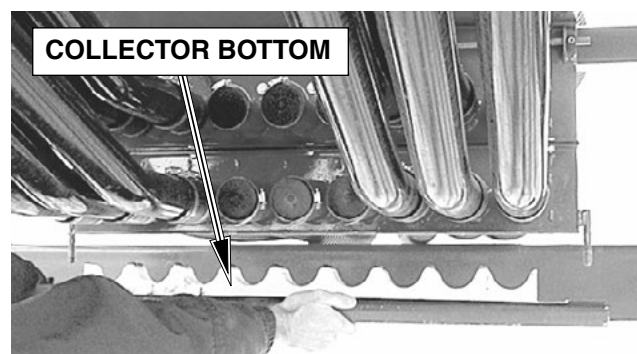
Auger locks

Operation

Unloading Tanks

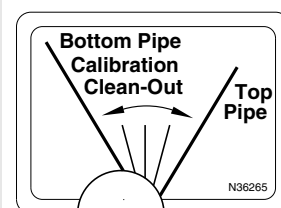
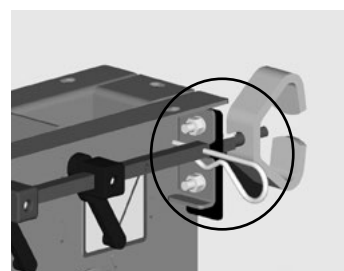
Emptying tanks is quick and easy to do.

- See auger arm decal for lock pin location.
- Position auger under the tank to be emptied. **Note:** Right Side ladder must be in transport position to empty rear tank.
- Remove Collector Bottom.
- Move flapper valves to “**Clean-Out**” position on the collector body. (**Double Shoot Only**)
- Start auger.
- Open Seed Plate to allow material to flow through the metering body into the auger. **DO NOT** open the Inspection Door on the meterbody.
- Once all material stops flowing, move “Shut-off” levers in and out a few times to dislodge any product and ensure free movement.
- Remove meterbody Inspection Door and Seed Plate completely.
- Rotate meter shaft using crank to empty meterwheel flutes.
- Brush out remaining material in the corners and on top of the back plate.
- Reset flapper valves to correct position for product delivery. Ensure that the flapper settings are correct. This can be done by visually checking that the flappers are fully over and touching the side walls, sealing off the individual airstreams. The flappers can be adjusted by loosening the individual adjusting setscrews and applying pressure to the flapper forcing it against the side wall while tightening the setscrew.
- Reinstall correct Seed Plate for product being metered.
- Reinstall Inspection door and Collector Bottom ensuring that the seals are free from leaks.



Danger

Keep all shields in place. Keep hands, feet and clothing away from auger intake, failure to do so will result in serious injury or death.



Collector Valve Double Shoot Only

Decal on Collector

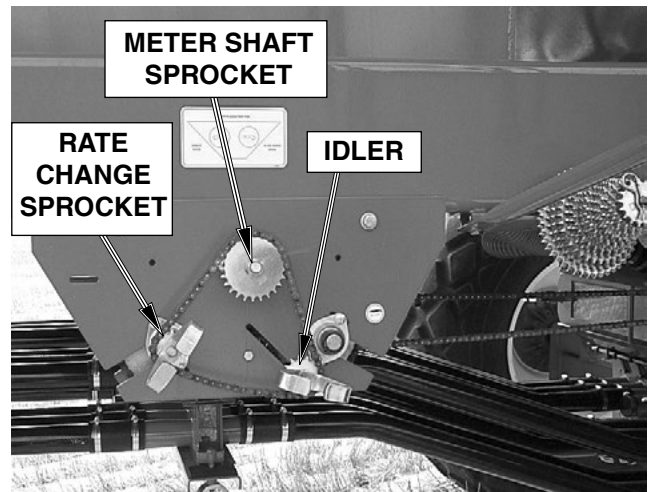
Metering Rate Adjustment

The metering rate adjustment for all tanks is done in the same manner. The rate varies with the speed of the metering wheels. A new rate is achieved by changing a sprocket on the Posi-Drive Transmission.

Refer to the rate charts for desired application rate and sprocket selection.

- Loosen metering chain on posi-drive transmission, by loosening the idler.
- Spin off wing nut and remove rate change sprocket.
- Install desired rate change sprocket and tighten wing nut.
- Tighten chain by adjusting idler.

Note: Do not over tighten chain, just take slack out of chain.



Acre Tally

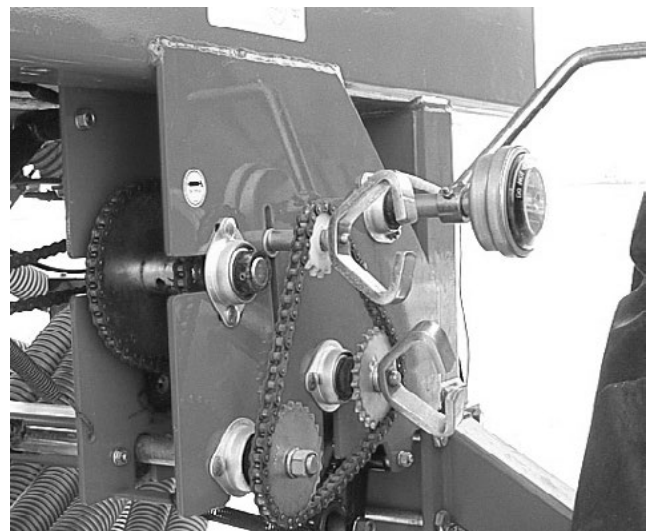
To convert the acre tally reading (T) into the actual acres seeded turn to the Crank Calibration Table page to get the acre tally factor (F) for the Air Cart/Seeding Tool width being used. Take the acre tally reading (T) and multiply it by the acre tally factor (F) to get the actual acres seeded.

$$T \times F = \text{Actual Acres Seeded}$$

Example: A 8425 with AWT Tire with a 41 foot seeding tool has an acre tally reading (T) of 100. The acre tally factor (F) is 5.91 from Calibration Chart.

$$T \times F = \text{Actual Acres Seeded}$$

$$100 \times 5.91 = 591 \text{ Acres}$$



Operation

Rate Charts

Spacing Sprocket

The rate chart applies to all spacings listed below.

Check that the correct spacing sprocket is installed on your machine. This sprocket is located on the inner side of the rear transmission on the clutch output shaft.

The spacing sprocket must be matched to the seeding tool trip spacing.

Determining Spacing Sprocket

To determine spacing sprocket for other spacings not listed in the chart use the following equation:

$$\text{New Spacing Sprocket} = \left(\frac{\text{New Spacing}}{12"} \right) \times 20$$

The rate charts and drive rates are all based upon 12" spacing - 20 tooth sprocket.

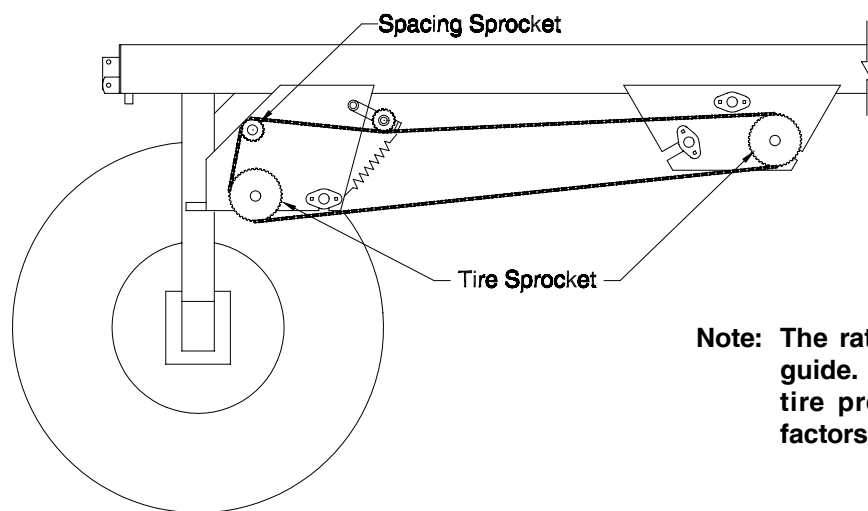
Note: Due to ratios of spacing the value may not be a whole number and should be rounded to nearest value.

Note: Incorrect spacing sprocket will cause inaccurate application rates.



Spacing Sprocket inside of Left Rear Frame

Spacing Sprocket	
Opener Spacing	Spacing Sprocket
7.2" (183 mm)	12 teeth
7.5" (191 mm)	12 teeth
8" (203 mm)	13 teeth
9" (229 mm)	15 teeth
10" (254 mm)	17 teeth
12" (305 mm)	20 teeth



Note: The rate charts should only be used as a guide. Variation in seed size, density, shape, tire pressure and wheel sinkage are all factors that can influence the seed rate.

Rate Charts - continued

Tire Size Sprocket

In conjunction with the spacing sprocket is the tire size sprocket as illustrated in the previous diagram.

Check that the correct tire sprockets are installed on your machine. These sprockets are located on the inner side of each transmission input shaft and are driven by the spacing sprocket.

The tire sprocket must be matched to the tire size of the air cart.

Determining Tire Circumference

Factors that may affect the tire circumference and in turn metering rates and monitor PP400 values are as follows:

- Manufacturing tire size tolerances can vary +/- 4%.
- Tire pressure.
- Field soil conditions (firm-unworked versus soft-worked)
- Tank capacity (empty tanks versus full tanks)
- Tire manufacturer (Good-Year versus Firestone)

Note: The values used for monitor PP400 values and tire size sprockets is based upon the tire circumference of Good-Year tires at proper pressure with half full tanks in normal working field conditions.

To determine tire sprocket for other tires not listed in the chart or to check the actual tire circumference use the following equation:

- The tire circumference should be checked under normal field conditions with tanks half full.
- Mark tire and starting point.
- Drive air cart 10 revolutions of tire.
- Mark ending point.
- Measure distance from starting point to ending point and divide by 10 to get the rolling circumference of the tire.

Note: Incorrect tire size sprocket will cause inaccurate application rates.

Important

Tire circumference affects metering accuracy. Tire Circumference should be determined for your field conditions by following procedure below. Then determine "New Crank Rotations" outlined under *Crank Calibration Table*. Also determine new "PP400" see "PP400 Calculation" in Monitor Section 6.

Tire Sprocket			
Tire Size	Tire Style	Rating	Tire Sprocket
23.1 x 26	AWT (Implement)	12 ply	26 teeth
23.1 x 26	Rice (TD8 Sure Grip)	10 ply	24 teeth
30.5 x 32	AWT (Implement)	12 ply	28 teeth
30.5 x 32	Lug (Dyna Torque II)	14 ply	28 teeth
800/65 R32	Radial (Dyna Torque)	L1 172	28 teeth

Imperial Measurement

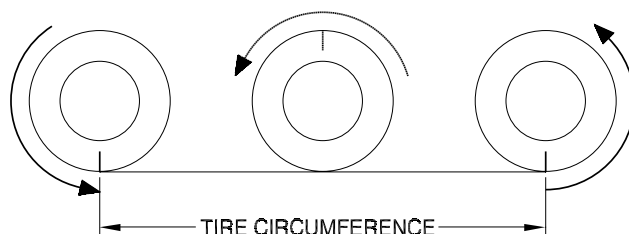
Tire Sprocket Size: (Ts)

For 26" Rim = $4360/T_c$

For 32" Rim = $5992/T_c$

Ts = _____

Tc = Tire Circumference measured in inches



Operation

Rate Charts - Continued

Rate Chart Use

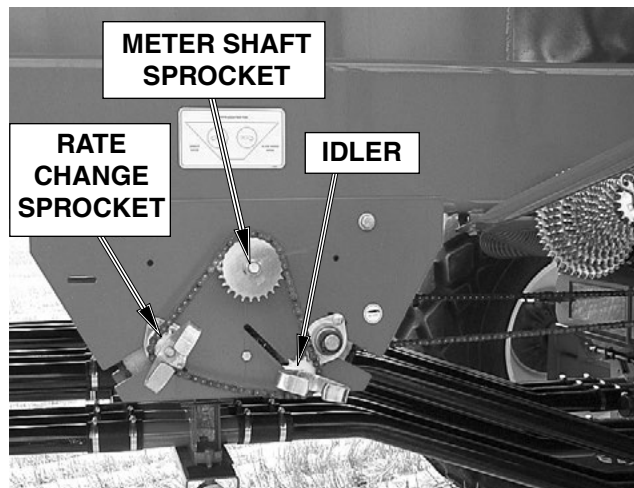
The rate chart applies to all spacings listed below.

The spacing sprocket must be matched to the seeding tool trip spacing see “*Spacing Sprocket*”.

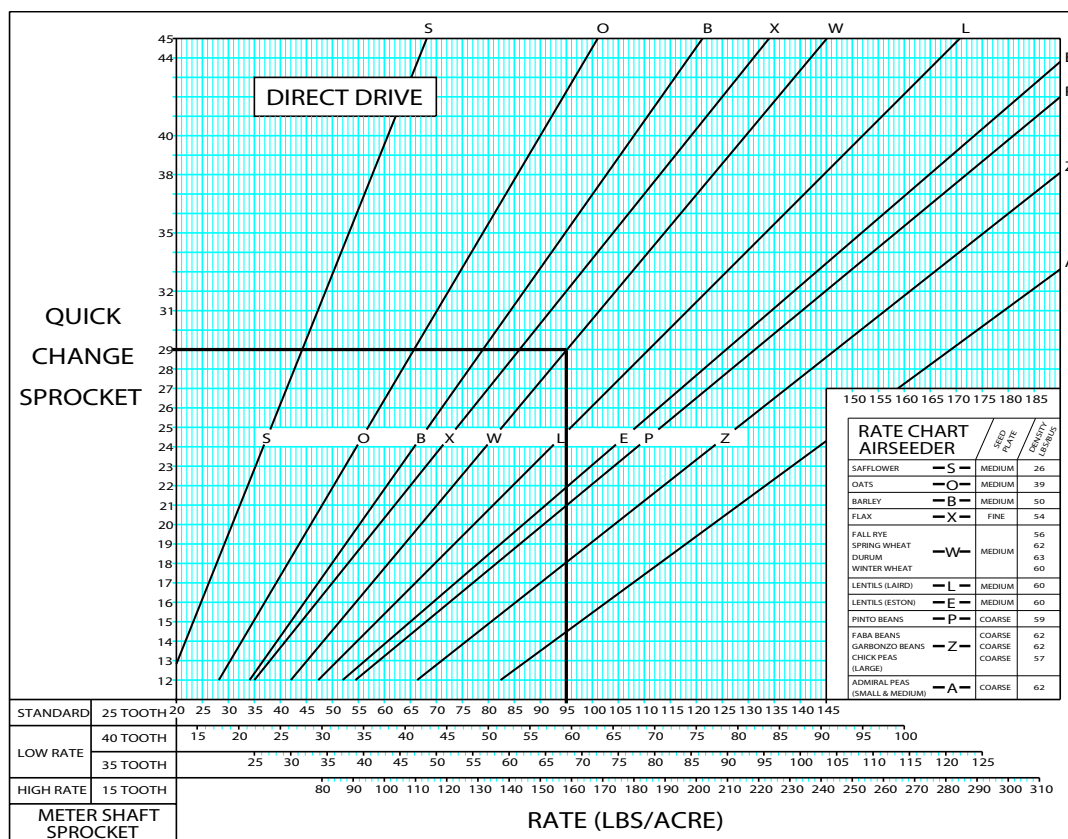
The charts should only be used as a guide. Specific rates can be achieved by using the rate check method as outlined under “*Rate Calibration*”.

To determine a seed/fertilizer rate from the chart:

- Go to the desired rate along the line marked “Standard” of a specific graph. (i.e. 95 lbs/acre of wheat)
- Go straight up from that point to where that line is intersected by the graph. This will give the sprocket size required to give the particular rate chosen.
- At this intersection go straight across to the vertical line of the graph. This will give the sprocket size required to give the particular rate chosen. (i.e. 95 lbs/acre of wheat requires a 29 tooth sprocket)
- Change the Quick Change Sprocket see “*Metering Rate Adjustment*”.
- Perform a rate check to confirm the seed rate see “*Rate Calibration*”.
- Repeat the above procedure for the other tank.
- For very low or very high rates, see next page *Extra Low Rates* and *Extra High Rates*.



Note: The rate charts should only be used as a guide. Variation in seed size, density, shape, tire pressure and wheel sinkage are all factors that can influence the seed rate.



Rate Charts - Continued

Extra Low Rates

Although the charts show a minimum rate of 35 lbs. per acre for fertilizer and 20 lbs. per acre for seed, sometimes this is not low enough, especially when product is being metered from both tanks.

Rates under the values mentioned can be achieved by replacing the standard 25 tooth meter shaft sprocket on the front of the transmission with either a 35 or 40 tooth sprocket.

The rates obtained when using the 35 and 40 tooth sprocket are shown on the rate charts beside the respective size sprocket.

When both tanks are being used to meter the same product then the 25 tooth sprocket on each transmission must be changed. Now both transmissions will have the same size *metershaft* sprocket.

The same metering chain can be used with these larger sprockets up to a certain size of quick change sprocket.

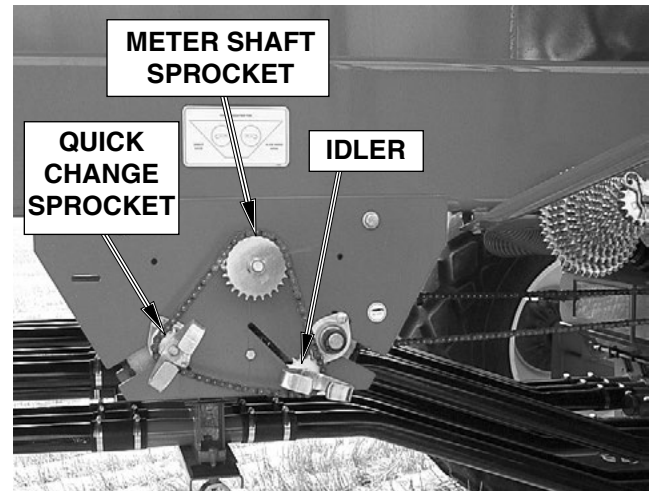
To determine a rate from the chart:

- Go to the desired rate along the line next to the size of metershaft sprocket used.
- Go straight up from that point to where that line is intersected by the graph line of the particular product being metered.
- At this intersection go straight across to the vertical line of the graph. This will give the sprocket size required to give the particular rate chosen.
- Change the quick change sprocket and repeat the rate check to confirm the seed rate.
- Repeat the above procedure for the other tanks.

Extra High Rates

In areas where higher rates of product are required the metershaft sprocket is changed from the standard 25 tooth to a 15 tooth.

Use the method described under EXTRA LOW RATES to determine the required metering rate.

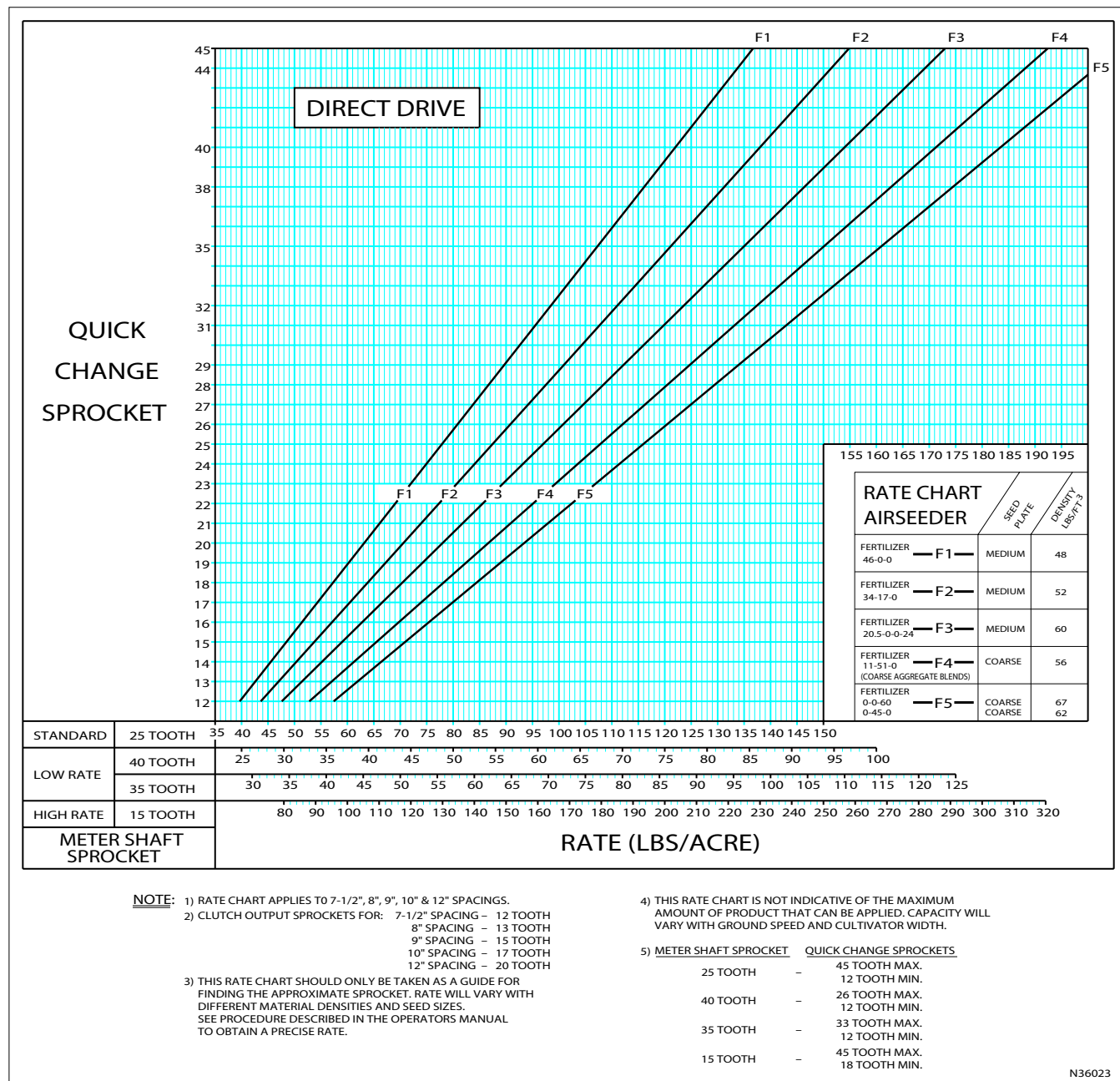


Rate	Metershaft Sprocket Size	Maximum Size of Quick Change Sprocket	Minimum Size of Quick Change Sprocket
Standard	25 Tooth	45 Tooth	12 Tooth
Low Rate (1)	35 Tooth	33 Tooth	12 Tooth
Low Rate (2)	40 Tooth	26 Tooth	12 Tooth
High Rate	15 Tooth	45 Tooth	18 Tooth

Operation

Rate Charts - Continued

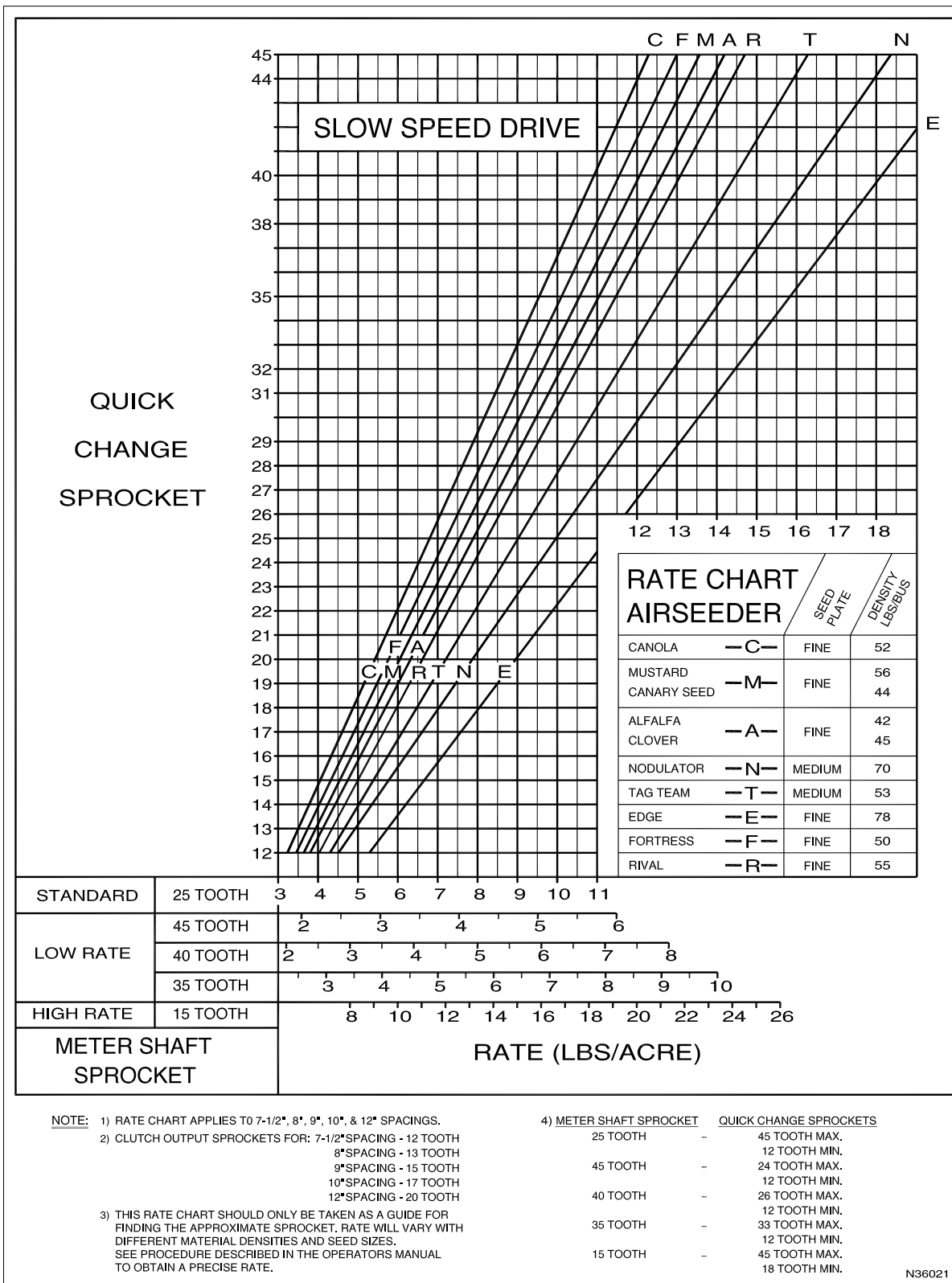
Fertilizer Rate Chart



Operation

Rate Charts - Continued

Slow Speed Seed Rate Chart



Rate Calibration

The practice of doing a rate calibration is strongly recommended as it will confirm the **actual** amounts of product being put into the ground.

Checking the rate on the EIGHT Series Air Cart is very simple.

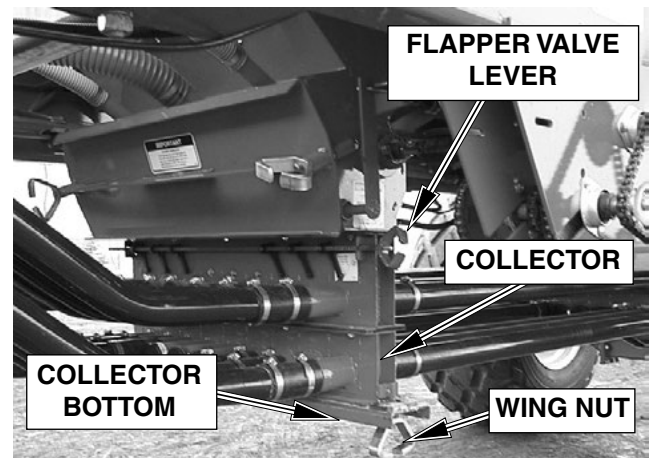
The following procedure is one that should be followed for every rate calibration or change of product.

- Refer to **Crank Calibration Table** for the correct number of turns of the crank.
- Set Flapper Valves to the “**Calibration**” position.
- Remove the collector bottom from the bottom of the collector body.
- Hook the Rate Calibration Insert on collector bottom and rotate up into position. Secure in place with slide lock.
- Remove the metering chain from the transmissions that are **not** being checked.
- Check that the desired rate change sprocket is installed in the transmission.

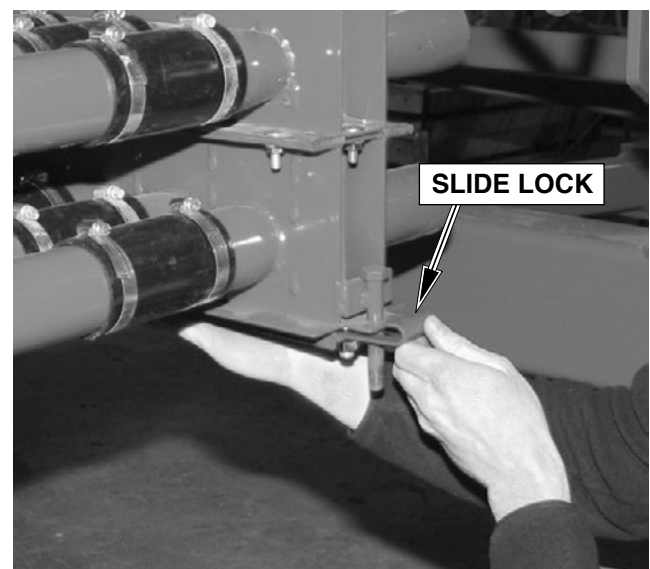
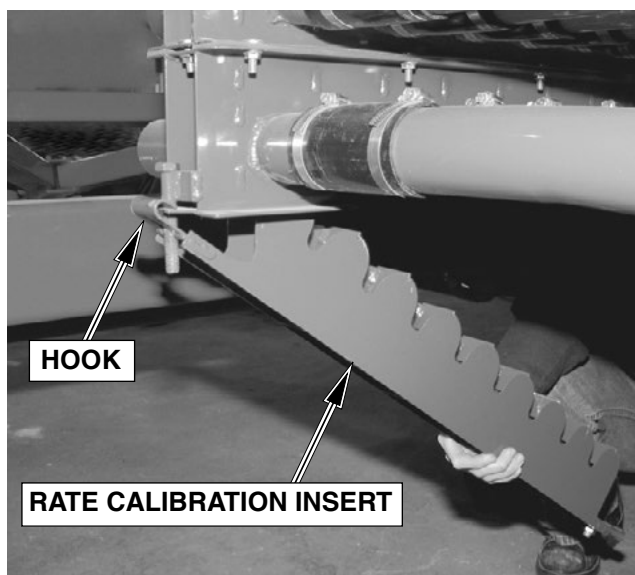
Note: The fan must not be running when a rate check is performed.

Important

Flapper Valves must be set to
“**CALIBRATION**”



Double Shoot Shown



Operation

Rate Calibration - Continued

- Turn the crank until material begins to fall through the collector body.
- Slide rate check box on the collector body.
- Turn the crank in direction of the arrow (Counter Clockwise) the required number of turns.

Note: Incorrect rates will occur if crank is rotated clockwise.

- Weigh the sample by using tarp straps to hook rate check box to scale.

Note: Remember to subtract the weight of the rate check box from the total sample weight.

- Check this rate against rate required.

For 1/10 acre sample:

$$\text{Rate} = \text{lbs/acre} = \text{Sample Weight (lbs)} \times 10$$

- If a different rate is required then increase or decrease the size of the rate change sprocket. Increasing the sprocket size will increase the rate and vice versa.
- Remove rate calibration insert and replace the bottom of the collector.
- Follow the above procedure to check the rate of the other tank.

For **Fine Seeds** it is recommended to take a large sample. Typically to take a sample for 1/2 acre or 1 acre.

Example:

For 1/2 acre sample for a 40 ft. wide seeding tool with a 8425 with 30.5 x 32 All Weather Tires:

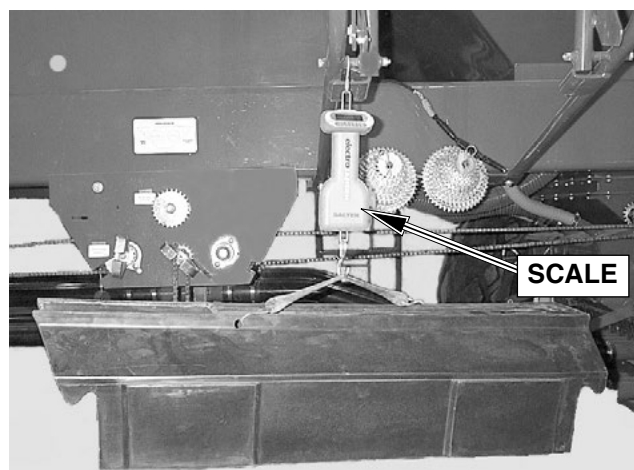
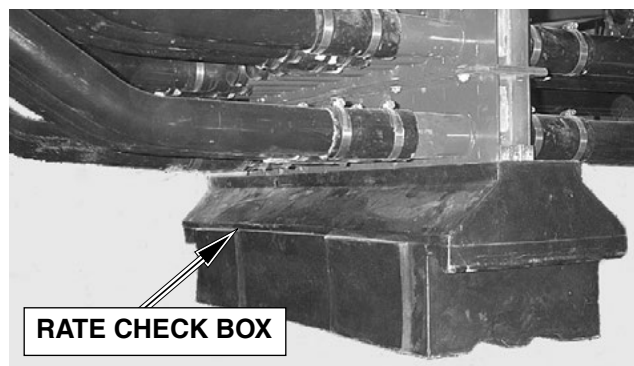
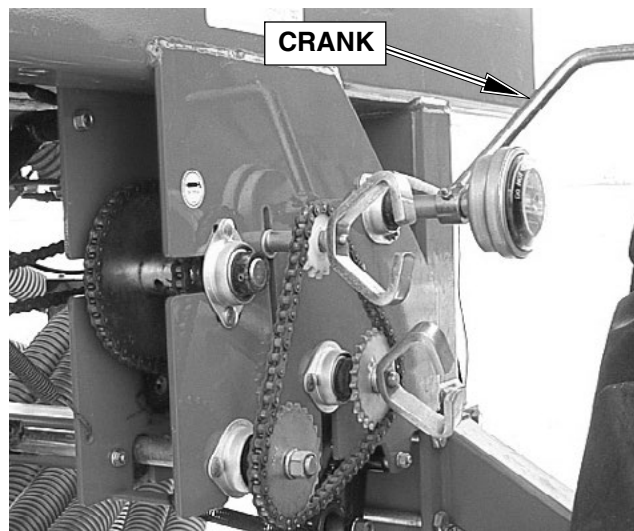
The number of crank turns required for a 1/2 acre is the number of turns required for 1/10 acre for a specific machine width x 5.

From the Calibration Table

Turns required for 1/10 acre = 9.71

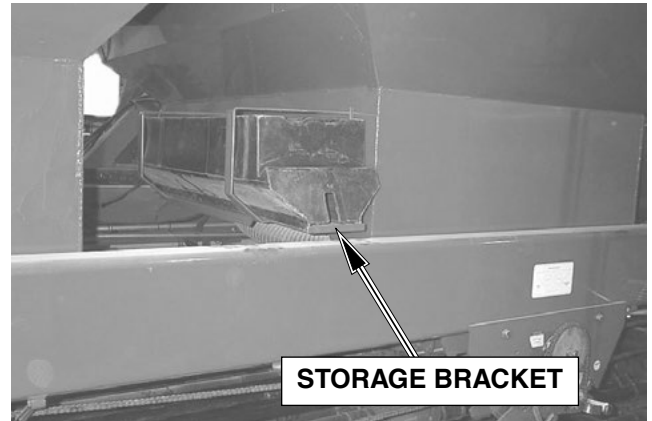
Turns required for 1/2 acre = $9.71 \times 5 = 48.55$

Rate = lbs/acre
= 1/2 acre sample weight (lbs.) x 2



Rate Calibration - Continued

- Once calibration checks have been completed place rate check box into storage bracket.



Alternative Rate Calibration

An alternate rate calibration method takes into account wheel sinkage and variations in tire circumference.

See the Monitor Section 6 (Application Rate). Instead of turning the calibration crank, the metering drive clutch is engaged and the seeder is pulled through a distance that equals at least 1/10 of an acre.

Note: Fan should not be running for either rate check method.

Operation

Imperial Crank Calibration Table

8240 Tow Behind and Tow Between - Standard Tires 8300 and 8336 Tow Behind - Standard Tires

Calibration table based on 1/10 of an acre

W = machine width (feet)

F = Optional Acre Tally Factor = 56/R

R = Crank Rotations # turns

for 1/10 acre = 348.5/W for 8336 with 23.1 x 26 AWT Tires

for 1/10 acre = 316.8/W for 8336 with 23.1 x 26 Rice Tires

D = Distance required for 1/10 Acre (feet) = 4356/W

Important

Tire circumference affects metering accuracy. Tire Circumference should be checked for your field conditions. To determine actual circumference follow procedure outlined under “*Determining Tire Circumference*” then determine “New Crank Rotations” below.

$$\text{New Crank Rotations} = \left(\frac{D \times 12}{\text{Tire Circumference}} \right) \times \frac{48}{15} \times \frac{18}{48} = \underline{\hspace{2cm}}$$

See Rear of book for Metric calibration table.

EIGHT Series Air Cart											
IMPERIAL CRANK CALIBRATION TABLE											
Width [W] (ft)	AirCart Model				Distance [D] (ft)	Width [W] (ft)	AirCart Model				Distance [D] (ft)
	8240 Tow Between										
	8240, 8300 & 8336 Tow Behind										
	AWT Tire 23.1 x 26 12 ply at 28 psi		RICE Tire 23.1 x 26 10 ply at 24 psi								
	[R]	[F]	[R]	[F]							
21	16.60	3.37	15.09	3.71	207.43	51	6.83	8.20	6.21	9.02	85.41
22	15.84	3.54	14.40	3.89	198.00	52	6.70	8.36	6.09	9.19	83.77
23	15.15	3.70	13.77	4.07	189.39	53	6.58	8.52	5.98	9.37	82.19
24	14.52	3.86	13.20	4.24	181.50	54	6.45	8.68	5.87	9.55	80.67
25	13.94	4.02	12.67	4.42	174.24	55	6.34	8.84	5.76	9.72	79.20
26	13.40	4.18	12.18	4.60	167.54	56	6.22	9.00	5.66	9.90	77.79
27	12.91	4.34	11.73	4.77	161.33	57	6.11	9.16	5.56	10.08	76.42
28	12.45	4.50	11.31	4.95	155.57	58	6.01	9.32	5.46	10.25	75.10
29	12.02	4.66	10.92	5.13	150.21	59	5.91	9.48	5.37	10.43	73.83
30	11.62	4.82	10.56	5.30	145.20	60	5.81	9.64	5.28	10.61	72.60
31	11.24	4.98	10.22	5.48	140.52	61	5.71	9.80	5.19	10.78	71.41
32	10.89	5.14	9.90	5.66	136.13	62	5.62	9.96	5.11	10.96	70.26
33	10.56	5.30	9.60	5.83	132.00	63	5.53	10.12	5.03	11.14	69.14
34	10.25	5.46	9.32	6.01	128.12	64	5.45	10.28	4.95	11.31	68.06
35	9.96	5.62	9.05	6.19	124.46	65	5.36	10.44	4.87	11.49	67.02
36	9.68	5.78	8.80	6.36	121.00	66	5.28	10.61	4.80	11.67	66.00
37	9.42	5.95	8.56	6.54	117.73	67	5.20	10.77	4.73	11.84	65.01
38	9.17	6.11	8.34	6.72	114.63	68	5.13	10.93	4.66	12.02	64.06
39	8.94	6.27	8.12	6.89	111.69	69	5.05	11.09	4.59	12.20	63.13
40	8.71	6.43	7.92	7.07	108.90	70	4.98	11.25	4.53	12.37	62.23
41	8.50	6.59	7.73	7.25	106.24	71	4.91	11.41	4.46	12.55	61.35
42	8.30	6.75	7.54	7.42	103.71	72	4.84	11.57	4.40	12.73	60.50
43	8.10	6.91	7.37	7.60	101.30	73	4.77	11.73	4.34	12.90	59.67
44	7.92	7.07	7.20	7.78	99.00	74	4.71	11.89	4.28	13.08	58.86
45	7.74	7.23	7.04	7.95	96.80	75	4.65	12.05	4.22	13.26	58.08
46	7.58	7.39	6.89	8.13	94.70	76	4.59	12.21	4.17	13.43	57.32
47	7.41	7.55	6.74	8.31	92.68	77	4.53	12.37	4.11	13.61	56.57
48	7.26	7.71	6.60	8.48	90.75	78	4.47	12.53	4.06	13.79	55.85
49	7.11	7.87	6.47	8.66	88.90	79	4.41	12.69	4.01	13.96	55.14
50	6.97	8.03	6.34	8.84	87.12	80	4.36	12.86	3.96	14.14	54.45

Imperial Crank Calibration Table

8240 Tow Behind and Tow Between - Optional Tires 8300 and 8336 Tow Behind - Optional Tires

Calibration table based on 1/10 of an acre

W = machine width (feet)

F = Optional Acre Tally Factor = 56/R

R = Crank Rotations # turns

for 1/10 acre = 390.18/W for 30.5 x 32 12 ply AWT Tires @ 20 psi

for 1/10 acre = 393.92/W for with 30.5 x 32 14 ply Lug Tires @ 20 psi

for 1/10 acre = 390.37/W for 800/65 R32 L1 172 Lug Tires @ 15 psi

D = Distance required for 1/10 Acre (feet) = 4356/W

$$\text{New Crank Rotations} = \left(\frac{D \times 12}{\text{Tire Circumference}} \right) \times \frac{63}{15} \times \frac{18}{48} =$$

Important

Tire circumference affects metering accuracy. Tire Circumference should be checked for your field conditions. To determine actual circumference follow procedure outlined under “Determining Tire Circumference” then determine “New Crank Rotations” below.

See Rear of book for Metric calibration table.

EIGHT Series Air Cart IMPERIAL CRANK CALIBRATION TABLE															
Width [W] (ft)	AirCart Model						Distance [D] (ft)	Width [W] (ft)	AirCart Model						Distance [D] (ft)
	8240 Tow Between								8240 Tow Between						
	8240, 8300, & 8336 Tow Behind								8240, 8300, & 8336 Tow Behind						
	AWT Tire 30.5 x 32 12 ply at 20 psi		LUG Tire 30.5 x 32 14 ply at 20 psi		LUG Tire 800/65 R32 L1 172 at 15 psi				AWT Tire 30.5 x 32 12 ply at 20 psi		LUG Tire 30.5 x 32 14 ply at 20 psi		LUG Tire 800/65 R32 L1 172 at 15 psi		
	[R]	[F]	[R]	[F]	[R]	[F]			[R]	[F]	[R]	[F]	[R]	[F]	
21	18.58	3.01	18.76	2.99	18.59	3.01	207.43	51	7.65	7.32	7.72	7.25	7.65	7.32	85.41
22	17.74	3.16	17.91	3.13	17.74	3.16	198.00	52	7.50	7.46	7.58	7.39	7.51	7.46	83.77
23	16.96	3.30	17.13	3.27	16.97	3.30	189.39	53	7.36	7.61	7.43	7.53	7.37	7.60	82.19
24	16.26	3.44	16.41	3.41	16.27	3.44	181.50	54	7.23	7.75	7.29	7.68	7.23	7.75	80.67
25	15.61	3.59	15.76	3.55	15.61	3.59	174.24	55	7.09	7.89	7.16	7.82	7.10	7.89	79.20
26	15.01	3.73	15.15	3.70	15.01	3.73	167.54	56	6.97	8.04	7.03	7.96	6.97	8.03	77.79
27	14.45	3.88	14.59	3.84	14.46	3.87	161.33	57	6.85	8.18	6.91	8.10	6.85	8.18	76.42
28	13.94	4.02	14.07	3.98	13.94	4.02	155.57	58	6.73	8.32	6.79	8.25	6.73	8.32	75.10
29	13.45	4.16	13.58	4.12	13.46	4.16	150.21	59	6.61	8.47	6.68	8.39	6.62	8.46	73.83
30	13.01	4.31	13.13	4.26	13.01	4.30	145.20	60	6.50	8.61	6.57	8.53	6.51	8.61	72.60
31	12.59	4.45	12.71	4.41	12.59	4.45	140.52	61	6.40	8.75	6.46	8.67	6.40	8.75	71.41
32	12.19	4.59	12.31	4.55	12.20	4.59	136.13	62	6.29	8.90	6.35	8.81	6.30	8.89	70.26
33	11.82	4.74	11.94	4.69	11.83	4.73	132.00	63	6.19	9.04	6.25	8.96	6.20	9.04	69.14
34	11.48	4.88	11.59	4.83	11.48	4.88	128.12	64	6.10	9.19	6.16	9.10	6.10	9.18	68.06
35	11.15	5.02	11.25	4.98	11.15	5.02	124.46	65	6.00	9.33	6.06	9.24	6.01	9.32	67.02
36	10.84	5.17	10.94	5.12	10.84	5.16	121.00	66	5.91	9.47	5.97	9.38	5.91	9.47	66.00
37	10.55	5.31	10.65	5.26	10.55	5.31	117.73	67	5.82	9.62	5.88	9.52	5.83	9.61	65.01
38	10.27	5.45	10.37	5.40	10.27	5.45	114.63	68	5.74	9.76	5.79	9.67	5.74	9.75	64.06
39	10.00	5.60	10.10	5.54	10.01	5.59	111.69	69	5.65	9.90	5.71	9.81	5.66	9.90	63.13
40	9.75	5.74	9.85	5.69	9.76	5.74	108.90	70	5.57	10.05	5.63	9.95	5.58	10.04	62.23
41	9.52	5.88	9.61	5.83	9.52	5.88	106.24	71	5.50	10.19	5.55	10.09	5.50	10.19	61.35
42	9.29	6.03	9.38	5.97	9.29	6.03	103.71	72	5.42	10.33	5.47	10.24	5.42	10.33	60.50
43	9.07	6.17	9.16	6.11	9.08	6.17	101.30	73	5.34	10.48	5.40	10.38	5.35	10.47	59.67
44	8.87	6.32	8.95	6.26	8.87	6.31	99.00	74	5.27	10.62	5.32	10.52	5.28	10.62	58.86
45	8.67	6.46	8.75	6.40	8.67	6.46	96.80	75	5.20	10.76	5.25	10.66	5.20	10.76	58.08
46	8.48	6.60	8.56	6.54	8.49	6.60	94.70	76	5.13	10.91	5.18	10.80	5.14	10.90	57.32
47	8.30	6.75	8.38	6.68	8.31	6.74	92.68	77	5.07	11.05	5.12	10.95	5.07	11.05	56.57
48	8.13	6.89	8.21	6.82	8.13	6.89	90.75	78	5.00	11.19	5.05	11.09	5.00	11.19	55.85
49	7.96	7.03	8.04	6.97	7.97	7.03	88.90	79	4.94	11.34	4.99	11.23	4.94	11.33	55.14
50	7.80	7.18	7.88	7.11	7.81	7.17	87.12	80	4.88	11.48	4.92	11.37	4.88	11.48	54.45

Operation

Imperial Crank Calibration Table

8300 and 8336 Tow Between 8370 and 8425 Tow Between and Tow Behind

Calibration table based on 1/10 of an acre

W = machine width (feet)

F = Optional Acre Tally Factor = 56/R

R = Crank Rotations # turns

for 1/10 acre = 388.25/W for 30.5 x 32 12 ply AWT Tires @ 24 psi

for 1/10 acre = 388.71/W for 30.5 x 32 14 ply Lug Tires @ 22 psi

for 1/10 acre = 389.26/W for 800/65 R32 L1 172 Lug Tires @ 20 psi

D = Distance required for 1/10 Acre (feet) = 4356/W

$$\text{New Crank Rotations} = \left(\frac{D \times 12}{\text{Tire Circumference}} \right) \times \frac{63}{15} \times \frac{18}{48} =$$

Important

Tire circumference affects metering accuracy. Tire Circumference should be checked for your field conditions. To determine actual circumference follow procedure outlined under “Determining Tire Circumference” then determine “New Crank Rotations” below.

See Rear of book for Metric calibration table.

**EIGHT Series Air Cart
IMPERIAL CRANK CALIBRATION TABLE**

Width [W] (ft)	AirCart Model						Distance	Width [W] (ft)	AirCart Model						Distance
	8300, 8336, 8370 & 8425 Tow Between								8300, 8336, 8370 & 8425 Tow Between						
	8370 & 8425 Tow Behind								8370 & 8425 Tow Behind						
	AWT Tire 30.5 x 32 12 ply at 24 psi		LUG Tire 30.5 x 32 14 ply at 22 psi		LUG Tire 800/65 R32 L1 172 at 20 psi				AWT Tire 30.5 x 32 12 ply at 24 psi		LUG Tire 30.5 x 32 14 ply at 22 psi		LUG Tire 800/65 R32 L1 172 at 20 psi		
	[R]	[F]	[R]	[F]	[R]	[F]			[R]	[F]	[R]	[F]	[R]	[F]	
21	18.49	3.03	18.51	3.03	18.54	3.02	207.43	51	7.61	7.36	7.62	7.35	7.63	7.34	85.41
22	17.65	3.17	17.67	3.17	17.69	3.16	198.00	52	7.47	7.50	7.48	7.49	7.49	7.48	83.77
23	16.88	3.32	16.90	3.31	16.92	3.31	189.39	53	7.33	7.64	7.33	7.64	7.34	7.62	82.19
24	16.18	3.46	16.20	3.46	16.22	3.45	181.50	54	7.19	7.79	7.20	7.78	7.21	7.77	80.67
25	15.53	3.61	15.55	3.60	15.57	3.60	174.24	55	7.06	7.93	7.07	7.92	7.08	7.91	79.20
26	14.93	3.75	14.95	3.75	14.97	3.74	167.54	56	6.93	8.08	6.94	8.07	6.95	8.06	77.79
27	14.38	3.89	14.40	3.89	14.42	3.88	161.33	57	6.81	8.22	6.82	8.21	6.83	8.20	76.42
28	13.87	4.04	13.88	4.03	13.90	4.03	155.57	58	6.69	8.37	6.70	8.36	6.71	8.34	75.10
29	13.39	4.18	13.40	4.18	13.42	4.17	150.21	59	6.58	8.51	6.59	8.50	6.60	8.49	73.83
30	12.94	4.33	12.96	4.32	12.98	4.32	145.20	60	6.47	8.65	6.48	8.64	6.49	8.63	72.60
31	12.52	4.47	12.54	4.47	12.56	4.46	140.52	61	6.36	8.80	6.37	8.79	6.38	8.78	71.41
32	12.13	4.62	12.15	4.61	12.16	4.60	136.13	62	6.26	8.94	6.27	8.93	6.28	8.92	70.26
33	11.77	4.76	11.78	4.75	11.80	4.75	132.00	63	6.16	9.09	6.17	9.08	6.18	9.06	69.14
34	11.42	4.90	11.43	4.90	11.45	4.89	128.12	64	6.07	9.23	6.07	9.22	6.08	9.21	68.06
35	11.09	5.05	11.11	5.04	11.12	5.04	124.46	65	5.97	9.38	5.98	9.36	5.99	9.35	67.02
36	10.78	5.19	10.80	5.19	10.81	5.18	121.00	66	5.88	9.52	5.89	9.51	5.90	9.49	66.00
37	10.49	5.34	10.51	5.33	10.52	5.32	117.73	67	5.79	9.66	5.80	9.65	5.81	9.64	65.01
38	10.22	5.48	10.23	5.47	10.24	5.47	114.63	68	5.71	9.81	5.72	9.80	5.72	9.78	64.06
39	9.96	5.63	9.97	5.62	9.98	5.61	111.69	69	5.63	9.95	5.63	9.94	5.64	9.93	63.13
40	9.71	5.77	9.72	5.76	9.73	5.75	108.90	70	5.55	10.10	5.55	10.08	5.56	10.07	62.23
41	9.47	5.91	9.48	5.91	9.49	5.90	106.24	71	5.47	10.24	5.47	10.23	5.48	10.21	61.35
42	9.24	6.06	9.26	6.05	9.27	6.04	103.71	72	5.39	10.39	5.40	10.37	5.41	10.36	60.50
43	9.03	6.20	9.04	6.19	9.05	6.19	101.30	73	5.32	10.53	5.32	10.52	5.33	10.50	59.67
44	8.82	6.35	8.83	6.34	8.85	6.33	99.00	74	5.25	10.67	5.25	10.66	5.26	10.65	58.86
45	8.63	6.49	8.64	6.48	8.65	6.47	96.80	75	5.18	10.82	5.18	10.80	5.19	10.79	58.08
46	8.44	6.63	8.45	6.63	8.46	6.62	94.70	76	5.11	10.96	5.11	10.95	5.12	10.93	57.32
47	8.26	6.78	8.27	6.77	8.28	6.76	92.68	77	5.04	11.11	5.05	11.09	5.06	11.08	56.57
48	8.09	6.92	8.10	6.92	8.11	6.91	90.75	78	4.98	11.25	4.98	11.24	4.99	11.22	55.85
49	7.92	7.07	7.93	7.06	7.94	7.05	88.90	79	4.91	11.39	4.92	11.38	4.93	11.37	55.14
50	7.77	7.21	7.77	7.20	7.79	7.19	87.12	80	4.85	11.54	4.86	11.53	4.87	11.51	54.45

Seeding Fine Seeds (Canola, Mustard, etc.)

When seeding fine seeds such as Canola or mustard, the slow speed transmission has to be engaged to ensure the low rates required for these products.

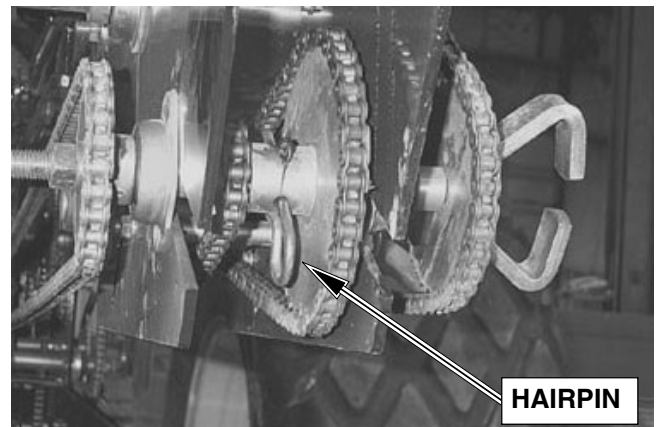
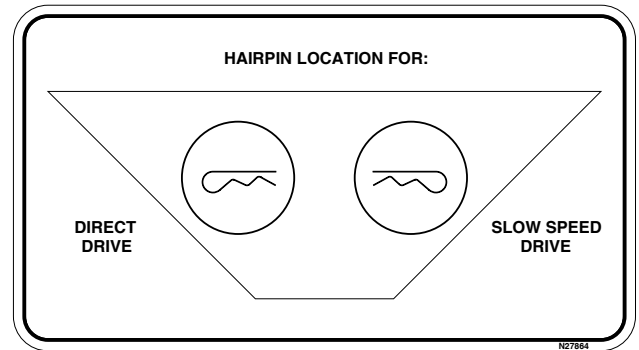
The slow speed transmission is incorporated in **All** the Posi-Drive Transmissions.

- To engage the slow speed, remove the large hairpin from the front shaft and install through the sleeve and shaft located at the rear of the transmission.

Note: Shaft will have to be rotated to align holes for pin insertion.

- To disengage the slow speed, reverse the above procedure.
- Rate checks can be performed the same way as for other seeds.
- Usually it is necessary to reduce the fan rpm when seeding fine seeds. See *Fan Speed* for specific fan speeds.

Note: Seed must be placed in the front tank.



Applying Inoculant

When inoculant is applied at the time of seeding, then once the Air Cart has been filled, the fill-lids should be left open and the fan run for 5-10 minutes at full rpm to dry the seed.

Calibration must be done after the seed is dried, otherwise the calibration will be incorrect.

Note: If the seed is not dried then the seed will have a tendency to bridge and not meter into the air stream.

Operation

Hydraulic Fan Drive

The piston type orbit motor on the fan requires tractor to have either a load sensing hydraulic system or a closed centre hydraulic system with flow control.

The flow required is 18 U.S. g.p.m. (68 liters) for the 12 cc motor and 21 U.S. g.p.m. (80 liters) for the 16 cc motor at a pressure of 2,750 p.s.i. (18,960 kPa) However, smaller flows can be used depending on the product being metered.

For correct operation of the fan the hydraulic motor must be coupled to the priority valve (if tractor is so equipped) in the hydraulic valve bank.

Check with the tractor manual or manufacturer to determine if or which spool is a *"priority valve"*.

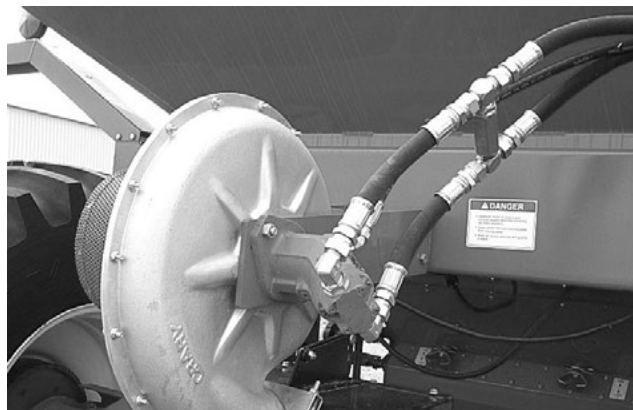
Speed fluctuations will result if the fan is not connected to the priority valve if hydraulic system is equipped with a priority valve.

Ensure couplers are free of dirt and are clean when connecting the fan hydraulics to the tractor.

Fan speed is adjusted by increasing the amount of oil being delivered to the motor. This is done by adjusting the respective flow control valve until the desired rpm is displayed on the monitor.

Note: There is a one-way check valve installed in the hydraulic circuit. If the fan does not rotate, then move hydraulic lever in the opposite direction; this will engage the fan. This valve prevents damage to the hydraulic systems when the fan is shut OFF, by allowing the fan to freewheel.

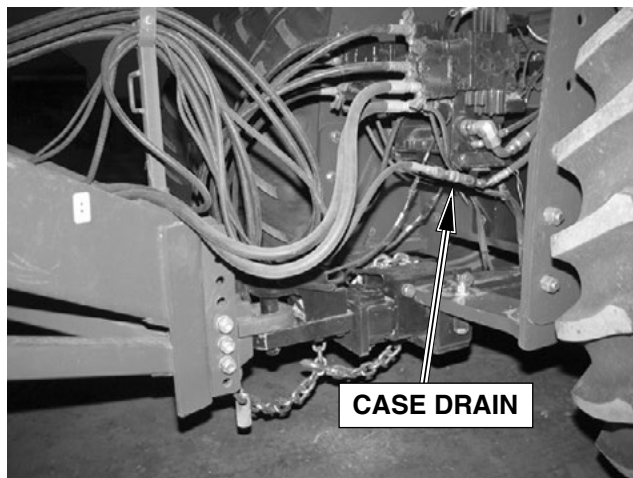
A piston motor creates leakage past the internal components for lubrication. This oil needs to go back to the oil reservoir at the lowest pressure possible. The motor has a 3/8" diameter drain line. This line must be connected directly into the tractor hydraulic reservoir to ensure that there is zero back pressure in the drainline, otherwise damage will result to the motor.



Hydraulic Drive (13" diameter Impeller shown)

IMPORTANT

Run hydraulic fan drive at lowest rpm possible (1,000-2,000) for 5-10 minutes before operating at set rpm. This is required to warm up the hydraulic fluid. Cold hydraulic fluid will cause pressure spikes in the system that will damage the case drain seal in the orbit motor.



Hydraulic Coupling on Tractor

Fan Speed Recommendations

Adequate air volume is necessary at all times to carry the product in the air stream. Air volume can be controlled by adjusting hydraulic oil flow on hydraulic fan drives or adjusting engine speed on engine fan drive models.

Air volume; hence fan speed requirements will vary with:

- (a) Ground speed
- (b) Metering rate
- (c) Number of primary runs
- (d) Width of machine
- (e) Density and size of material

Excessive fan speed can cause seed damage, seed bouncing and premature wear of the system.

Generally fan speed is adequate if product flows through the hoses without surging and the hoses empty quickly and evenly when the system shuts down.

The charts on the next page list *suggested fan speeds* for various application rates.

Note: The charts should be used only as a guide. If plugging or surging occurs increase the fan speed to eliminate the problem.

Note: It is recommended that after a rain or dew the fan be run two to three minutes to expel any moisture in the system.

Important

Keep fan impeller blades clean at all times.

Note: Once fan speed is properly set, be sure to adjust the monitor fan alarm setting accordingly. See Monitor Section “Monitor Programming”.

Operation

Fan Speed Recommendations - continued

Charts are based on a 40 foot machine traveling at 5 mph (8 kph).

13 inch Diameter Impeller Suggested Fan RPM @ 5 mph		
Combined Application Rate	Fan Speed Setting	
	Single Shoot	Double Shoot
3 - 50 lbs/acre 3 - 56 kg/ha	3500 - 3750 RPM	3400 - 3650 RPM
50 - 100 lbs/acre 56 - 112 kg/ha	3750 - 4000 RPM	3650 - 3900 RPM
100 - 150 lbs/acre 112 - 168 kg/ha	4000 - 4250 RPM	3900 - 4150 RPM
150 - 200 lbs/acre 168 - 224 kg/ha	4250 - 4500 RPM	4150 - 4400 RPM
200 - 250 lbs/acre 224 - 280 kg/ha	4500 - 4750 RPM	4400 - 4650 RPM
250 - 300 lbs/acre 280 - 336 kg/ha	4750 - 5000 RPM	4650 - 4900 RPM
300 - 350 lbs/acre 336 - 392 kg/ha	5000 - 5250 RPM	4900 - 5150 RPM
> 350 lbs/acre > 392 kg/ha	5250 - 5500 RPM	5150 - 5400 RPM
Note: Fan Speeds given are when applying product. It is normal for fan speed to drop when not applying product.		

17 inch Diameter Impeller Suggested Fan RPM @ 5 mph		
Combined Application Rate	Fan Speed Setting	
	Single Shoot	Double Shoot
3 - 50 lbs/acre 3 - 56 kg/ha	3000 - 3250 RPM	2900 - 3150 RPM
50 - 100 lbs/acre 56 - 112 kg/ha	3250 - 3500 RPM	3150 - 3400 RPM
100 - 150 lbs/acre 112 - 168 kg/ha	3500 - 3750 RPM	3400 - 3650 RPM
150 - 200 lbs/acre 168 - 224 kg/ha	3750 - 4000 RPM	3650 - 3900 RPM
200 - 250 lbs/acre 224 - 280 kg/ha	4000 - 4250 RPM	3900 - 4150 RPM
250 - 300 lbs/acre 280 - 336 kg/ha	4250 - 4500 RPM	4150 - 4400 RPM
300 - 350 lbs/acre 336 - 392 kg/ha	4500 - 4750 RPM	4400 - 4650 RPM
> 350 lbs/acre > 392 kg/ha	4750 - 5000 RPM	4650 - 4900 RPM
Note: Fan Speeds given are when applying product. It is normal for fan speed to drop when not applying product.		

Meter Chamber Pressurization

The meter chambers are pressurized directly from the plenum. This pressurization is required to keep fine dust and seed particles from building up in the meter chamber as well as provides pressurization to the tank. The amount of airflow required to pressurize the system is minimal requiring the shut-off valve to remain closed at all times. If valve is opened it could lead to plugging and reduced capacity.

Note: The shut-off valve has been discontinued after Spring 2003 units.



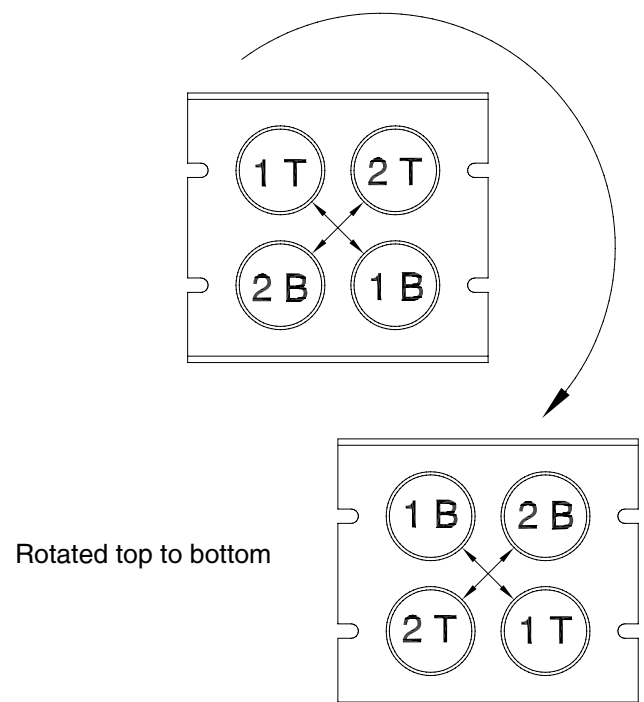
Shut-Off Valve

Important

Leave Shut-Off Valve Closed at all times.

Quick Coupler

Hoses on Quick Coupler should be plumbed on a cross pattern. This orientation of the hoses allows the operator to switch which airstream is being used by simply rotating coupler top to bottom.



Operation

Plenum Settings

Double Shooting is done with a few simple adjustments as follows:

1. Plenum Setting
2. Collector Valve settings

Plenum Damper Settings

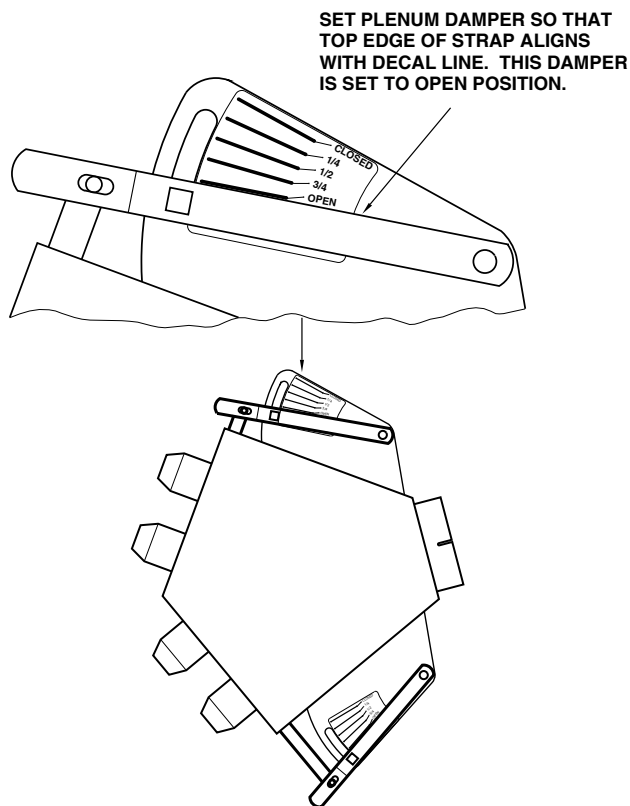
16 Outlet Plenum

Adequate air volume is necessary at all times to carry the product in the air stream. Air volume can be controlled by adjusting the plenum damper settings.

The table below lists initial plenum damper settings for certain products.

Note: The settings in the table should be used only as a guide.

- If **fertilizer** plugging or surging occurs **decrease** the seed damper setting to eliminate the problem.
- If **seed** plugging or surging occurs **increase** the seed damper setting to eliminate the problem.



Suggested Plenum Settings				
Product	Seed		Fertilizer	
	Rate lb/acre	Damper Setting	Rate lb/acre	Damper Setting
Fine Seeds	All Rates	1/4	All Rates	Open
Coarse Grains	90 lb (100 kg/ha)	Open	50 lb (56 kg/ha)	1/2
	90 lb (100 kg/ha)	Open	100 lb (112 kg/ha)	Open
	90 lb (100 kg/ha)	1/4	150 + lb (168 kg/ha)	Open
Large Seeds	180 lb (200 kg/ha)	Open	40 lb (45 kg/ha)	1/4
Single Shoot	Lower Pipes - Top Damper Closed - Bottom Damper Open			
	Upper Pipes - Top Damper Open - Bottom Damper Closed			

Note: See “Fan Speeds” for Fan RPM.

Plenum Settings - Continued

Plenum Damper Settings

18 Outlet Plenum

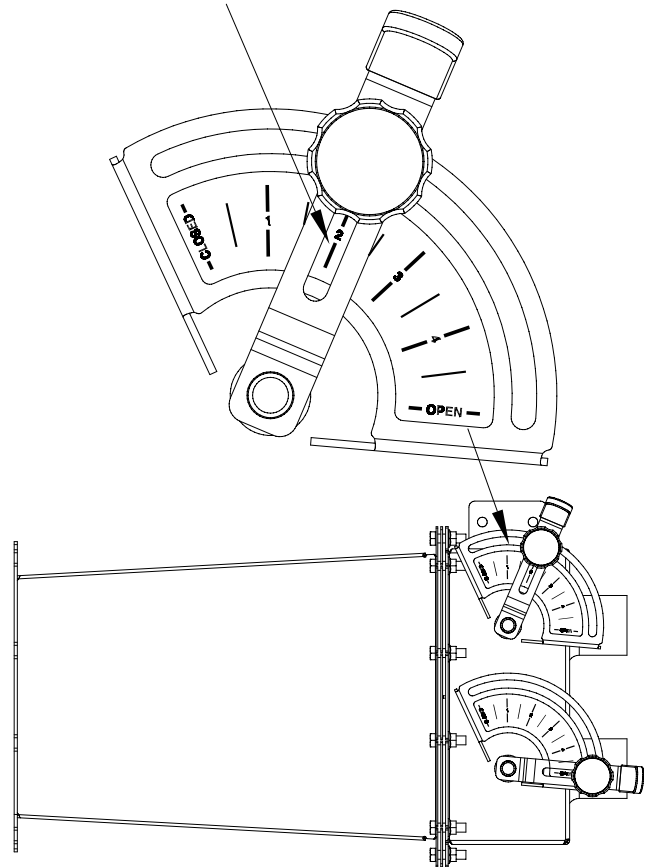
Adequate air volume is necessary at all times to carry the product in the air stream. Air volume can be controlled by adjusting the plenum damper settings.

The table below lists initial plenum damper settings for certain products.

Note: The settings in the table should be used only as a guide.

- If **fertilizer** plugging or surging occurs **decrease** the seed damper setting to eliminate the problem.
- If **seed** plugging or surging occurs **increase** the seed damper setting to eliminate the problem.

Set Plenum Damper so that setting is in the middle of slot.
This Damper is set at the 2 position.



Suggested Plenum Settings				
Product	Seed		Fertilizer	
	Rate lb/acre	Damper Setting	Rate lb/acre	Damper Setting
Fine Seeds	All Rates	1	All Rates	Open
Coarse Grains	90 lb (100 kg/ha)	Open	50 lb (56 kg/ha)	2
	90 lb (100 kg/ha)	4	100 lb (112 kg/ha)	Open
	90 lb (100 kg/ha)	3	150 + lb (168 kg/ha)	Open
Large Seeds	180 lb (200 kg/ha)	Open	40 lb (45 kg/ha)	2
Single Shoot	Lower Pipes	- Top Damper Closed - Bottom Damper Open		
	Upper Pipes	- Top Damper Open - Bottom Damper Closed		

Note: See “Fan Speeds” for Fan RPM.

Operation

Plenum Settings - Continued

Plenum Damper Settings

27 Outlet Plenum

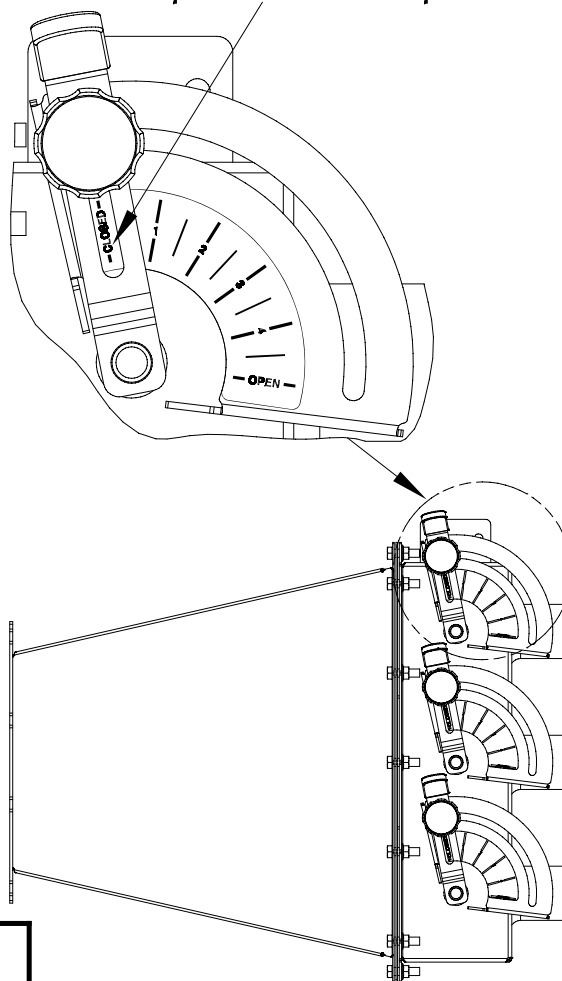
Adequate air volume is necessary at all times to carry the product in the air stream. Air volume can be controlled by adjusting the plenum damper settings.

The table below lists initial plenum damper settings for certain products.

Note: The settings in the table should be used only as a guide.

- If **fertilizer** plugging or surging occurs **decrease** the seed damper setting to eliminate the problem.
- If **seed** plugging or surging occurs **increase** the seed damper setting to eliminate the problem.

Set Plenum Damper so that setting is in middle of slot.
This damper is set in the closed position



Suggested Plenum Settings						
Product	Seed		Starter Fertilizer		N based Fertilizer	
	Rate b/acre	Damper Setting	Rate b/acre	Damper Setting	Rate b/acre	Damper Setting
Fine Seeds	All Rates	1	All Rates	Open	All Rates	Open
Coarse Grains	90 b (100 kg/ha)	Open	25 b (28 kg/ha)	3	50 b (56 kg/ha)	3
	90 b (100 kg/ha)	Open	50 b (56 kg/ha)	3	100 b (112 kg/ha)	Open
	90 b (100 kg/ha)	4	75 b (84 kg/ha)	3	150 + b (168 kg/ha)	Open
Large Seeds	180 b (200 kg/ha)	Open	40 b (45 kg/ha)	2	40 b (45 kg/ha)	2
Double Shoot	Top & Bottom Pipes	-Top Damper use Double Shoot Plenum Settings -Middle Damper Closed -Bottom Damper use Double Shoot Plenum Settings				
Single Shoot	Bottom Pipes	-Top Damper Closed -Middle Damper Closed -Bottom Damper Open				

**Note: See “Fan Speeds”
for Fan RPM.**

Double and Triple Shoot Settings

Collector Valve Settings

Located in each upper collector body are flapper valves for machines equipped for Double or Triple shoot. The flapper valve must be properly set in order for product to flow correctly.

See Illustrations on following pages for specific settings for various combinations for Triple, Double and Single Shoot set ups.

Flapper valves must be cycled daily to free valves of any fertilizer and grain dust accumulations.

Whenever valves are cycled or reset to a new position the position should be visually inspected as follows:

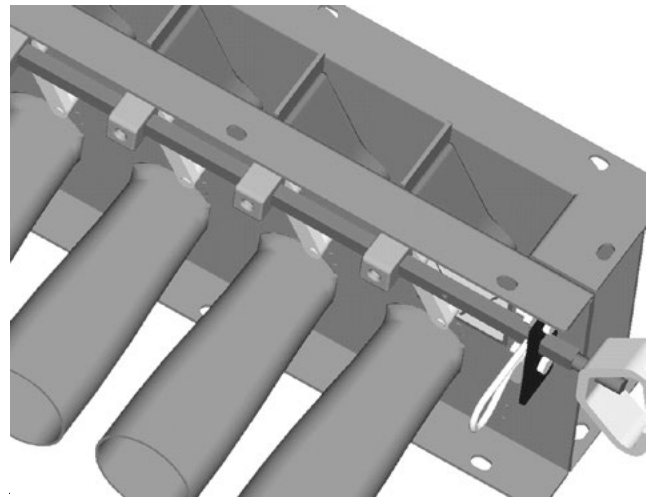
- Set flapper valves to correct position for product delivery.
- Remove the inspection door and visually check that the flappers are fully over and touching the side walls, sealing off the individual airstreams.
- The flappers can be adjusted by loosening the individual adjusting setscrews and applying pressure to the flapper forcing it against the side wall while tightening the setscrew.

Note: The bottom airstream should be used to carry the higher rate of product.

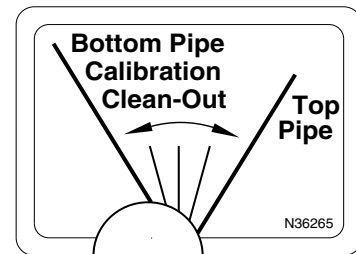
Flapper Valve Run Test

Use the following procedure to check that the flapper valves do not move when air pressure is applied to under side of flappers.

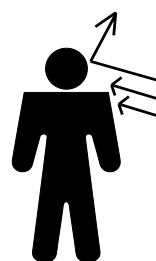
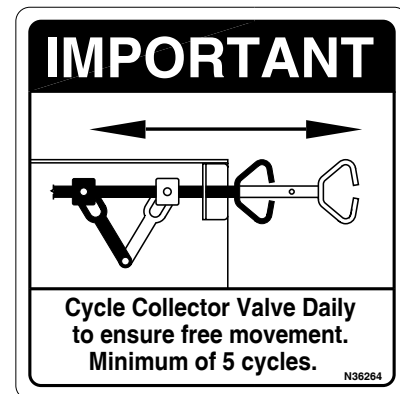
- Check flapper valves in both directions with air running.
 - If valve is set to direct product into the bottom pipe, have the plenum damper open for the top pipes and closed to the bottom pipes.
 - If valve is set to direct product into the top pipe, have the plenum damper open for the bottom pipes and closed to the top pipes.
- **Always wear** safety goggles, breathing apparatus and gloves when working on seeder filled with granular chemical or treated seed per the manufacture's instructions.
- With fan running check flapper valve position.
- The flappers can be adjusted by loosening the individual adjusting setscrews and applying pressure to the flapper forcing it against the side wall while tightening the setscrew.



Flapper in "Bottom Pipe" Setting



Decal on Collector



Caution

Care should be taken when working near the air cart while the fan is running. Product blowing out of the system could cause personal injury.

Operation

Double Shoot Settings

Double Shoot Tow Behind

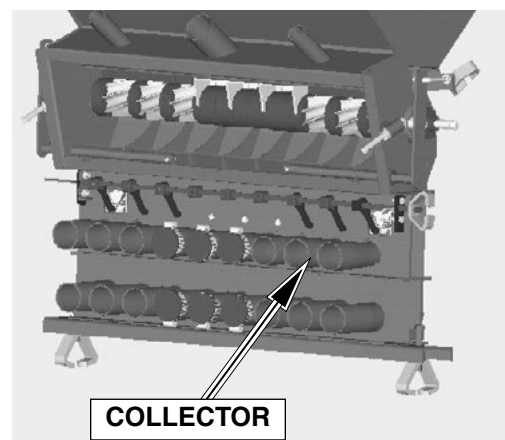
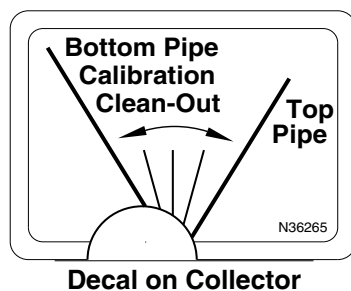
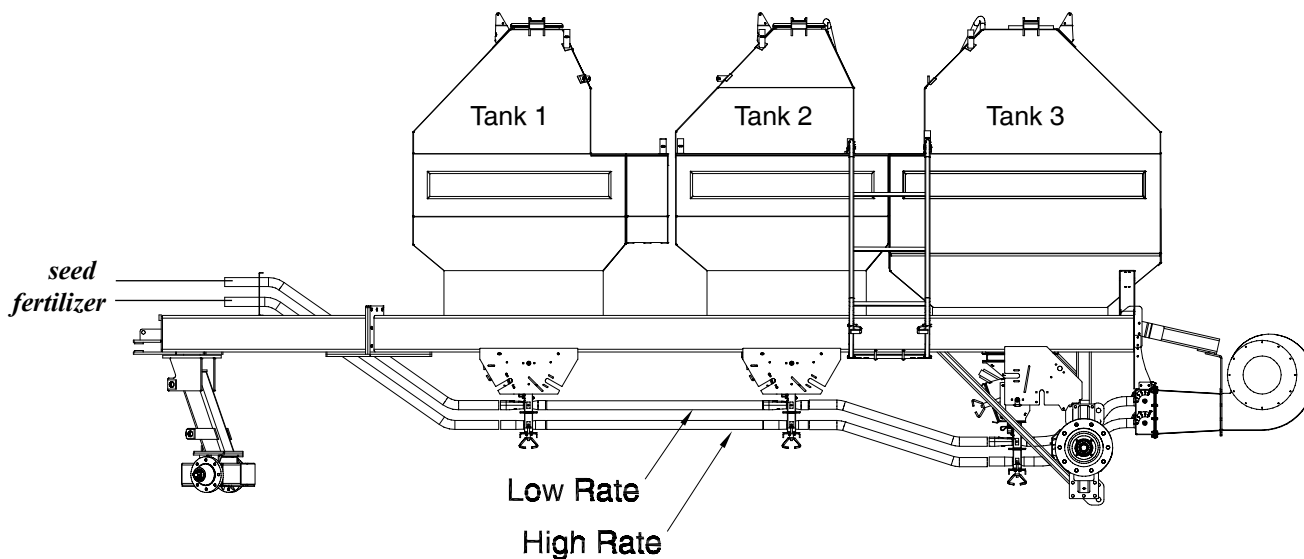
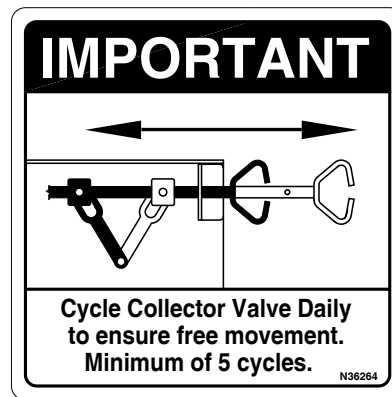
- Combining product from any combination of tanks and placed in either air stream is possible with the EIGHT Series distribution system. Some typical examples are shown below.

Example 1.

Tank 1 - seed

Tank 2 and Tank 3 - fertilizer

- Collector Valve Setting: Tank 1- Top Pipe
Tank 2- Bottom Pipe
Tank 3- Bottom Pipe
- Plenum Setting: See table on "Plenum Settings" located in previous section "Plenum Damper Settings".



Collector Valve Shown on "Bottom Pipe" Setting

Double Shoot Settings - Continued

Double Shoot Tow Behind

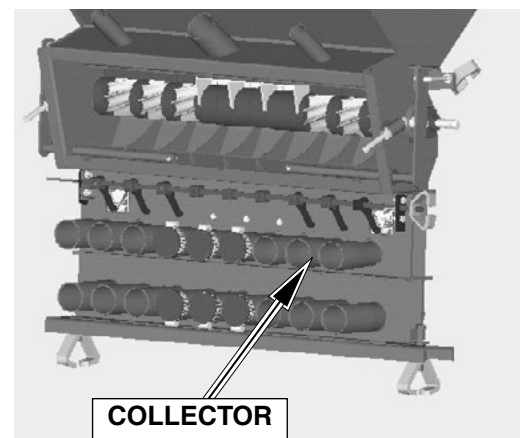
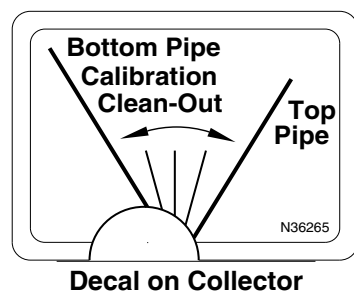
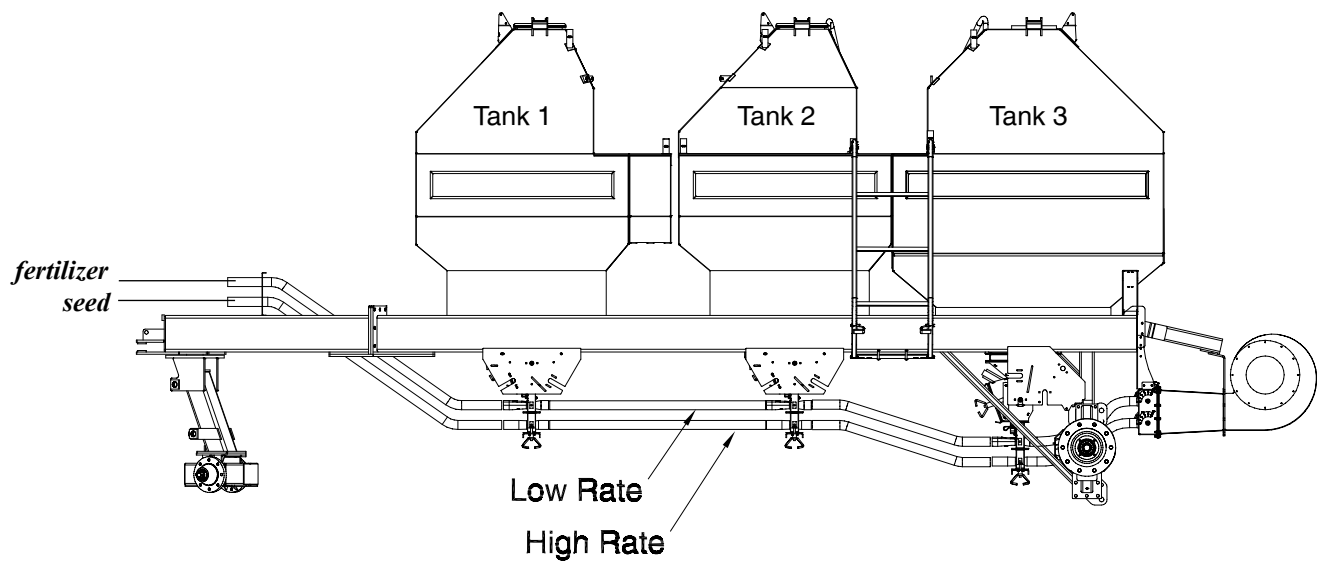
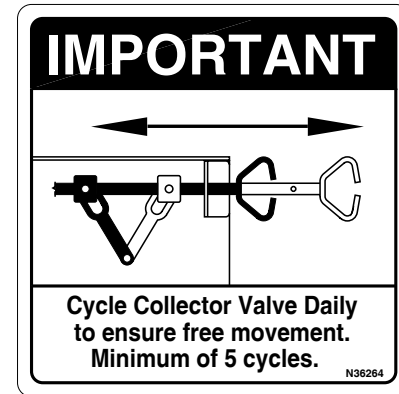
Example 2.

Tank 1 - inoculant

Tank 2 - fertilizer

Tank 3 - peas

1. Collector Valve Setting: Tank 1- Bottom Pipe
Tank 2- Top Pipe
Tank 3- Bottom Pipe
2. Plenum Setting: See table on “Plenum Settings” located in previous section “Plenum Damper Settings”.



Collector Valve Shown on “Bottom Pipe” Setting

Operation

Double Shoot Settings - Continued

Single Shoot Tow Behind

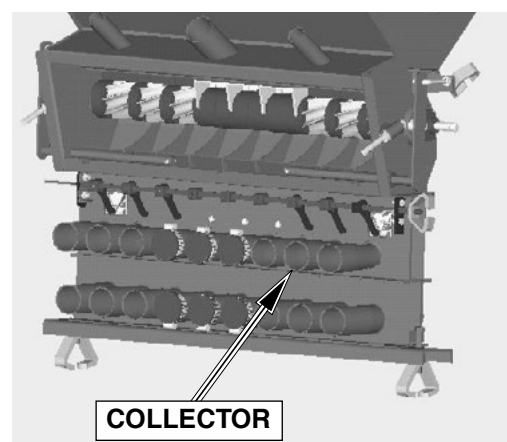
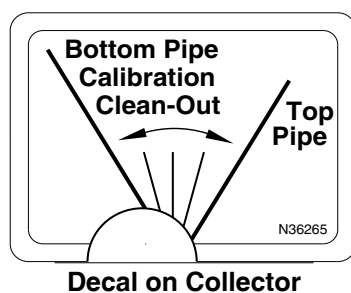
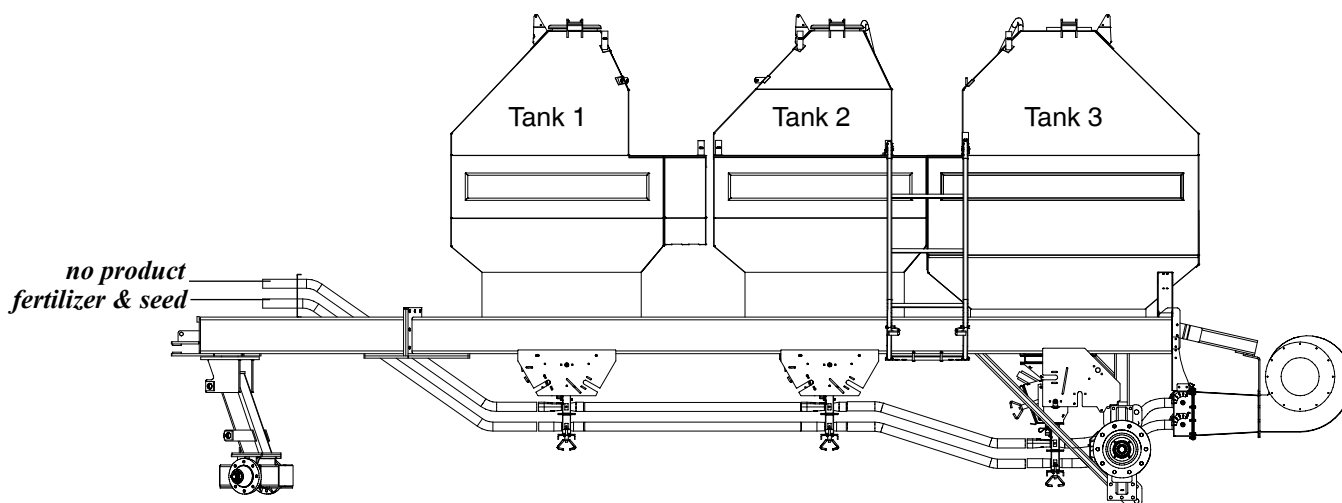
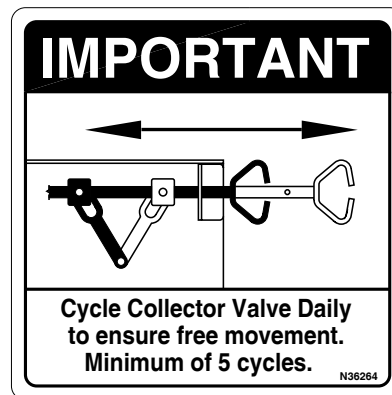
Example 3.

Tank 1 - seed

Tank 2 - seed

Tank 3 - fertilizer

1. Collector Valve Setting: Tank 1- Bottom Pipe
Tank 2- Bottom Pipe
Tank 3- Bottom Pipe
2. Plenum Setting: See table on "Plenum Settings" located in previous section "Plenum Damper Settings".



Collector Valve Shown on "Bottom Pipe" Setting

Triple Shoot Settings

Triple Shoot Tow Behind

- Combining product from any combination of tanks and placed in either air stream is possible with the EIGHT Series distribution system. Some typical examples are shown below.

Example 1.

Tank 1 - Starter Fertilizer

Tank 2 - Coarse or Large Seed

Tank 3 - Nitrogen Fertilizer

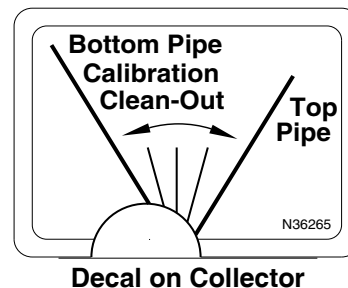
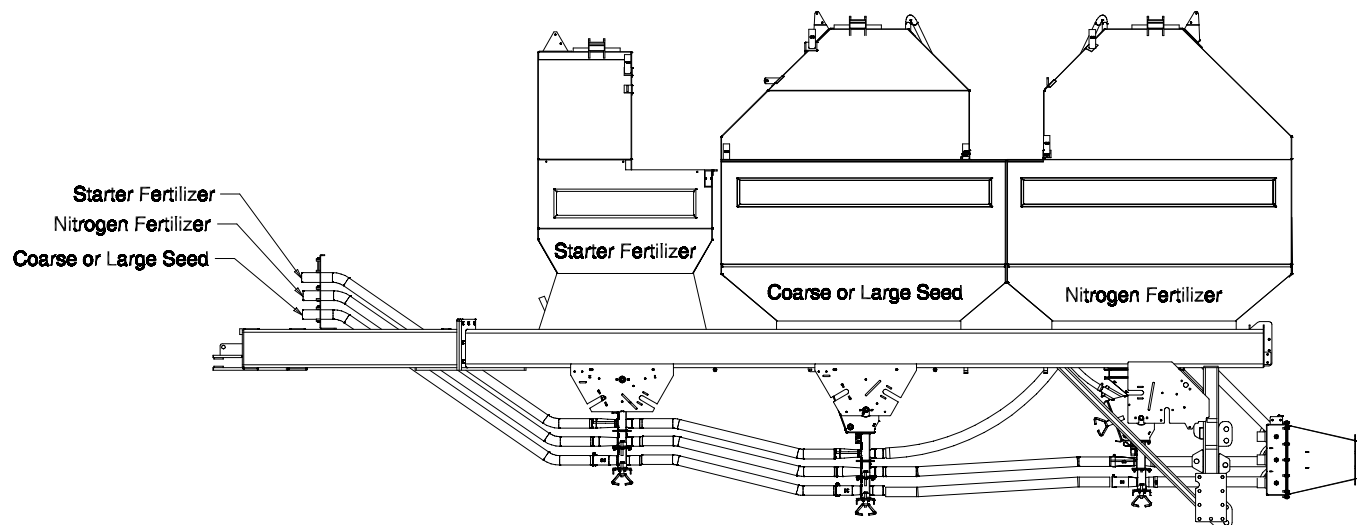
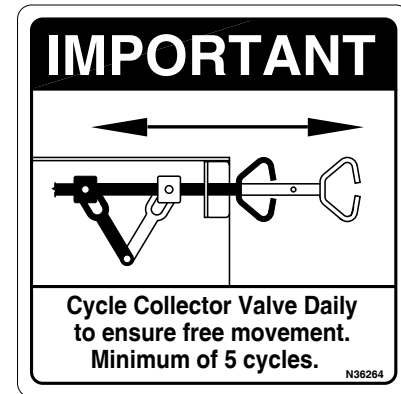
1. Collector Valve Setting:

Tank 1 (Starter Fertilizer) - **Top Pipe**

Tank 2 (Coarse or Large Seed) - **Bottom Pipe**

Tank 3 (Nitrogen Fertilizer) - **Middle Pipe**

2. Plenum Setting: See table on "Plenum Settings" located in previous section "Plenum Damper Settings".



Operation

Triple Shoot Settings - Continued

Example 2.

Tank 1 - Small Seed (Canola)

Tank 2 - Starter Fertilizer

Tank 3 - Nitrogen Fertilizer

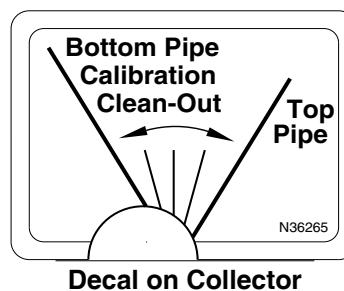
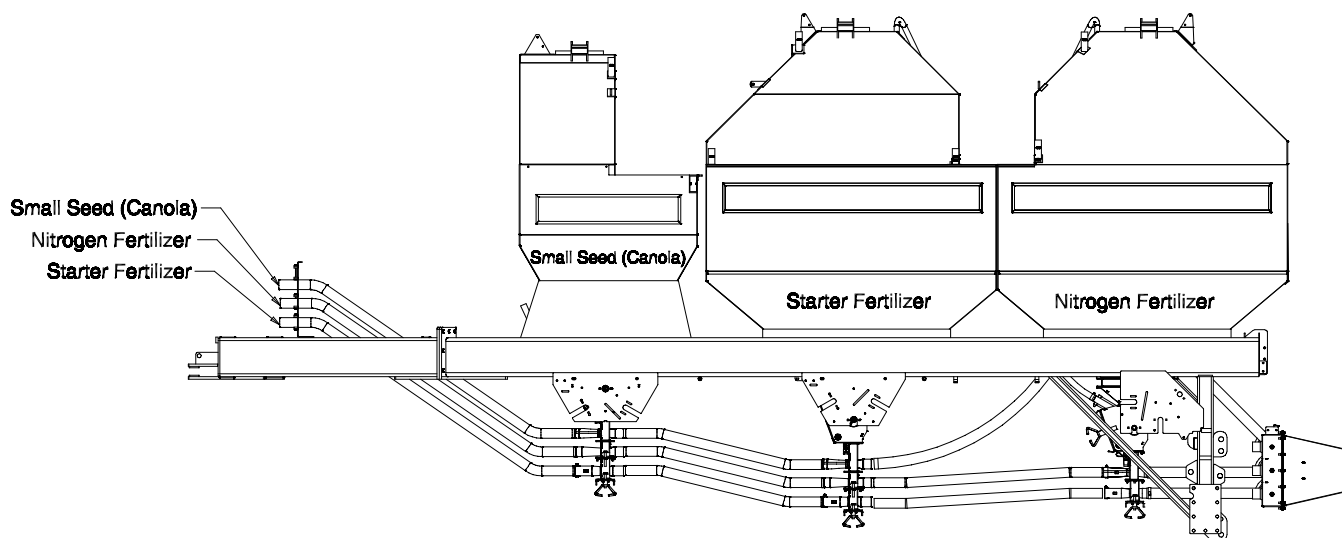
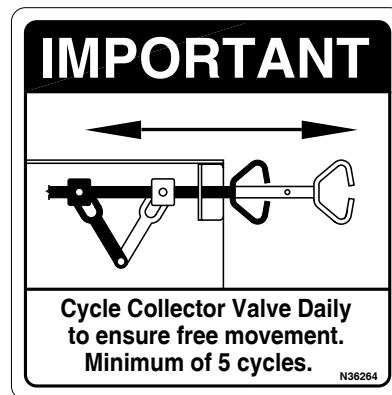
1. Collector Valve Setting:

Tank 1 (Small Seed (Canola)) - **Top Pipe**

Tank 2 (Starter Fertilizer) - **Bottom Pipe**

Tank 3 (Nitrogen Fertilizer) - **Middle Pipe**

2. Plenum Setting: See table on "Plenum Settings" located in previous section "Plenum Damper Settings".



Triple Shoot Settings - Continued

Double Shoot Tow Behind

- Combining product from any combination of tanks and placed in either air stream is possible with the EIGHT Series distribution system. Some typical examples are shown below.

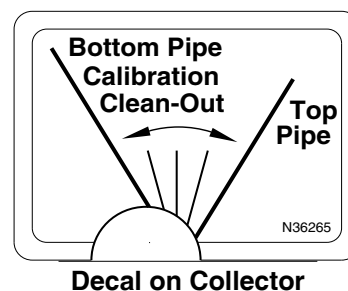
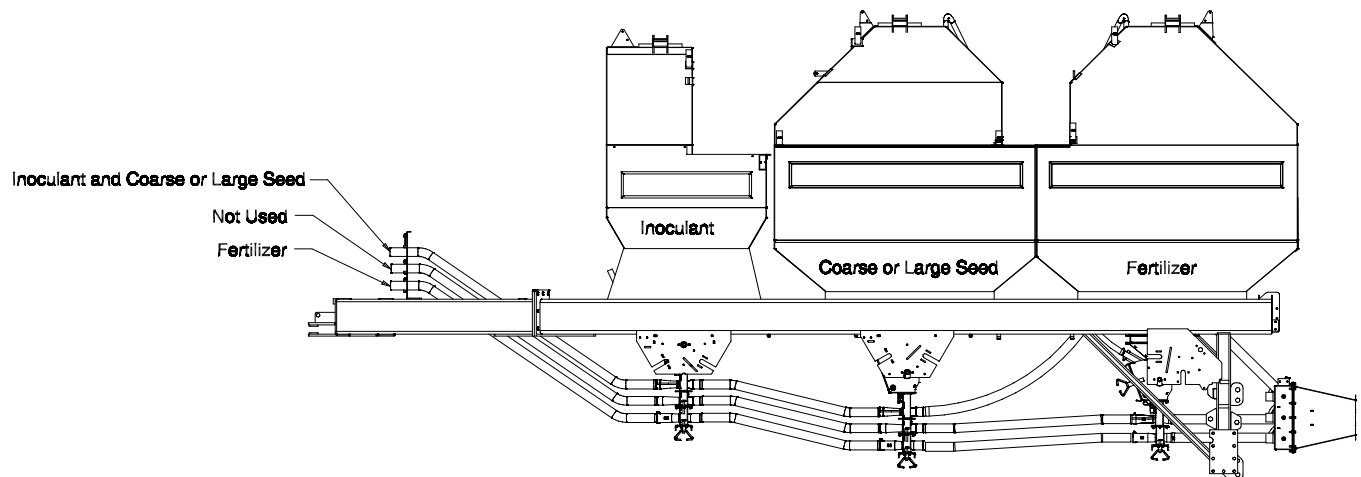
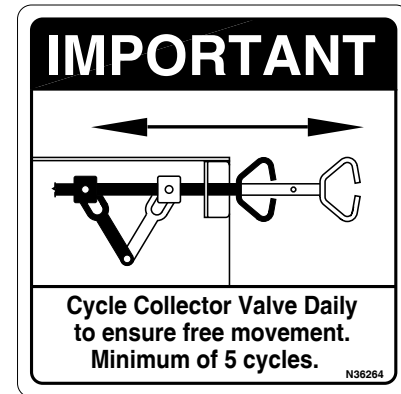
Example 1.

Tank 1 - Inoculent

Tank 2 - Coarse or Large Seed

Tank 3 - Fertilizer

- Collector Valve Setting:
 - Tank 1 (Innoculent) - **Top Pipe**
 - Tank 2 (Coarse or Large Seed) - **Top Pipe**
 - Tank 3 (Fertilizer) - **Bottom Pipe**
- Plenum Setting: See table on "Plenum Settings" located in previous section "Plenum Damper Settings".



Operation

Triple Shoot Settings - Continued

Single Shoot Tow Behind

- Combining product from any combination of tanks and placed in either air stream is possible with the EIGHT Series distribution system. Some typical examples are shown below.

Example 1.

Tank 1 - Coarse or Large Seed

Tank 2 - Coarse or Large Seed

Tank 3 - Fertilizer

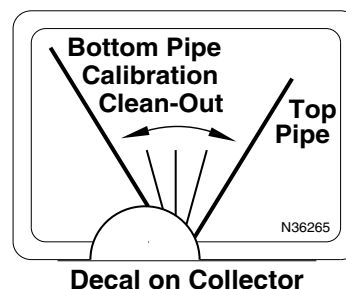
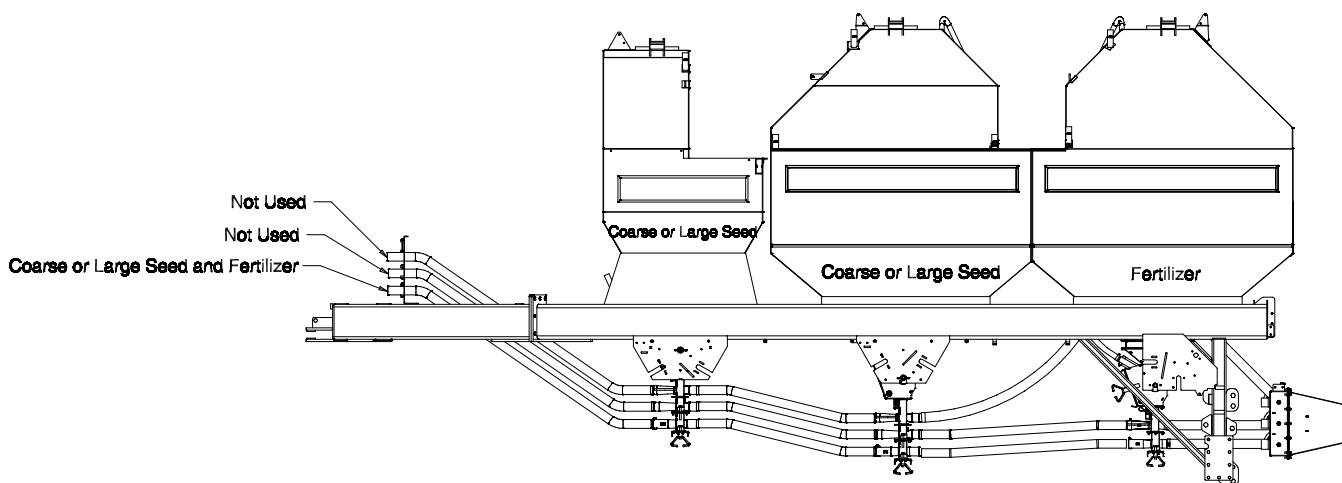
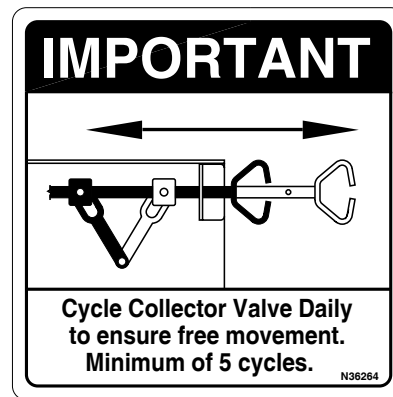
1. Collector Valve Setting:

Tank 1 (Coarse or Large Seed) - **Bottom Pipe**

Tank 2 (Coarse or Large Seed) - **Bottom Pipe**

Tank 3 (Fertilizer) - **Bottom Pipe**

2. Plenum Setting: See table on "Plenum Settings" located in previous section "Plenum Damper Settings".



Operating Guidelines

There are a number of areas that can cause problems when seeding. Listed below are specific points that should be addressed at all times. Following these guidelines will ensure better crop emergence and consequently the potential for better yields.

An improperly leveled seeding tool cause uneven depth, which could result in poor emergence.

It is important that the seeding tool is leveled both side-to-side and front to back.

Check Tire Pressures

- Ensure all tires are inflated to their specified pressure. Incorrect tire pressure can cause depth variations.

Level Seeding Tool Side to Side

- Check the depth of each shovel on the back row.
- Adjust side to side level as necessary. See seeding tool manual for more details.

Level Seeding Tool Front to Rear

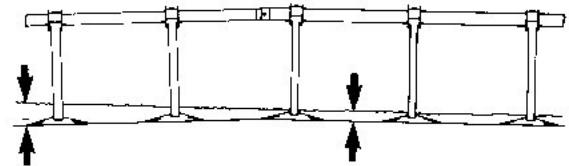
- Poor front to rear leveling causes ridging as shown.
- Check the depth of two adjacent shanks, normally one on the front row and one on the rear row.
- Adjust level as necessary. See seeding tool manual for more details.

Worn Seeding Tool Parts

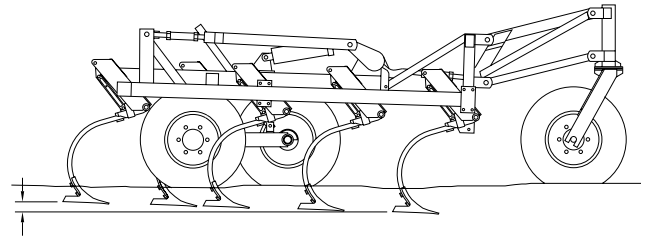
- Shanks that are bent cause uneven depth and they should be repaired or replaced.
- Trip mechanisms that are worn can also cause poor depth control and any worn parts should be repaired or replaced.

Packing

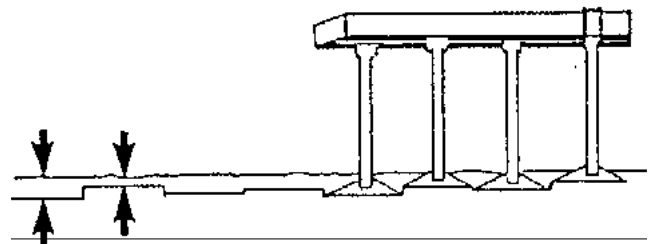
- Packing behind the seeding unit is strongly recommended. This improves germination and helps reduce moisture loss and erosion.
- In wet conditions the head land should be done last to prevent over packing.



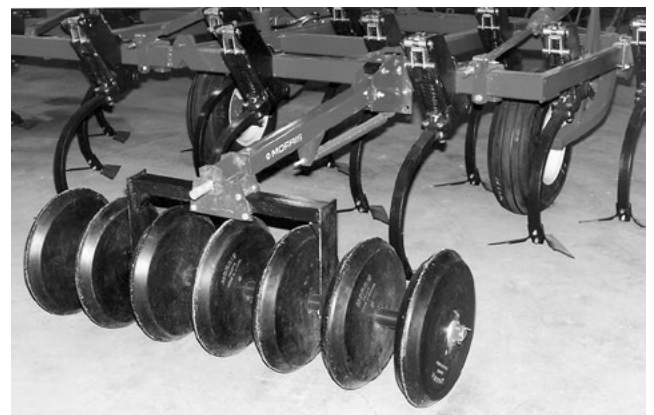
Side to Side Level



Front to Back Level



Ridging Front to Back



Mounted Packers

Operation

Operating Guidelines - Continued

Turning

- Avoid sharp turns. Backing up of the outer wings with the seeding tool in the ground has a tendency to plug the seed boot with soil.
- Raise seed boots fully before making sharp turns or backing machine.

Note: It is strongly recommended to consult local agricultural extension offices for allowable product rates, which are dependent on soil moisture and type.

Seed Rate Settings

- Remove any caked-on material from seed plate and metering wheels.
- Ensure correct seed plate is installed and metershaft turns freely.
- Check product rates carefully by performing a calibration check.

Fertilizer Application

- Avoid using fertilizers that absorb moisture readily, especially during periods of high humidity.
- Also avoid fertilizers that contain a high percentage of fine dust, as these materials can plug metering wheels and coat the inside of seed distribution system.

Fan Setting

- Run fan at recommended speed. If plugging or surging occurs increase the fan speed to eliminate the problem.
- Allow tractor hydraulic oil to warm-up thoroughly prior to seeding. Cold oil will cause slower fan speeds (Hydraulic driven fan).

Product Application

- Control product application with the clutch switch in tractor.
- Have machine moving forward before lowering seed boots to avoid plugging.
- To prevent skipping, allow a minimum of 15 feet (5 m) of forward travel to ensure air system has delivered product to seed boots.

Forward travel should be equal to half the width of the seeding tool. [i.e. for a 40 ft (14 m) wide seeding tool the forward travel should be a minimum of 20 feet (7 m).]

Note: Do not attempt to meter product when fan is not running. Damage to the metering wheels may occur.

Operating Guidelines - Continued

Adjustments and Operational Checks:

- When changing fields and periodically throughout the day the seeding tool should be checked for level and depth and the seed boots for blockage.

Checking Seed Flow:

The following procedure should be implemented throughout the day typically at each fill of the Air Cart:

- Raise the seeding tool out of the ground.
- With the fan running turn the crank on the rear transmission 4 or 5 turns.
- Seed and/or fertilizer should appear at each outlet on the ground.
- If no seed or fertilizer appears on the ground at any of the openers check for hose blockage in both the 15/16" (24 mm) diameter secondary and the 2 1/2" (64 mm) diameter primary hose, as well as in the flat fan divider.
- See Trouble Shooting Section for possible causes of the blockage.

Moisture Alert

- Whenever Air Cart has been standing for an hour or more during period of high humidity or damp, rainy days, or after sitting overnight, run fan at recommended rpm, with machine stationary for 5 minutes.

Air Leaks

It is imperative that no air leaks occur in the Air Cart tank as even the smallest air leak from the lid will lead to material bridging in the tank thereby causing misses in the field.

Check the following areas for air leaks:

- Tank clean-out door
- Metering body assembly seals
- Collector assembly seals
- Tank lid

Tank Low in Product

- Refill tank before metering wheels are exposed.
- The metering wheels must be completely covered to avoid unseeded strips.

Important

Check Metering Wheel flutes in the event the primary lines plug.

Flutes may shear if the collector becomes plugged.

Note : Check Seed Flow as described above, after running fan for 5 minutes.

Operation

Operating Guidelines - Continued

Monitor

- Familiarize yourself with all monitor functions.
- Ensure all monitor “*settings*” are correctly set for the Air Cart/Seeding Tool combination.
- Recognize and correct alarm conditions as indicated on the machine.
- Check all wire harness connections for corrosion and use a dielectric spray to clean. Inspect all sensors for proper gap.



MONITOR

General Field Operation

- Follow guidelines outlined in “*Operating Guidelines*”.
- Switch monitor on.
- Start Fan.

Note: Load sensing hydraulic systems require “*warming up*” before they function smoothly. See “*Hydraulic Fan Drive*” for more details.

- Move forward with seeding tool.
- Engage metering system clutch (MAIN).
- Lower seeding tool into ground.
- Turning at headland: Switch metering system clutch off (MAIN), immediately raise seeding tool fully rephasing hydraulics (see seeding tool manual).
- Once turned engage metering system clutch (MAIN) and lower seeding tool into ground.

Note: Do not attempt to meter product when fan is not running. Damage to the metering wheels may occur.

Note: It takes a minimum of 15 feet (5 m) of forward travel @6 M.P.H. (10 kph) before product reaches the seed openers. Forward travel should be equal to half the width of the seeding tool. [i.e. for a 40 ft (14 m) wide seeding tool the forward travel should be a minimum of 20 feet (7 m).]

Clutch Switches

Main

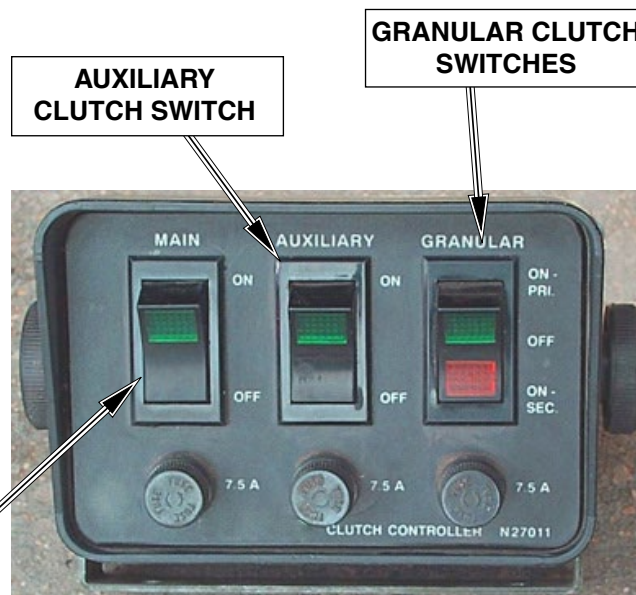
- Controls the main clutch which engages and disengages the ground drive.

Auxiliary

- Controls the optional second clutch.

Granular

- Controls a secondary auxiliary clutch





Clutch Switch Console

Tighten Bolts

- Before operating the air cart.
- After the first two hours of operation.
- Check tightness periodically thereafter.
- Use Bolt Torque Chart for correct values on various bolts.
- Note dashes on hex heads to determine correct grade.

Note: DO NOT use the values in the Bolt Torque Chart if a different torque value or tightening procedure is given for a specific application.

- Fasteners should be replaced with the same or higher grade. If higher grade is used, only tighten to the strength of the original.

Bolt Torque Chart				
Grade 5 Bolt Marking 		Bolt Size	Grade 8 Bolt Marking 	
Nm	lb. ft.		lb. ft.	Nm
11	8	1/4	12	16
23	17	5/16	24	33
41	30	3/8	45	61
68	50	7/16	70	95
102	75	1/2	105	142
149	110	9/16	155	210
203	150	5/8	210	285
366	270	3/4	375	508
536	395	7/8	610	827
800	590	1	910	1234
1150	850	1-1/8	1350	1850
1650	1200	1-1/4	1950	2600
2150	1550	1-3/8	2550	3400
2850	2100	1-1/2	3350	4550

Tires

- Inspect tires and wheels daily for tread wear, side wall abrasions, damaged rims or missing lug bolts and nuts. Replace if necessary.
- Tighten wheel bolts - refer to Bolt Torque Chart.
- Check tire pressure daily, when tires are cold.
- Correct tire pressure is important.
- Do not inflate tire above the recommended pressure.

Tire Specifications				
Tire	Style	Rating	Pressure	
			8240 8300 BH 8336 BH	8300 BT 8336 BT 8370 8425
21.5 x 16.1	Soft Trac	10 ply	28 psi	N/A
21.5 x 16.1	Lug	12 ply	24 psi	N/A
560/65 D24	Soft Trac	LI 140	19 psi	24 psi
500/70 R24	Lug	LI 157	20 psi	25 psi
540/65 R24	Lug	LI 135	18 psi	20 psi
23.1 x 26	AWT	12 ply	24 psi	N/A
23.1 x 26	Rice	10 ply	28 psi	N/A
30.5 x 32	AWT	12 ply	20 psi	24 psi
30.5 x 32	Lug	14 ply	20 psi	22 psi
800/65 R32	Lug	LI 172	15 psi	20 psi

*BH - Tow Behind only

*BT - Tow Between only



Caution

Tire replacement should be done by trained personnel using the proper equipment.

Maintenance

Daily Maintenance

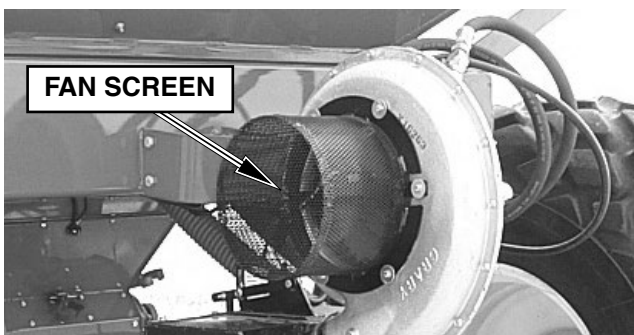
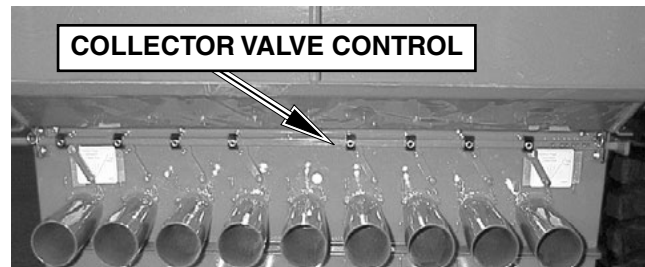
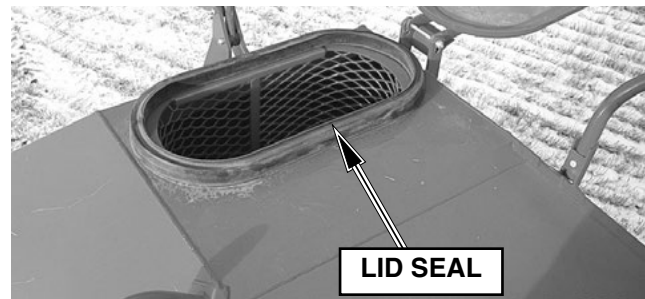
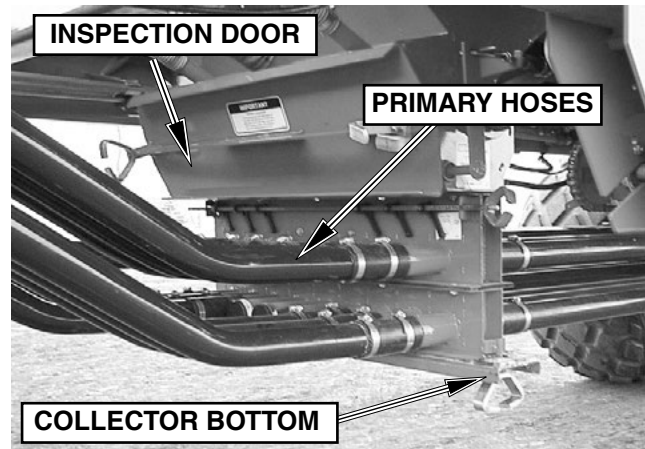
- Check for and remove any water in primary collectors and pressure lines after rainy weather. Remove all inspection doors and collector bottoms to drain water from the tanks and collectors.
- Reinstall collector bottoms and inspection doors.
- Ensure fan screen is clear of debris.

Note: Start fan and run for 3 - 5 minutes prior to loading machine to get rid of accumulated moisture.

- Check lid seals for damage, and that they are sitting properly on steel ring.
- Check tank pressure hoses for leaks, cracks or plugging.
- **Check the following areas for air leaks:**
 - Tank inspection door
 - Metering body assembly seals
 - Collector assembly seals
 - Tank lid

Refer to "Air Leak Check" under Air System Maintenance.

- Check monitor wiring that all sensor wires are properly routed and retained.
- Check for plugged hoses.
- Cycle Collector Valve five times to ensure parts are free to move.
- Check for free movement of spring loaded chain tension idlers.
- Ensure drive chains are cleared of debris.
- Check torque on wheel bolts.



Lubrication

Greasing pivot points prevents wear and helps restrict dirt from entering. However, once dirt does enter a bearing, it combines with the lubricant and becomes an abrasive grinding paste, more destructive than grit alone.

- Apply new lubricant frequently during operation to flush out old contaminated lubricant.
- Use a good grade of lithium based grease.
- Use a good grade of machine oil.
- Clean grease fittings and lubricator gun before applying lubricant.

Refer to the following photos for grease fitting locations.

1. Drive shaft bearings

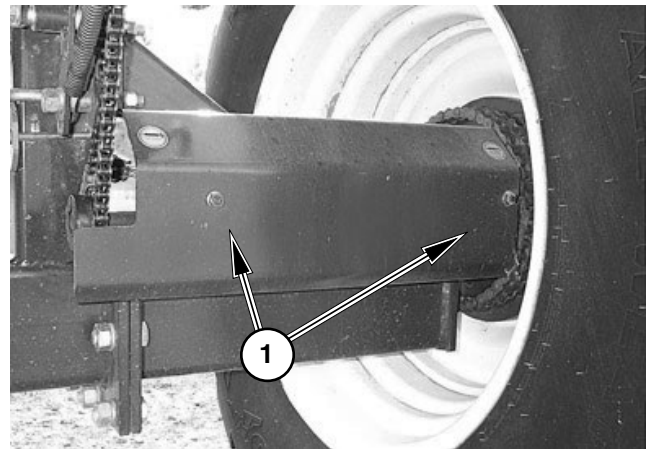
- Grease every 50 hours.

2. Drive Chains

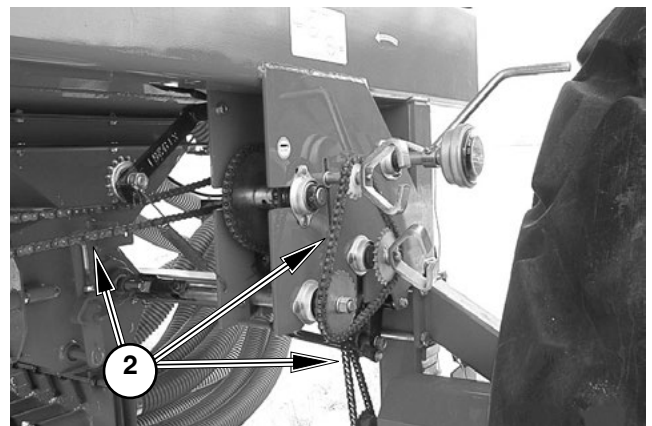
- Oil every 50 hours.

3. Slow Speed Drive

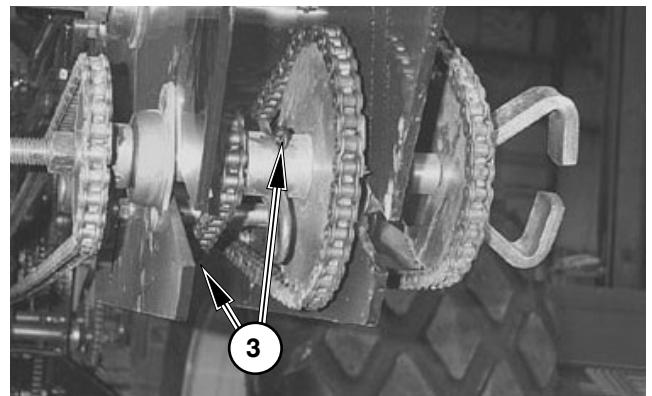
- Grease every 50 hours.



1. Drive Shaft Bearings



2. Drive Chains



3. Slow Speed Drive

Maintenance

Lubrication - (continued)

4. Auger Pivot

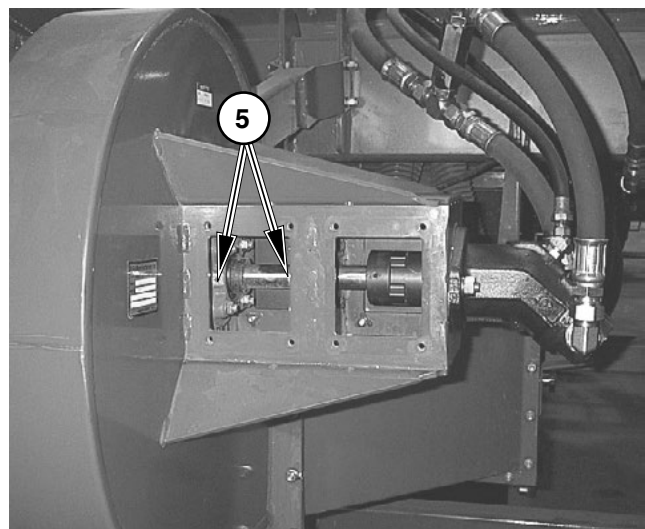
- Grease every 100 hours.



4. Auger Pivots

5. Fan Bearings (17" Diameter Fan only)

- Grease every 100 hours.



5. Fan Bearings

Air Delivery System

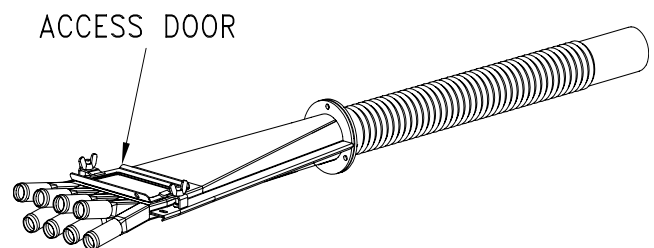
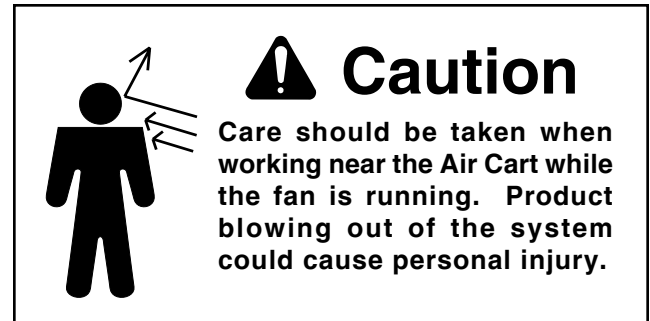
General

The air delivery system of all Air Carts is extremely important for the proper metering of product to the openers. The metering system on all pressurized Air Carts is sensitive to air leaks. **Loss of tank air pressure could affect feed rates, which could become erratic or even stop.**

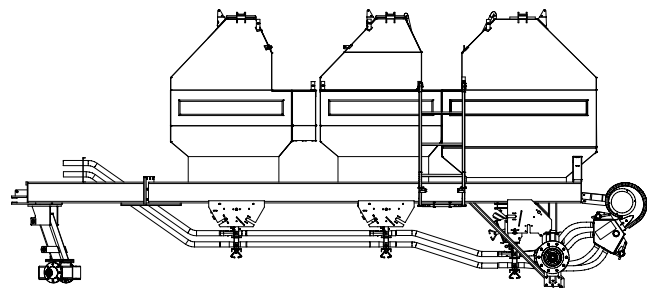
- Regularly check that all hoses are free from kinks or blockages throughout the day. To check for blockages raise seeding tool out of the ground and with the fan running turn crank a couple of turns. Equal amounts of material should be deposited under each boot. If not, check the following for blockage:
 1. Seed openers and secondary hoses.
 2. Divider heads by removing access doors.
 3. Primary hoses and collectors.
 4. Metering wheels for damage to the flutes of the wheel.
- Keep fan inlet screen clear and free from debris.
- Place a plastic bag over the fan when the unit is not in use. This helps prevent moisture from entering the system.
- Check periodically and at the end of each season for air leaks at hose connections.
- Check periodically and at the end of each season for air leaks at the following:
 1. Tank Lid Seals.
 2. Metering body shaft seals.
 3. Metering body to tank seals.
 4. Collector to metering body seals.
 5. Fan to plenum.
 6. Plenum to collector.
 7. Inspection doors, for leaks and loss of seal memory.
 8. Collector door seals.
 9. Couplers between seeder and cultivator.
 10. Access Doors on Divider Heads.

Note: There must not be any air leaks from the tank. This air leakage causes air turbulence in the tank which can result in inaccurate metering rates.

- Once a year check for wear of primary and secondary hoses.



Note: Extended life can be obtained if the hoses are rotated 1/4 turn once a year.



Maintenance

Air Delivery System - continued

Tank Lids

The lid seal is probably the area that sees the most abuse due to the activity associated with filling the tanks.

With each fill the lid seals should be inspected for cuts, abrasions, debris in the seal and ensure the seal is positioned properly on the steel rim around the tank opening.

Tank Lid Adjustment

Check Tank Lid tension on *all tanks* at beginning of each season and periodically during season for air leaks. The following checks and adjustments must be made to prevent air leaks from occurring:

- Check for any foreign material embedded into seal. Clean out foreign material from seal surface.
- Check seal for cuts and abrasions. If seal is cut or severely worn, then replace seal.
- Ensure seal is positioned properly on steel rim around tank opening.
- Use a 0 - 100 lb. spring scale to check the tank lid opening force. With the lid closed place one end of the scale one inch from the end of the tank lid lever. Pull straight up on the scale and note the maximum force it takes to open the lid. The force needed to open the lid **must be greater than 65 lbs.** Adjust the lid latch adjusting bolt as necessary. The lid latch should close with a **snap**. This will ensure that the lid is sufficiently tight and prevent any leaks.
- Re-check for leaks. If lids still leak turn down bolt one or two more turns. Re-check for leaks.

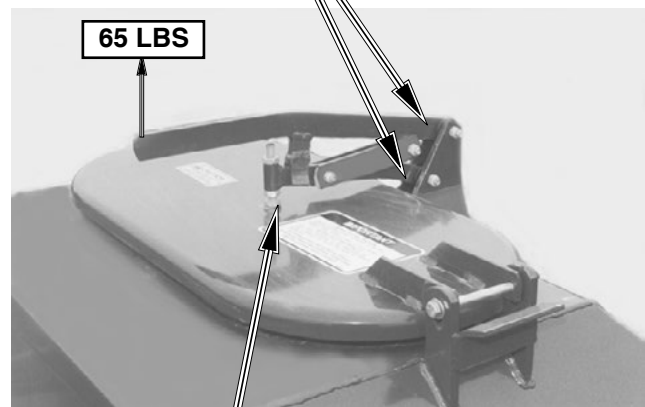


Important

It is imperative that no air leaks occur in the Air Cart tank as even the smallest air leak from the lid will lead to material bridging in the tank thereby causing misses in the field.

Note: When Air Cart is not in use, leave lid latches loose to help maintain resilience of the seals.

These bolts and lock nuts must be tightened to maintain a friction fit so the lid latch stays stationary when in open position.



Adjust the lid latch adjusting bolt to obtain a force *greater than 65 lbs* to open the lid.

Air Delivery System - continued

Air Leak Check

It is **imperative that no air leaks occur** in the Air Cart tank. Any air leaks could cause loss of tank air pressure affecting feed rates, which could become erratic or stop.

To prevent this from occurring, it is strongly recommended that a pressure test be conducted prior to seeding time. This can be performed very easily and simply by completing the following steps:

- Clean fan impeller and adjust tank lids.
- Disconnect the 2 1/2" diameter primary hoses from the rear of the cultivator at the primary hose coupler(s) by loosening the four 3/8" bolts.
- Install the blank off plate that is supplied with the Air Cart at each coupler and retighten the 3/8" bolts. If the blank off plates are not readily at hand a piece of cardboard can be used in its place.
- Once the blank off plates have been installed, start the fan and run at 4,500 rpm.

Check the following areas for air leaks:

1. Tank lid seals.
2. Metering body shaft seals.
3. Metering body to tank seals.
4. Collector to metering body seals.
5. Fan to plenum and plenum to collector.
6. Inspection doors, for leaks and loss of seal memory.
7. Collector door seals.
8. Tanks union plate.
9. Tank Site Glasses.

Air leaks can be detected by spraying a soapy water solution onto the seal area. If bubbling of soap occurs, the seal has a leak. Another method is to use your hand to feel for any air movement around the seal. This method requires a calm day, as the wind can make it difficult to detect a small leak.

- If any of the above areas leak, remove the parts and replace the seal. Ensure upon reassembly that the parts are tightened sufficiently to prevent air leakage.
- Remove the blank off plates before using the Air Cart.

Once the pressure test is complete, check the following areas for air leaks:

10. Couplers between Air Cart and seeding tool.
11. Access doors on divider heads.

Important

It is imperative that no air leaks occur in the Air Cart tank, as even the smallest air leak will lead to material bridging in the tank, thereby causing misses in the field.

Note: When Air Cart is not in use leave lid latches and inspection doors loose to help maintain resilience of the seals.

Maintenance

Air Delivery System - continued

Fan

Debris can build up on the fan screen and blades causing reduced output of the fan. The lack of air flow even at higher fan speeds will cause material plugging of the air system.

The build up of material during operation can cause the following:

1. Fan rpm will increase without increasing oil flow to orbit motor.
2. Air Cart distribution system plugging from a lack of air flow (Increasing fan rpm has little or no effect).

Fan Screen

- Ensure fan screen is clear of debris. Check periodically through the day.

Fan Impeller

The fan blades may become plugged under high humidity/dusty conditions/high insect counts.

Under severe conditions the fan blades should be inspected daily and cleaned as required.

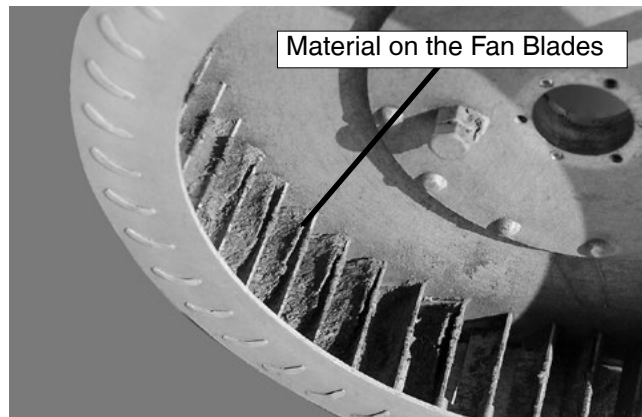
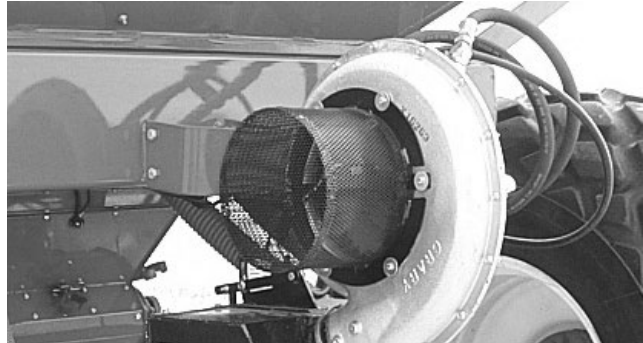
Under normal conditions the fan should be inspected and cleaned at least once a season.

- Care should be taken in cleaning all fan blades thoroughly to restore the fans peak performance.
- Ensure that the balance clips located on the fan blades are not removed, as this will put the fan out of balance.

Storage

To prevent water entering the air system, cover the fan intake with a plastic bag, whenever the seeder is not in use.

Note: Be sure to remove fan cover prior to starting fan. Serious damage could result to the fan.



Note: Material build up on the fan blades could cause the fan to be out of balance. The added vibration of the out of balance impeller will reduce the life of the fan components.

Air Delivery System - continued

Impeller Clearance

The impeller should be centred inside the housing to avoid contact between the impeller and housing.

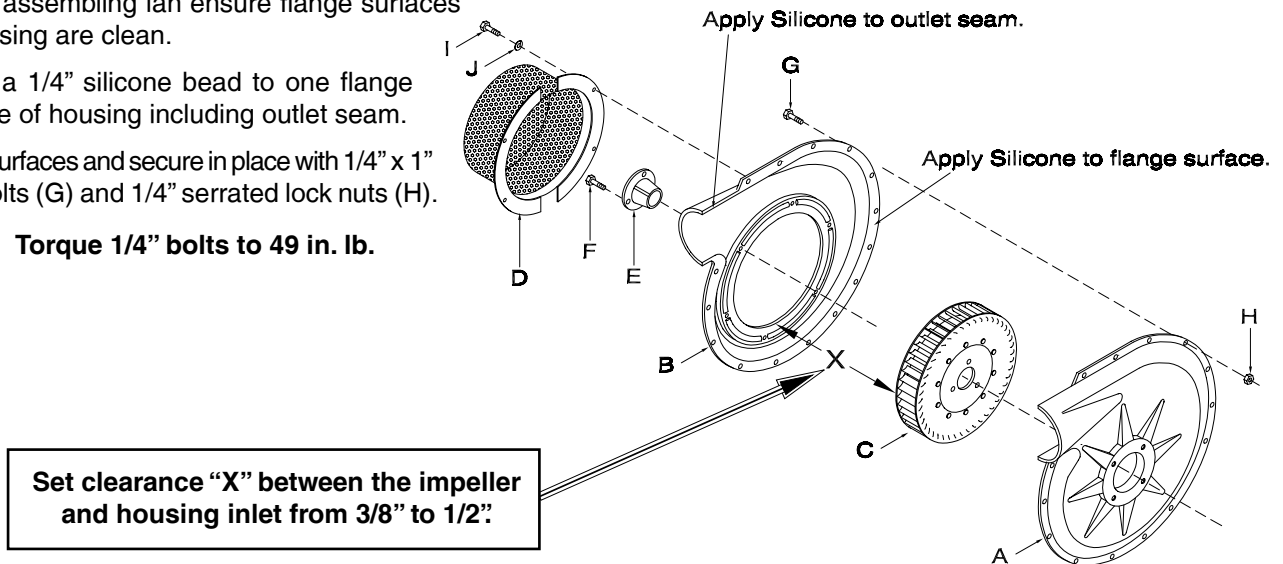
The distance "X" between the impeller and housing inlet, when centred, will be approximately 3/8" to 1/2".

When assembling fan ensure flange surfaces of housing are clean.

Apply a 1/4" silicone bead to one flange surface of housing including outlet seam.

Mate surfaces and secure in place with 1/4" x 1" hex bolts (G) and 1/4" serrated lock nuts (H).

Note: Torque 1/4" bolts to 49 in. lb.



Hoses

Inspect air delivery hoses for wear and replace as required. Check areas where hoses may be exposed to moving parts such as hitch hinge area.

Also, inspect hoses for blockage as rodents/birds may nest in hoses that have not been properly capped during storage.

To optimize the EIGHT Series Air Cart air system all primary hoses **must be equal in length**.

Important

ALL Primary Hoses must be the same length.

Maintenance

Hydraulic Orbit Motor

The motor requires no maintenance itself.

It does, however, require clean oil so the tractor hydraulic filters must be replaced regularly.

Repair/Replacement

- Remove orbit motor from the fan.

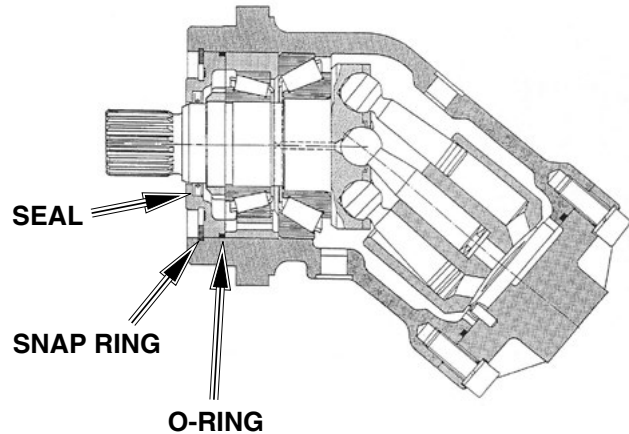
Note: The shaft should never be hammered on or forced in as this will result in motor damage upon startup.

- Remove the snap ring.
- Clean away paint then remove front cover.
- Push out the old shaft seal and press in the new one.

Note: The bearings should never be removed from the shaft as they are pretensioned to the shaft with the motor spinning.

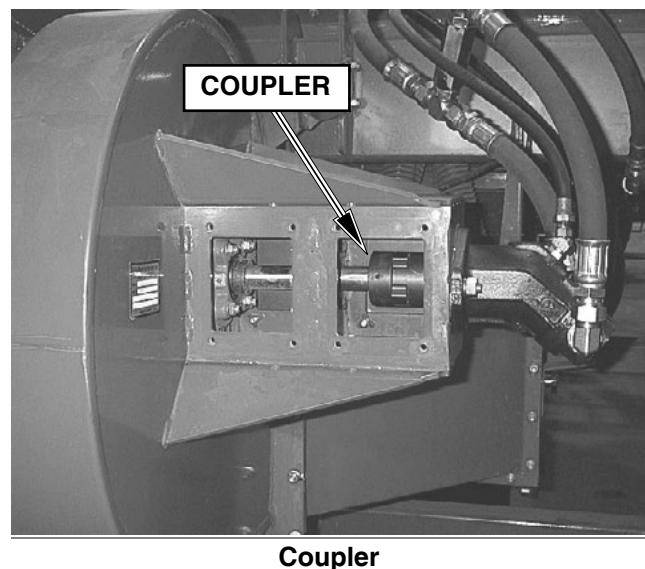
- Replace the O-ring.
- Both the O-ring and shaft seal should be greased with “*clean*” grease.
- Care must be taken when the front cover is installed so the shaft seal is not damaged.
- Reinstall the snap ring.
- Fill the motor case with “*clean*” oil before running.

Note: Any time a motor is replaced the case must be filled with oil before it is started, if not, a bearing failure could occur.



Orbit Motor Coupler (17" Diameter Fan only)

- Urethane insert should be inspected every 100 hours or when greasing bearings.
- Inspect that there are no urethane filings or nicks or cracks in urethane insert.
- Ensure set screws in each half of the coupler are tight.



Clutch

To check clutch for slippage check the following:

- Check friction plates for corrosion and buff with a wire wheel if necessary.
- Check clutch for side play. If there is movement on the shaft between the two clutch halves, adjust locking collars to snug halves together.
- Check clutch coil resistance. If the meter reads below 2.40 ohms or above 2.90 ohms, then the clutch has failed and needs to be replaced.
- Check clutch current draw. If the meter reads below 4 amps, there is a problem in the electrical system leading to the clutch.

Note: All values taken at room temperature. Voltage at 12VDC. As temperature increases, resistance increases, and current decreases.

Tie Rod - Tow Between

- Check at 10 and 50 hours and periodically afterwards.
- Torque to 450 ft. lbs.



Style 1



Style 2

Maintenance

Hydraulics

Refer to Section 1 regarding hydraulic safety. In addition:

- Inspect hydraulic system for leaks, damaged hoses and loose fittings.
- Damaged Hoses and hydraulic tubing can only be repaired by replacement. **DO NOT ATTEMPT REPAIRS WITH TAPE OR CEMENTS.** High pressure will burst such repairs and cause system failure and possible injury.
- Leaking cylinders - install a new seal kit.
- Fittings - use liquid Teflon on all NPT hydraulic joints. **Do not use liquid Teflon or Teflon tape on JIC or ORB ends.**
- Hydraulic Hose Connections - when connecting the hoses to the cylinders, tubing, etc. always use one wrench to keep the hose from twisting and another wrench to tighten the union. Excessive twisting will shorten hose life.
- Keep fittings and couplers clean.
- Check the Tractor Manual for proper filter replacement schedule.

Refer to the Trouble Shooting Section.

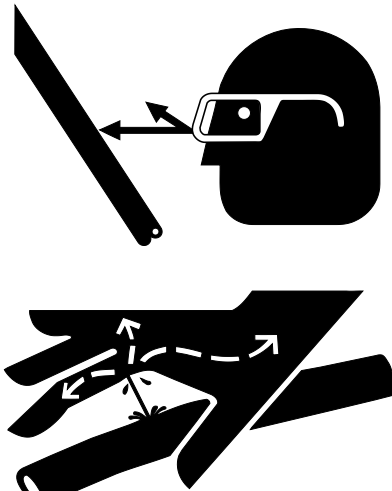


Contact your nearest Dealer for genuine repair parts. Dealers carry ample stocks and are backed by the manufacturer and regional associations.

Caution

Dirt in the hydraulic system could damage O-rings, causing leakage, pressure loss and total system failure.

Note: Extreme care must be taken to maintain a clean hydraulic system. Use only new hydraulic fluid when filling reservoir.



Warning

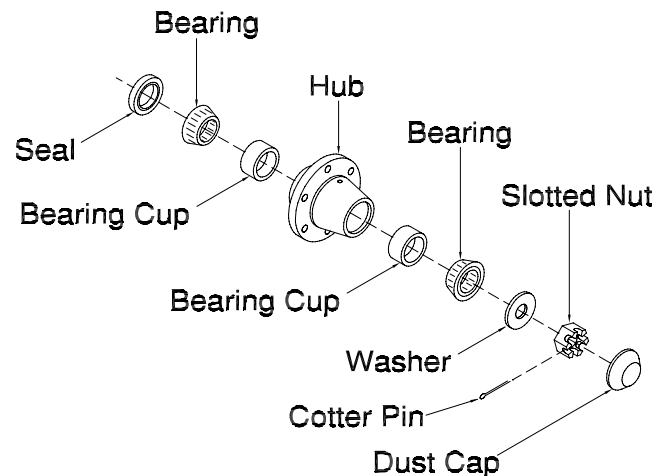
HIGH-PRESSURE FLUID HAZARD

To prevent serious injury or death:

- **Relieve pressure on hydraulic system before servicing or disconnecting hoses.**
- **Wear proper hand and eye protection when searching for leaks. Use wood or cardboard instead of hands.**
- **Keep all components in good repair.**

Wheel Bearings

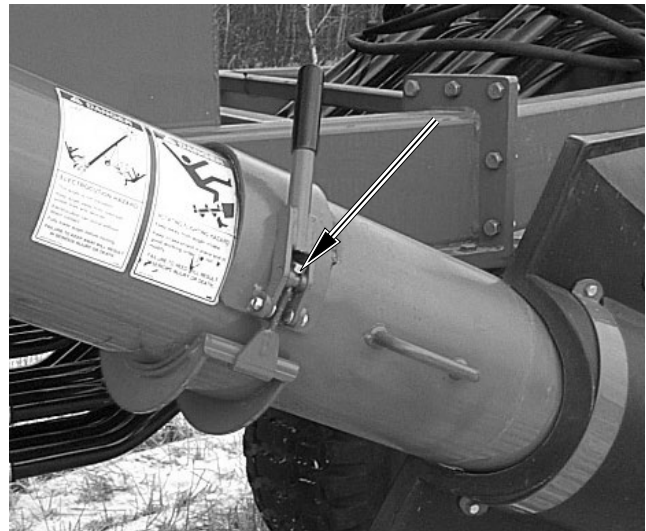
- Shut tractor off and remove key.
- Block wheel on tractor.
- Raise the Air Cart wheels enough to clear the surface.
- Securely block Air Cart frame.
- Remove wheel from hub.
- Remove the dust cap, cotter pin, and the slotted nut and washer.
- Be careful when pulling the hub off as not to drop the outer bearing.
- Clean spindle and bearing components with solvent.
- Inspect for wear on bearings, spindle and cups. Replace parts as required.
- Do not reuse old seals. Use only new seals when assembling.
- Pack inner hub with bearing grease.
- Be sure bearing and cup are dry and clean.
- Work grease into the bearing rollers, until each part of the bearing is completely full of grease.
- Install inner bearing and cup first, then press new seals in place.
- Place hub on spindle.
- Install outer bearing, washer and slotted nut.
- Tighten nut while turning the wheel until a slight drag is felt.
- Back nut off one slot and install a cotter pin. Bend cotter pin up around nut.
- Pack grease inside the dust cap and tap into position.



Maintenance

Auger Arm Locks

- Adjust the 3/8" nuts such that the lock handles snap firmly over centre when they are placed in the locked position.



Auger Front Latch

- Adjust the 3/8" nuts such that the lock handles snap firmly over centre when they are placed in the locked position.



Style 1 - Auger Rear Latch

- Adjust the 1/2" nuts such that the lock handle snaps firmly over centre when placed in the locked position.



Style 2 - Auger Rear Latch

Spacing Sprocket

Located on the inner side of the rear transmission is a “spacing sprocket”.

The spacing sprocket must be matched to the seeding tool trip spacing.

Note: Incorrect spacing sprocket will cause inaccurate application rates.

Spacing Sprocket	
Opener Spacing	Spacing Sprocket
7.2" (183 mm)	12 teeth
7.5" (191 mm)	12 teeth
8" (203 mm)	13 teeth
9" (229 mm)	15 teeth
10" (254 mm)	17 teeth
12" (305 mm)	20 teeth

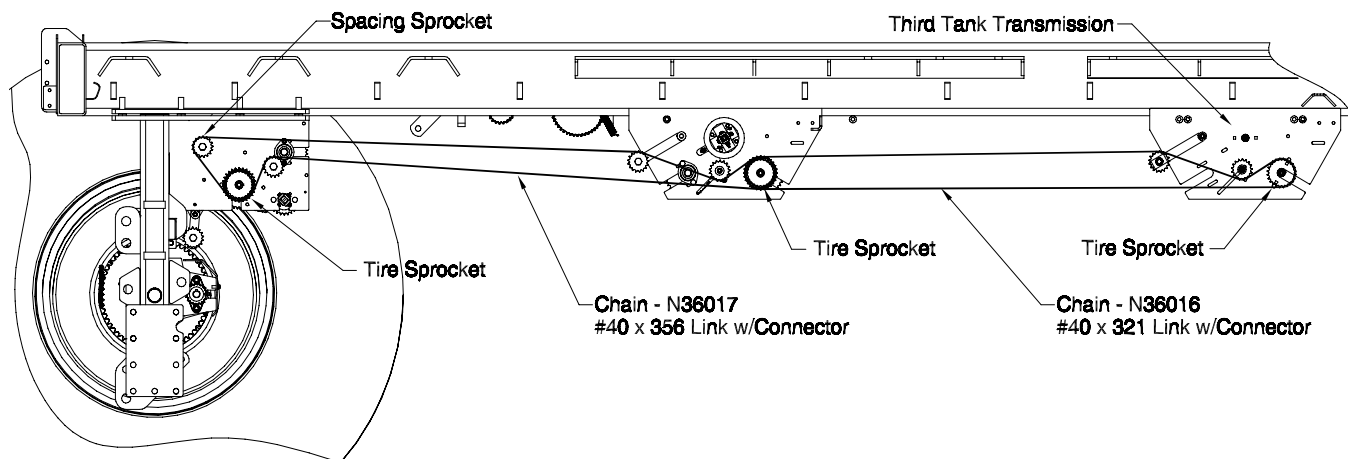


Spacing Sprocket

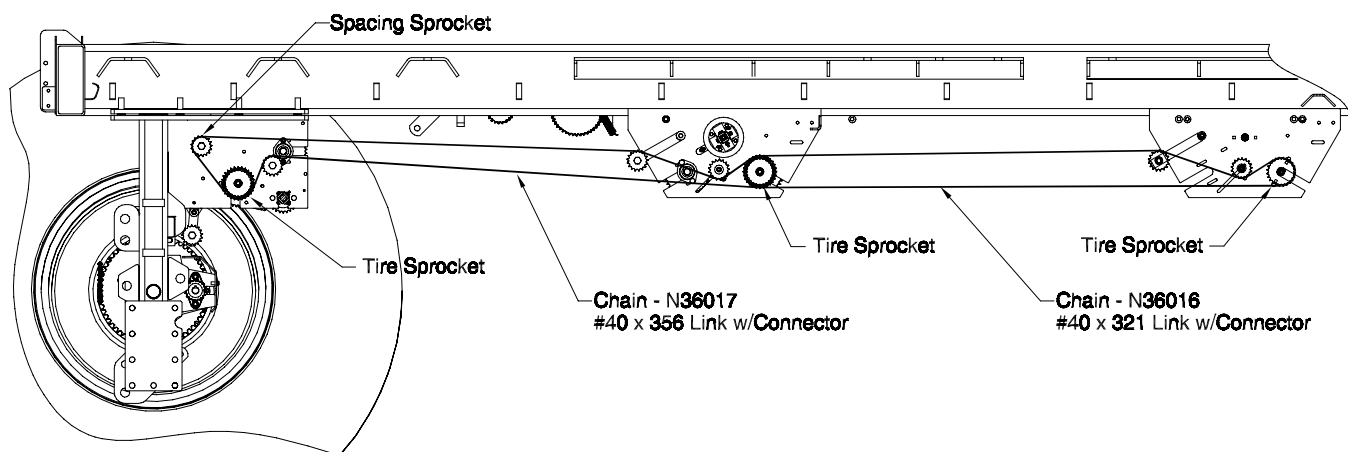
Metering

Spacing Sprocket - continued

8240 and 8300 with optional Third Tank

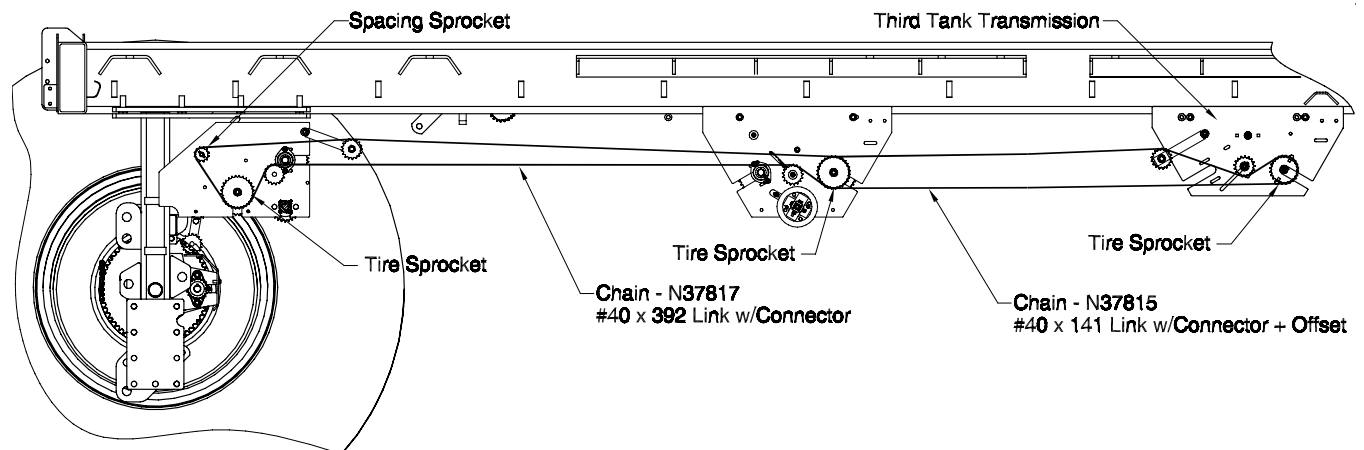


8336 and 8425



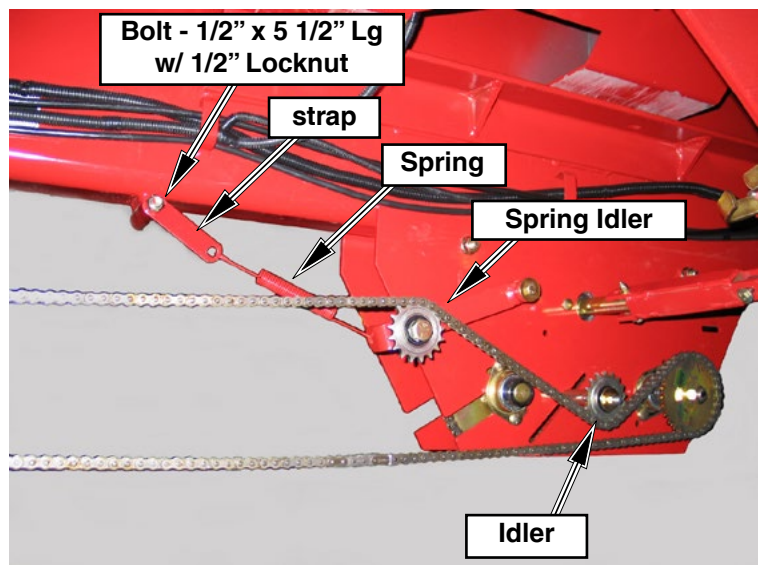
Spacing Sprocket - continued

8370 with optional Third Tank



8370 Third Tank Drive Chain

- Attach strap to frame as shown with a 1/2" x 5 1/2" bolt and 1/2" Locknut.
- Connect spring to strap and idler arm.
- Adjust idler in slot to provide tension on spring idler.



Metering

Tire Size Sprocket

In conjunction with the spacing sprocket is the tire size sprocket as illustrated in the previous diagram.

These sprockets are located on the inner side of each transmission input shaft and are driven by the spacing sprocket.

The tire sprocket must be matched to the tire size of the air cart.

Note: Incorrect tire size sprocket will cause inaccurate application rates.

Tire Sprocket			
Tire Size	Tire Style	Rating	Tire Sprocket
23.1 x 26	AWT (Implement)	12 ply	26 teeth
23.1 x 26	Rice (TD8 Sure Grip)	10 ply	24 teeth
30.5 x 32	AWT (Implement)	12 ply	28 teeth
30.5 x 32	Lug (Dyna Torque II)	14 ply	28 teeth
800/65 R32	Radial (Dyna Torque)	L1 172	28 teeth

Metering Wheels

The metering wheels come in 4 different sizes. Each wheel matches to a specific distribution head mounted on the Seeding Tool.

If the metering wheel and distribution head are not matched correctly, the distribution accuracy will be adversely affected.

Spacer plates are used to take up the extra space in each metering cup. These spacer plates vary in size according to the size of the metering wheel. (See Table 1) When a metering wheel is not required then spacers are used instead of the metering wheel.

There is an additional spacer used to separate each primary run. This spacer is 5/16" thick. The distance between the 5/16" spacers is 3".

There is a 1/4" spacer used on each end of the meter shaft.

Table 1				
Divider Head	Metering Wheel		Spacer	
Outlets	Number	Width	Qty	Width
-	Blank Off	-	2	1 1/2" (38 mm)
7	7	1 3/4" (45 mm)	2	5/8" (16 mm)
8	8	2" (51 mm)	2	1/2" (13 mm)
9	9	2 1/4" (57 mm)	2	3/8" (9.5 mm)
10	10	2 1/2" (64 mm)	2	1/4" (6.4 mm)

Important

Ensure distribution system is balanced.

It is very important that head outlets only vary by one.

(i.e. use only 7 and 8 together, 8 and 9 together, 9 and 10 together)

Metering

Metering Wheels - continued

Standard Head Arrangement

# Runs	Meter Wheel Size For All Meter Bodies								
60	9	9	8	8	Blank Off	Blank Off	8	9	9
61	9	9	9	8	Blank Off	Blank Off	8	9	9
62	9	9	9	8	Blank Off	Blank Off	9	9	9
63	9	9	9	9	Blank Off	Blank Off	9	9	9
64**	10	9	9	9	Blank Off	Blank Off	9	9	9
64	8	8	8	8	Blank Off	8	8	8	8
65	9	8	8	8	Blank Off	8	8	8	8
66	9	8	8	8	Blank Off	8	8	8	9
67	9	9	8	8	Blank Off	8	8	8	9
68	9	9	8	8	Blank Off	8	8	9	9
69	9	9	9	8	Blank Off	8	8	9	9
70	9	9	9	8	Blank Off	8	9	9	9
71	8	8	8	8	7	8	8	8	8
72	8	8	8	8	8	8	8	8	8
73	9	8	8	8	8	8	8	8	8
74	9	8	8	8	8	8	8	8	9
75	9	9	8	8	8	8	8	8	9
76	9	9	8	8	8	8	8	9	9
77	9	9	9	8	8	8	8	9	9
78	9	9	9	8	8	8	9	9	9
79	9	9	9	9	8	8	9	9	9
80	9	9	9	9	8	9	9	9	9
81	9	9	9	9	9	9	9	9	9
82	10	9	9	9	9	9	9	9	9
83	10	9	9	9	9	9	9	9	10
84	10	10	9	9	9	9	9	9	10
85	10	10	9	9	9	9	9	10	10
86	10	10	10	9	9	9	9	10	10
87	10	10	10	9	9	9	10	10	10
88	10	10	10	10	9	9	10	10	10
89	10	10	10	10	9	10	10	10	10
90	10	10	10	10	10	10	10	10	10
91	11	10	10	10	10	10	10	10	10
92	11	10	10	10	10	10	10	10	11
93	11	11	10	10	10	10	10	10	11
94	11	11	10	10	10	10	10	11	11
95	11	11	11	10	10	10	10	11	11
96	11	11	11	10	10	10	11	11	11
97	11	11	11	11	10	10	11	11	11
98	11	11	11	11	10	11	11	11	11
99	11	11	11	11	11	11	11	11	11

** For 40 foot Never Pin on 7 1/2" spacing.

Metering Body Looking From The Front When Installed

--	--	--	--	--	--	--	--	--	--

Metering Wheels - continued

Maximum Head Arrangement

# Runs	Meter Wheel Size For All Meter Bodies									
21	7	7	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	7
22	7	8	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	7
23	8	7	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	8
24	8	8	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	8
25	8	9	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	8
26	9	8	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	9
27	9	9	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	9
28	7	7	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	7	7
29	7	7	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	7	8
30	8	7	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	7	8
31	8	8	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	7	8
32	8	8	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	8	8
33	8	8	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	8	9
34	9	8	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	8	9
35	7	7	7	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	7	7
36	7	7	7	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	7	8
37	8	7	7	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	7	8
38	8	8	7	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	7	8
39	8	8	7	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	8	8
40	8	8	8	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	8	8
41	8	8	8	Blank Off	Blank Off	Blank Off	Blank Off	Blank Off	8	9
42	7	7	7	Blank Off	Blank Off	Blank Off	Blank Off	7	7	7
43	8	7	7	Blank Off	Blank Off	Blank Off	Blank Off	7	7	7
44	8	7	7	Blank Off	Blank Off	Blank Off	Blank Off	7	7	8
45	8	7	7	Blank Off	Blank Off	Blank Off	Blank Off	7	8	8
46	8	8	7	Blank Off	Blank Off	Blank Off	Blank Off	7	8	8
47	8	8	8	Blank Off	Blank Off	Blank Off	Blank Off	7	8	8
48	8	8	8	Blank Off	Blank Off	Blank Off	Blank Off	8	8	8
49	7	7	7	7	Blank Off	Blank Off	Blank Off	7	7	7
50	7	7	7	7	Blank Off	Blank Off	Blank Off	7	7	8
51	8	7	7	7	Blank Off	Blank Off	Blank Off	7	7	8
52	8	7	7	7	Blank Off	Blank Off	Blank Off	7	7	8
53	8	8	7	7	Blank Off	Blank Off	Blank Off	7	8	8
54	8	8	8	7	Blank Off	Blank Off	Blank Off	7	8	8
55	8	8	8	7	Blank Off	Blank Off	Blank Off	8	8	8
56	7	7	7	7	Blank Off	7	7	7	7	7
57	8	7	7	7	Blank Off	7	7	7	7	7
58	8	7	7	7	Blank Off	7	7	7	7	8
59	8	8	7	7	Blank Off	7	7	7	7	8

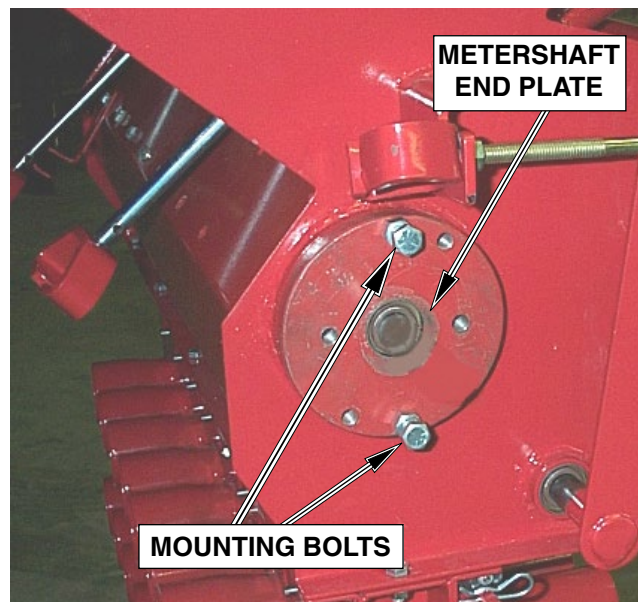
Metering Body Looking From The Front When Installed

--	--	--	--	--	--	--	--	--	--

Metering Wheels - continued

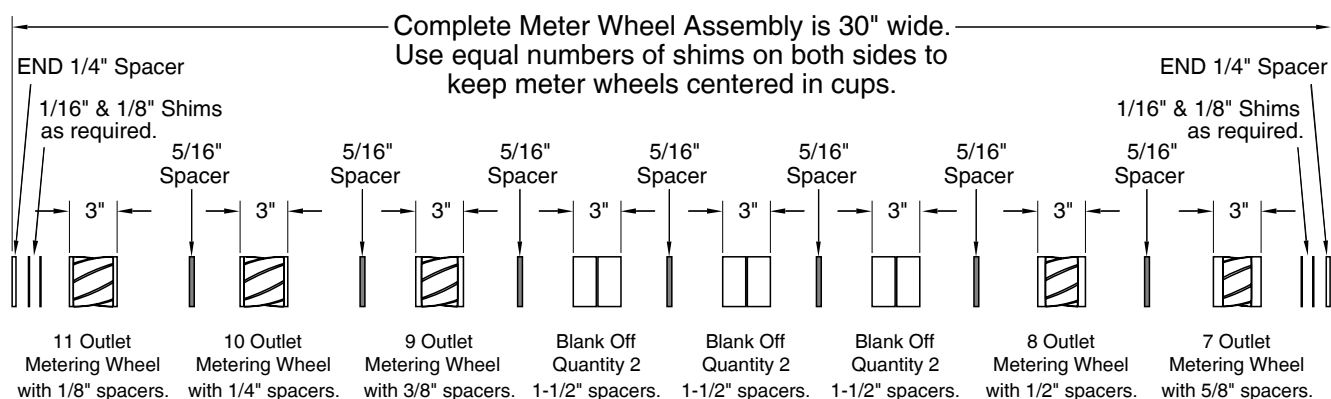
Metering Shaft Assembly

- Remove Inspection door.
- Remove 3/8" bolts holding the shipping plates covering the metershaft openings in the meterbody.
- Install snap ring and 1" ID stainless steel flatwasher onto the end of the shaft.
- Install (1) 1/4" spacer onto the shaft and slide against the flat washer and snap ring.
- Assemble meterwheels and spacers to shaft. Ensure correct spacers and wheels are located and assembled in the correct order. See Table 1 for meterwheel configurations. **Note:** After each meterwheel configuration, including any "Blank Offs", add one 5/16" spacer. The correct distance between the 5/16" spacers is 3" when assembled.
- Once all meterwheels and spacers are assembled add 1/4" spacer, 7/8" ID stainless steel flat washer and nut.
- Tighten nut on metering shaft until it bottoms out, ensure end spacers are on square of shaft.
- Check if spacers and wheels are tight. If the wheels and spacers are loose. Measure shim thickness required. If 1/16" shim required remove nut on metershaft and install shim between the 1/4" end spacer and the spacer used for the run.
- If a 1/8 shim is required then remove nut and install 1/16" shim between 1/4" end spacer and the spacer used for the run. Remove the snap ring at the other end of the shaft and install the other 1/16" spacer before the 1/4" end spacer. If more shims are required install 1/8 shims same as above.
- Reinstall snap ring and 1" ID stainless steel flat washer.



Assembly Hint: Arrange wheel assemblies in the coarse seed plate. This will ensure correct wheel and spacer arrangements prior to placing on meter shaft.

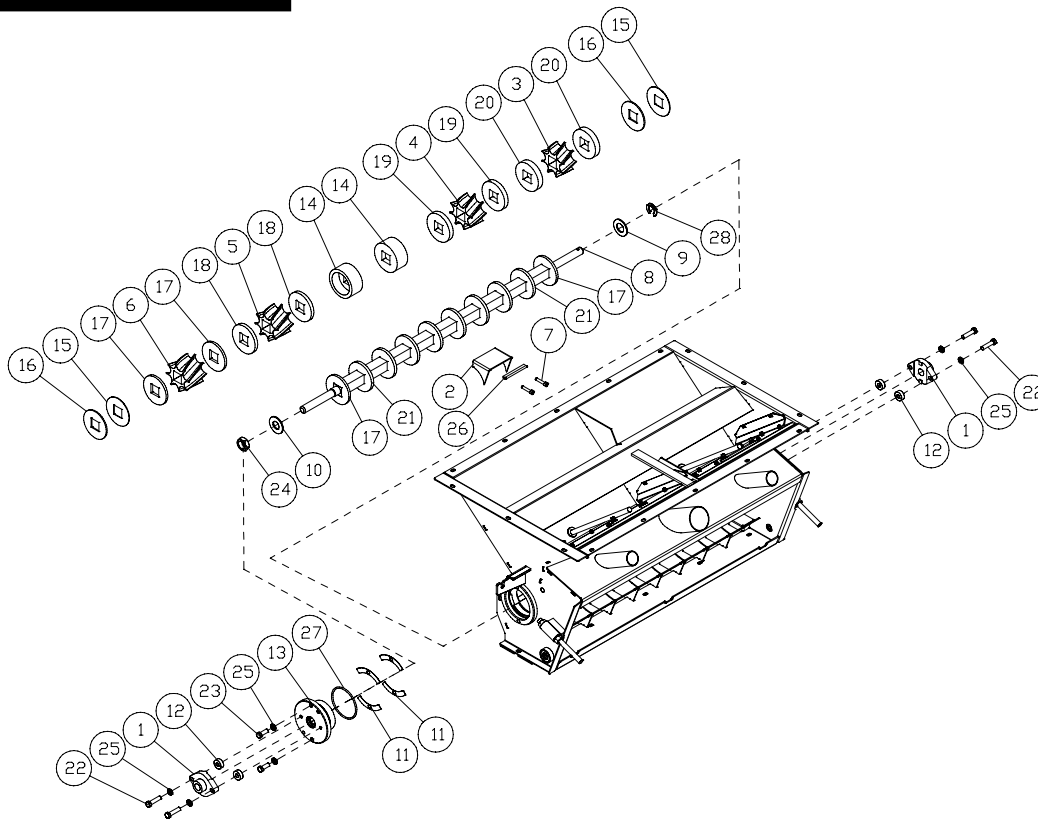
Note: Each meter wheel assembly is 3" wide.



Note: This is an illustration to show each wheel combination and overall spacer arrangement.

Metering

Metering Wheels - continued



Item	Part No.	Description	Qty
1	N19269	Flange Bearing	2
2	N36145	Blank Off	Asreq
3	N36717	Meterwheel - 7 Outlet	1
4	N36718	Meterwheel - 8 Outlet	1
5	N36719	Meterwheel - 9 Outlet	1
6	N36720	Meterwheel - 10 Outlet	1
7	S33922	Socket Head Capscrew	2
8	N36430	Metershaft	1
9	N36744	Washer - 1" ID Stainless Steel	1
10	N36431	Washer - 7/8 ID Stainless Steel	1
11	N37210	Shim - Metering Body End Cap	Asreq
12	N21602	Spacer - 13/32 ID x 3/8 Thick	4
13	N36774	End Plate	1
14	N36106	Blank Wheel Spacer Half	2
15	N36110	Meterwheel Spacer 0.0625	Asreq
16	N36731	Meterwheel Spacer 0.125	Asreq
17	N36732	Meterwheel Spacer 0.25	4
18	N36733	Meterwheel Spacer 0.375	2
19	N36734	Meterwheel Spacer 0.5	2
20	N36735	Meterwheel Spacer 0.625	2
21	N36736	Meterwheel Spacer 0.3125	8
22	W-477	Hex Bolt 3/8 x 1 1/2	4
23	W-475	Hex Bolt 3/8 x 1	2
24	N36432	Nylon Insert Hex Locknut - 7/8	1
25	W-523	Lockwasher - 3/8	6
26	D-5590	Seal - 1/16 x 3/4 (Bulk/Ft)	Asreq
27	N36748	O-Ring	1
28	N36813	1 Dia Retaining Ring	1

Metering Wheels - continued

- Reassemble shaft and tighten nut. Check to see that spacers and meterwheels are tight.
- **Do Not** install metershaft into the meterbody at this point.
- Install the Seed Plate and adjust the seed plate locks so that the bottom of the seed plate comes against the bottom of the rear back plate. Tighten nuts, so the flat washers are against the bracket
- Remove the Seed Plate and set aside.

Assembly Hint: Mark metering wheel size on the metering body. This will help in connecting the main distribution hose and secondary divider heads

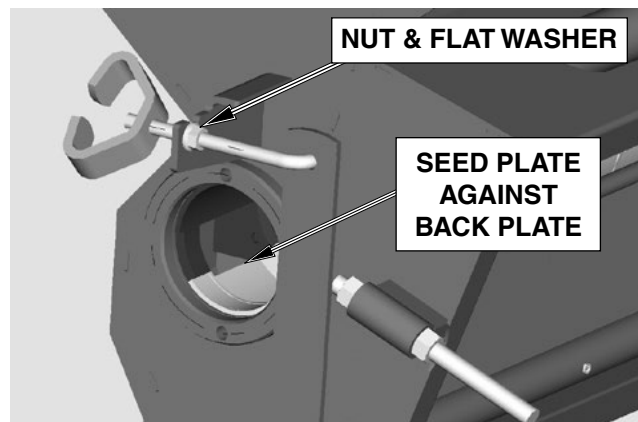
- Install metershaft assembly, snap ring end first into meterbody.
- Install 'O' Ring onto metershaft end plate.

Note: Apply thin layer of lubricate on 'O' Ring.

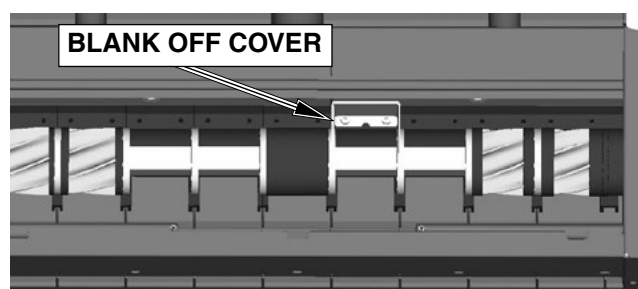
- Insert Metershaft end plate into the right hand side meterbody opening. The end plate can only be installed one way. The end plate is stamped with a "T" to mark top hole. The mounting holes are slightly offset ensuring that it is mounted correctly.
- Install Metershaft end plate and monitor sensor bracket using (2) 3/8" x 1" lg. The Metershaft end plate should bottom out against the side of the meterbody.
- Install metershaft bearings and spacers using 3/8" x 1 1/2" bolts.
- Check meter shaft for ease of rotation. The wheels should turn easily when rotated by hand. **Maximum torque on assembled metershaft is 50 inch pounds.** If too tight then back off bolts (2) 3/8" x 1" lg on the Metershaft end plate and install N37210 shims as required. Retighten bolts and check ease of rotation.

If they are difficult to turn after shims have been added, alignment of the backing plates is required. With meter wheels assembled in the body, loosen the 1/4" x 1/2" Lg hex bolts securing the backing plates to the meter body. Rotate meter wheels in direction of rotation (3 to 4 turns) until backing plates align with the wheels. Secure 1/4" x 1/2" Lg bolts starting from right, and alternate from bottom to top bolt.

Note: Bolt Torque is 5 ft. lb.

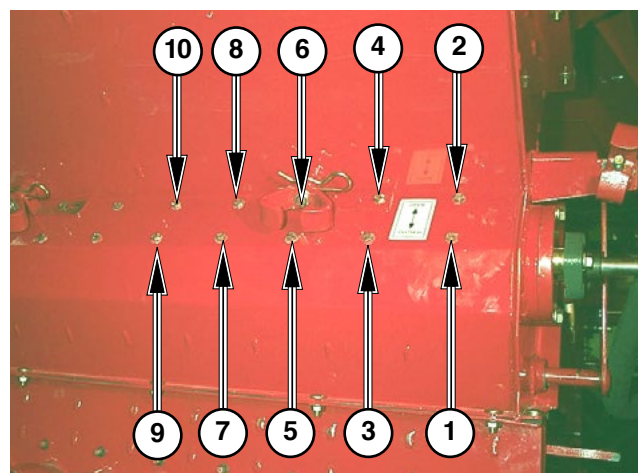


Seed Plate Adjustment



Blank Off

Note: Blank-Off Wheel Spacers are removed for clarity.



Alignment of the Backing Plates

Metering

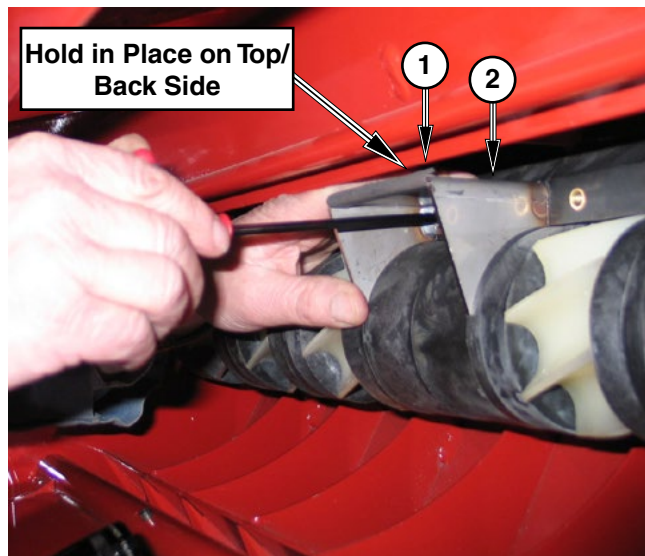
Metering Wheels - continued

Blank Off Installation

Proper fit between the blank-off and the spacer on the meter roller is important.

To ensure correct installation of the blank-off follow the procedures listed below:

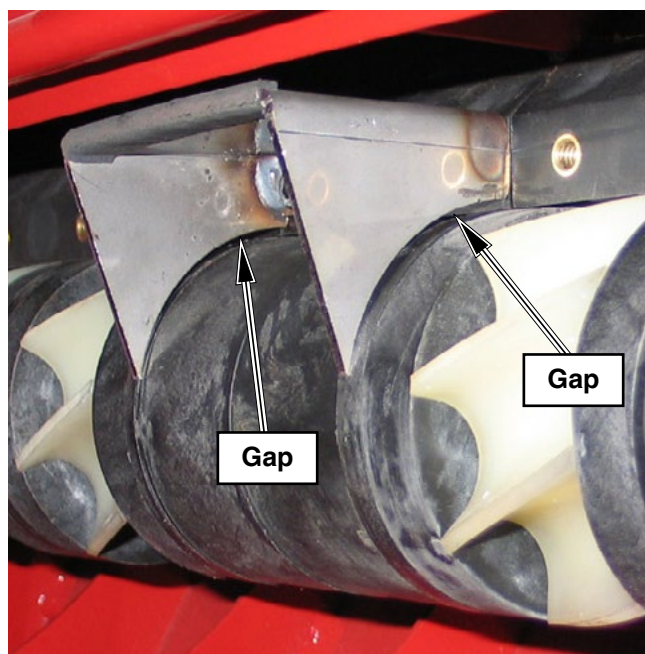
- Loosely install the Blank Off covers using (2) 1/4" Hex Socket bolts over the top of **all** the Blanked Off runs. Ensure seal strip **item # 26** is installed on the front of the Blank Off.
- Hold in place on top/back side of the blank-off to align the radius with meter roller while tightening capscrews.
- Tighten capscrews starting with the left screw when facing body.



Blank-Off Installation Procedure



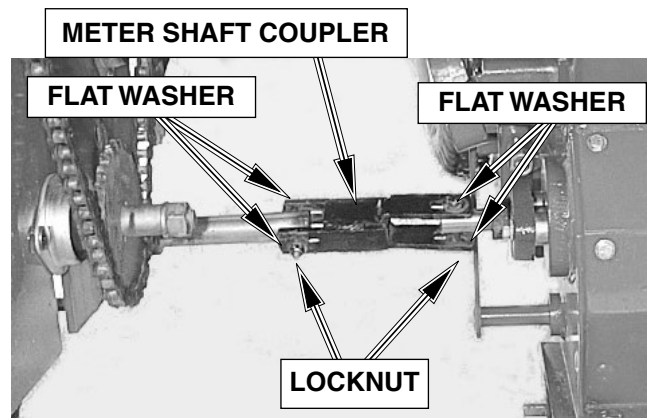
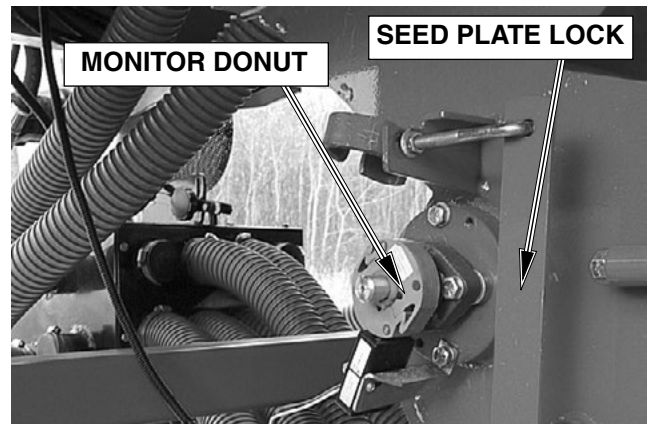
Correctly Installed blank-off



Incorrectly Installed blank-off

Metering Wheels - continued

- Tighten locking collars by turning the collars in the direction of the shaft rotation. Lock the collar by tapping the collar with a punch in the direction of rotation of the shaft.
- Install monitor donut on shaft. Ensure donut is centred to the pick-up. Set the gap between the pick-up and the donut at 0.030".
- Install the **Correct** seed plate for product being metered.
- Attach meter shaft coupler over the meter shaft and transmission drive shaft.
- Install the 1/4" x 2 1/4" Special bolt with two flatwashers and locknut. **Tighten locknuts to bottom of threads.**
- Repeat the above procedure for each tank.



Metering

Single Shoot

General

The air plenum is supplied mounted to the fan and connected to pressurize the metering body.

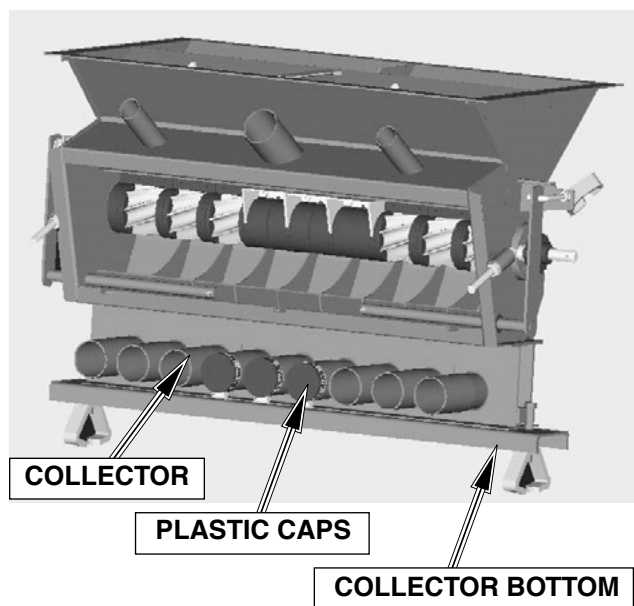
- Connection of hoses from the plenum to the collector will depend on the number of primary runs used.
- For All Macines, **Except Single Shoot Tow Between Units**, Mount Collector Body to the bottom of the metering body using (12) 5/16" x 3/4" lg Carriage Bolts and 5/16" Flange Locknuts.

Important: Ensure the “Air Flow” decal on the collector is pointing in the correct direction.

- Assemble the collector bottom to the collector using the large wing nuts.
- Cut 2 1/2" diameter primary hose to the required length to connect the plenum to the collector.
- Connection of hoses from the plenum to the collector will depend on the number of primary runs used.
- All unused ports must be blanked off using a plastic cap and hose clamp.



Plenum - Tow Behind

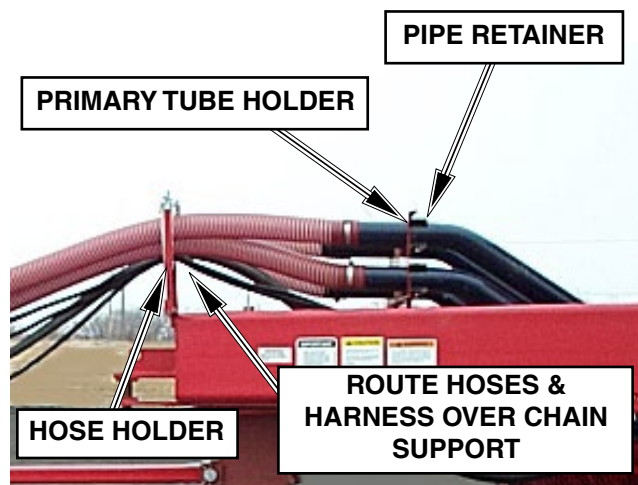


Single Shoot - Continued

Tow Behind

Distribution Steel Tube Installation - All Models

- Slide the 5" length of 2 1/2" black coupler hose onto either end of the steel tubes.
- Insert the steel tubes between the collectors on the rear and middle tanks.
- Secure the steel tubes with hose clamps.
- Repeat above for the steel pipes between the middle and front tanks if so equipped.
- Slide the 5" length hose onto the front collector outlets.
- Install the primary tube holder onto the front of the Air Cart, using two - 3/8" x 1" bolts, lockwashers and nuts.
- Insert the bare end of the steel primary tubes into the holder and install the other end onto the respective collector outlets.
- Secure the steel tubes with hose clamps.
- Ensure collector outlets and tube holder holes correspond.
- Apply 3/8" x 1" seal strip to each distribution pipe retainer.
- Attach distribution pipe retainer to steel primary tubes with 1/4" x 3 1/2" bolts and 1/4" locknut. The pipe retainer should be snug against the primary tube holder.
- Install the hose holder onto the front of the Air Cart, using two - 3/8" x 2 1/2" bolts, flatwashers, lockwashers and nuts.
- Route clutch and monitor wires and hydraulic lines through hose holder retaining chain with the secondary hose over the bottom half of the chain.



Double Shoot Shown

Metering

Single Shoot - Continued

Tow Between

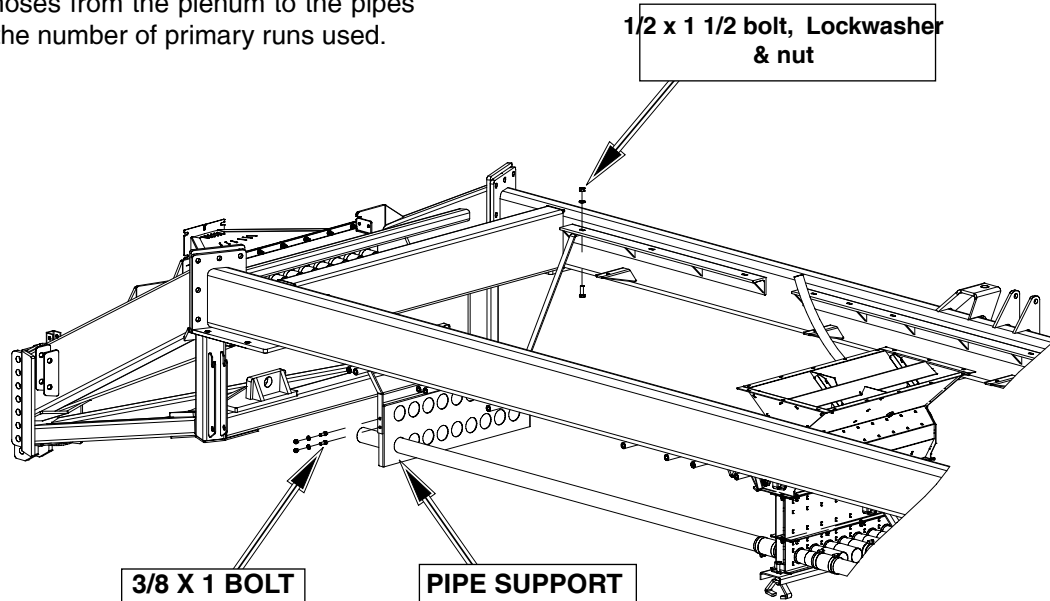
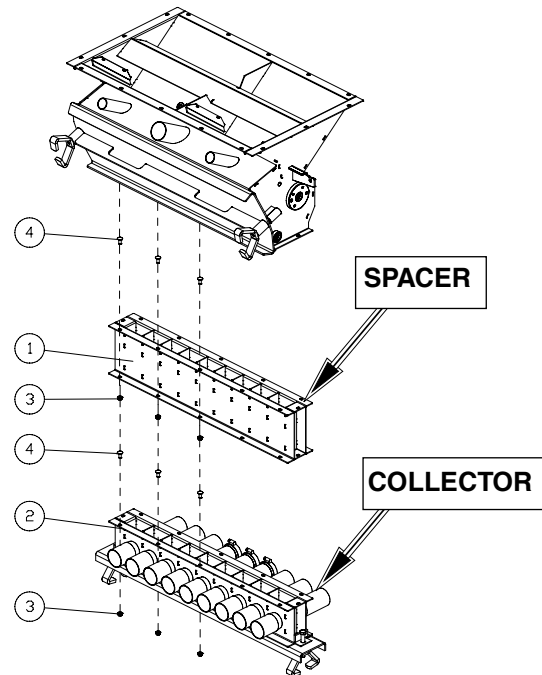
- For **ALL Single Shoot Tow Between** Machines install Spacer body between the Collector Body and Metering Body. Assemble using 5/16" x 3/4" lg Carriage Bolts and 5/16" Flange Locknuts.

Important: Ensure the "Air Flow" decal on the collector is pointing in the correct direction.

- Assemble the collector bottom to the collector using the large wing nuts.
- All unused ports must be blanked off using a plastic cap and hose clamp.

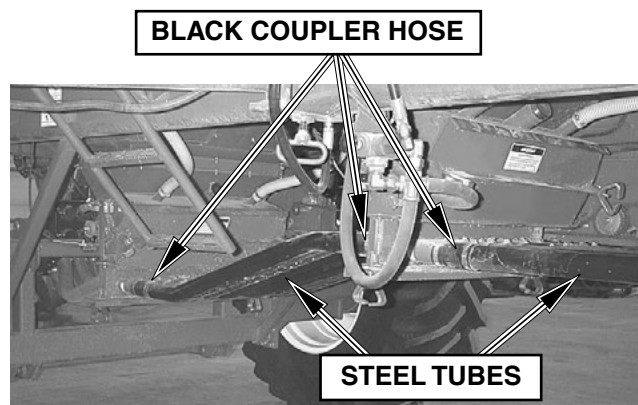
Distribution Steel Tube Installation - 8240 & 8300

- Mount support bracket straps to the frame using 1/2" x 1 1/2" bolts nuts and lockwashers.
- Install the primary tube holder to the support straps using four - 3/8" x 1" bolts, lockwashers and nuts.
- Insert the bare end of the steel primary tubes into the holder and install the other end onto the respective collector outlets using 5' length of 2 1/2" black coupler hose.
- Ensure collector outlets and tube holder holes correspond.
- Cut 2 1/2" diameter primary hose to the required length to connect the plenum to the steel pipes.
- Connection of hoses from the plenum to the pipes will depend on the number of primary runs used.



Single Shoot - Continued

- Slide the 5" length of 2 1/2" black coupler hose onto either end of the steel tubes.
- Insert the steel tubes between the collectors the rear and middle tanks.
- Slide the 5" length hose onto the collector outlets.
- Secure the steel tubes with hose clamps.
- Install the front primary steel tubes to the front collector outlets with 5" length hose.
- Secure the steel tubes with hose clamps.
- Repeat above for the steel pipes between the middle and front tanks if so equipped.



Distribution Steel Tube Installation - 8336

- Cut 2 1/2" diameter primary hose to the required length to connect the plenum to the collector.
- Connection of hoses from the plenum to the collector will depend on the number of primary runs used.
- Slide the 5" length of 2 1/2" black coupler hose onto either end of the steel tubes.
- Insert the steel tubes between the collectors the rear and middle tanks.
- Slide the 5" length hose onto the collector outlets.
- Secure the steel tubes with hose clamps.
- Install the front primary steel tubes to the front collector outlets with 5" length hose.
- Secure the steel tubes with hose clamps.
- Repeat above for the steel pipes between the middle and front tanks if so equipped.

Important

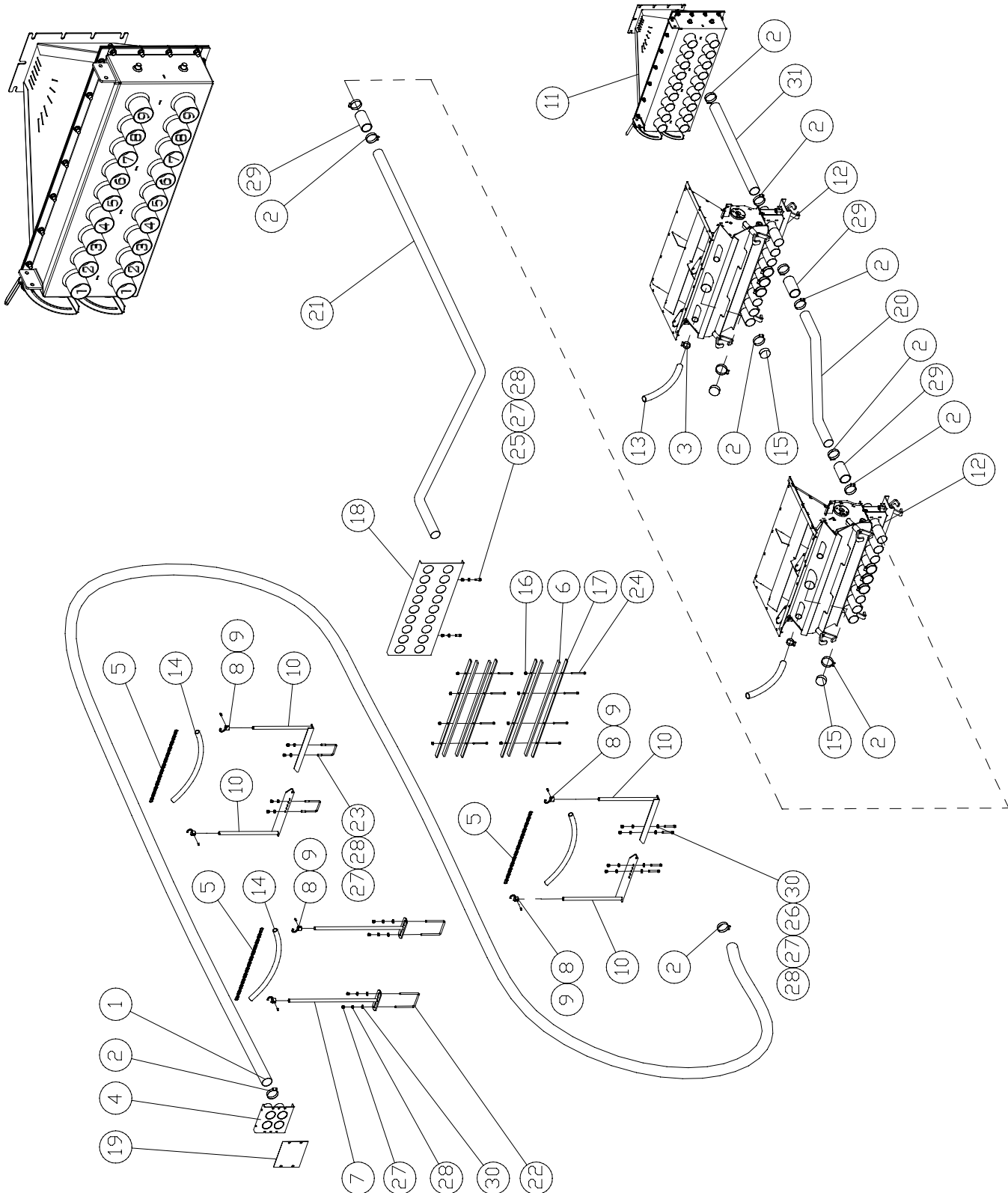
Hot water is the only acceptable lubricant for the installation of the 2 1/2" Black Coupler Hose.

WD-40 or any other lubricant (i.e. liquid detergent) will have a negative effect on the chemical stability of the hose, resulting in the degradation and failure of the hose due to Environmental Stress Cracking.

Metering

Single Shoot - Tow Behind

Tow Behind - Two Tank Models - 8240, 8300 & 8370



Single Shoot - Tow Behind Continued

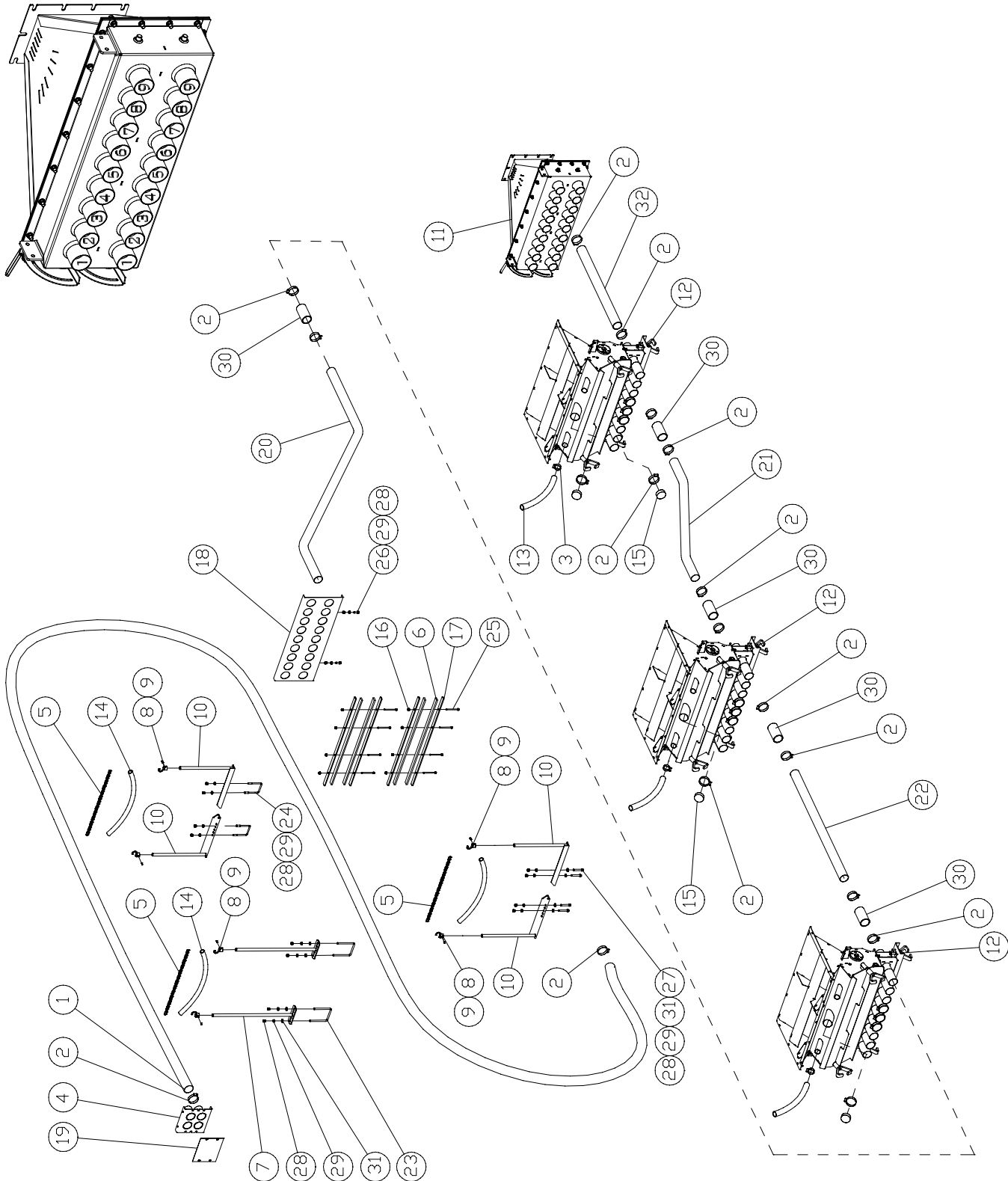
Item	Part No.	Description	No. Used						
			Number of Primaries						
			3	4	5	6	7	8	9
1	R480055	Hose 2 1/2 ID Goodyear x 17 Ft	3	4	5	6	7	8	9
2	N11905	Hose Clamp - HS-20.....	71	76	81	86	91	96	101
3	N11906	Hose Clamp - 1 1/2 Dia.....	2	2	2	2	2	2	2
4	N19398	Hose Coupler	1	1	2	2	2	2	3
5	N19448	Chain - 3/16 x 80 Links	3	3	3	3	3	3	3
6	N19449	Seal Strip 3/8 x 1 x 2.583 Ft.....	4	4	4	4	4	4	4
7	N19531	Support 24" Lg.....	2	2	2	2	2	2	2
8	N19717	Chain Hook	6	6	6	6	6	6	6
9	N24396	Set Screw - 1/4 x 1/2 Lg Sq Head.....	6	6	6	6	6	6	6
10	N33834	Bracket.....	4	4	4	4	4	4	4
11	N37459	Plenum Assembly - 18 Outlet.....	1	1	1	1	1	1	1
12	*****	Single Shoot Collector.....	2	2	2	2	2	2	2
13	R480056	Hose - 1 1/2 ID x 26" Lg	2	2	2	2	2	2	2
14	R480034	Hose .929 ID x 1.169 ODx18" Lg	3	3	3	3	3	3	3
15	N11907	Plastic Cap	41	36	31	26	21	16	11
16	D-5277	1/4 Flange Lock Nut.....	8	8	8	8	8	8	8
17	N36146	Distribution Pipe Retainer	4	4	4	4	4	4	4
18	N36440	Mount Plate - Primary Tube Double	1	1	1	1	1	1	1
19	N19573	Blank Off	1	1	2	2	2	2	3
20	N36281	Distribution Pipe (8240 & 8300)	3	4	5	6	7	8	9
	N37794	Distribution Pipe (8370)	3	4	5	6	7	8	9
	N37806	Distribution Pipe Straight (8370)	3	4	5	6	7	8	9
21	N37443	Distribution Pipe (8240 & 8300)	3	4	5	6	7	8	9
	N37808	Distribution Pipe (8370)	3	4	5	6	7	8	9
22	N15098	U-Bolt - 3/8 x 4 x 5	2	4	6	8	10	12	14
23	N36148	U-Bolt - 3/8 x 3 x 4	2	4	6	8	10	12	14
24	N12882	Hex Bolt - 1/4 x 3 1/2.....	8	8	8	8	8	8	8
25	W-475	Hex Bolt - 3/8 x 1 Lg.....	2	2	2	2	2	2	2
26	W-480	Hex Bolt - 3/8 x 2 1/2 Lg.....	4	4	4	4	4	4	4
27	W-514	Hex Nut - 3/8.....	14	14	14	14	14	14	14
28	W-523	Lockwasher - 3/8.....	14	14	14	14	14	14	14
29	N19428	Hose - 2.52 ID x 2.77 OD x 5 Lg.....	9	12	15	18	21	24	27
30	D-5489	Flatwasher - 13/32 ID x 13/16 OD x 16 Ga	8	8	8	8	8	8	8
31	R480055	Hose 2 1/2 ID Goodyear x 32" Lg.....	3	4	5	6	7	8	9

Metering

Single Shoot - Tow Behind Continued

Tow Behind - Three Tank Models - 8240, 8300 & 8370 including Third Tank

Tow Behind - Three Tank Models - 8336, 8425



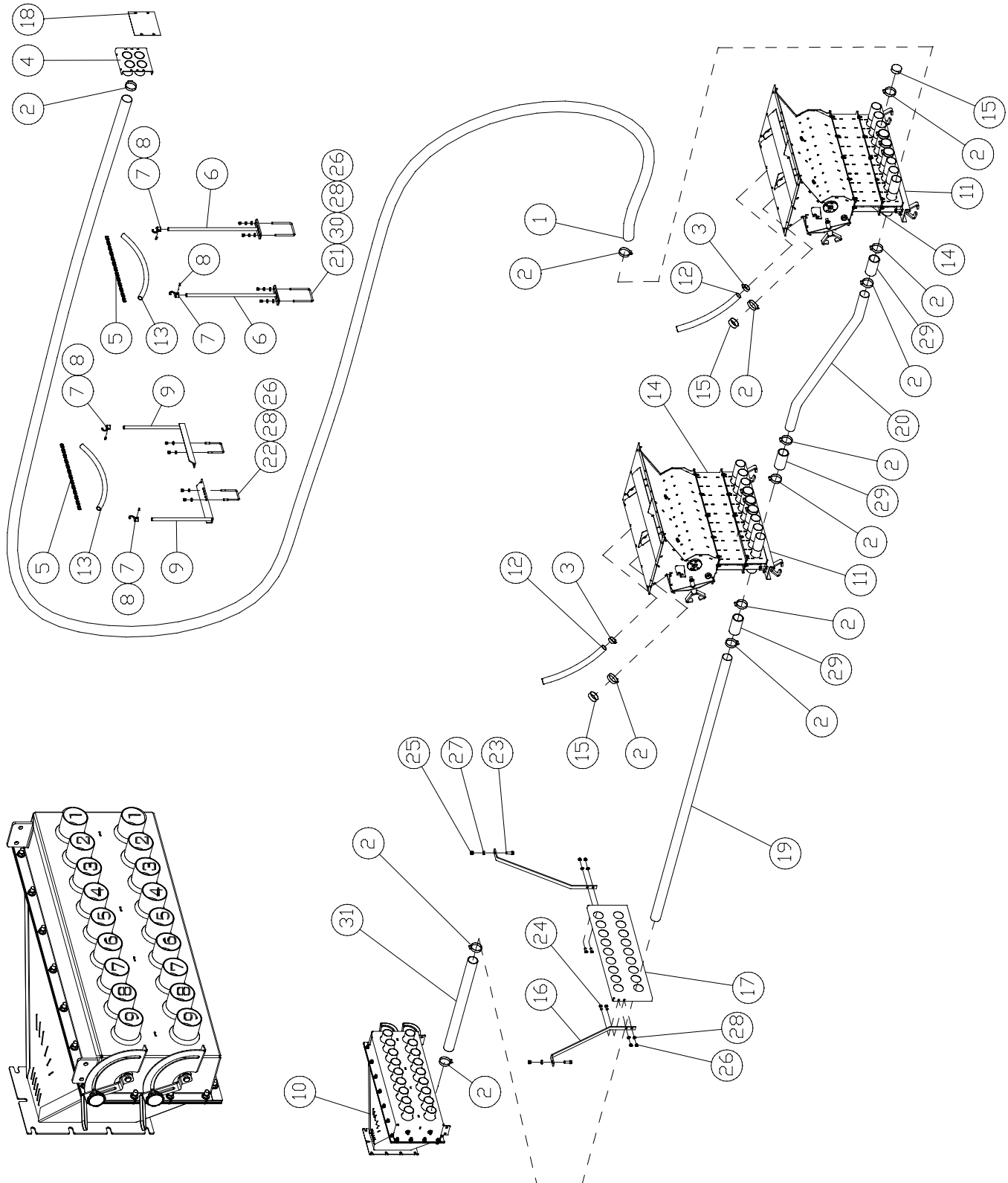
Single Shoot - Tow Behind Continued

Item	Part No.	Description	No. Used						
			Number of Primaries						
			3	4	5	6	7	8	9
1	R480055	Hose 2 1/2 ID Goodyear x 17 Ft	3	4	5	6	7	8	9
2	N11905	Hose Clamp - HS-20.....	96	103	110	117	124	131	138
3	N11906	Hose Clamp - 1 1/2 Dia.....	3	3	3	3	3	3	3
4	N19398	Hose Coupler	1	1	2	2	2	2	3
5	N19448	Chain - 3/16 x 80 Links	3	3	3	3	3	3	3
6	N19449	Seal Strip 3/8 x 1 x 2.583 Ft.....	4	4	4	4	4	4	4
7	N19531	Support 24" Lg.....	2	2	2	2	2	2	2
8	N19717	Chain Hook	6	6	6	6	6	6	6
9	N24396	Set Screw - 1/4 x 1/2 Lg Sq Head.....	6	6	6	6	6	6	6
10	N33834	Bracket.....	4	4	4	4	4	4	4
11	N37459	Plenum Assembly - 18 Outlet.....	1	1	1	1	1	1	1
12	*****	Single Shoot Collector.....	3	3	3	3	3	3	3
13	R480056	Hose - 1 1/2 ID x 26" Lg	3	3	3	3	3	3	3
14	R480034	Hose .929 ID x 1.169 ODx18" Lg	3	3	3	3	3	3	3
15	N11907	Plastic Cap.....	54	47	40	33	26	19	12
16	D-5277	1/4 Flange Lock Nut.....	8	8	8	8	8	8	8
17	N36146	Distribution Pipe Retainer	4	4	4	4	4	4	4
18	N36440	Mount Plate - Primary Tube Double	1	1	1	1	1	1	1
19	N19573	Blank Off	1	1	2	2	2	2	3
20	N37899	Distribution Pipe (8240 & 8300)	3	4	5	6	7	8	9
	N37875	Distribution Pipe (8370)	3	4	5	6	7	8	9
	N36283	Distribution Pipe (8336 & 8425)	3	4	5	6	7	8	9
21	N36281	Distribution Pipe (8240 & 8300)	3	4	5	6	7	8	9
	N37994	Distribution Pipe (8370)	3	4	5	6	7	8	9
	N36281	Distribution Pipe (8336 & 8425)	3	4	5	6	7	8	9
22	N37898	Distribution Pipe (8240 & 8300)	3	4	5	6	7	8	9
	N37996	Distribution Pipe (8370)	3	4	5	6	7	8	9
	N37806	Distribution Pipe (8336 & 8425)	3	4	5	6	7	8	9
23	N15098	U-Bolt - 3/8 x 4 x 5	2	2	2	2	2	2	2
24	N36148	U-Bolt - 3/8 x 3 x 4	2	2	2	2	2	2	2
25	N12882	Hex Bolt - 1/4 x 3 1/2.....	8	8	8	8	8	8	8
26	W-475	Hex Bolt - 3/8 x 1 Lg.....	2	2	2	2	2	2	2
27	W-480	Hex Bolt - 3/8 x 2 1/2 Lg.....	4	4	4	4	4	4	4
28	W-514	Hex Nut - 3/8.....	14	14	14	14	14	14	14
29	W-523	Lockwasher - 3/8.....	14	14	14	14	14	14	14
30	N19428	Hose - 2.52 ID x 2.77 OD x 5 Lg.....	15	20	25	30	35	40	45
31	D-5489	Flatwasher - 13/32 ID x 13/16 OD x 16 Ga	8	8	8	8	8	8	8
32	R480055	Hose 2 1/2 ID Goodyear x 32" Lg.....	3	3	3	3	3	3	3

Metering

Single Shoot - Tow Between

Tow Between - Two Tank Models - 8240 & 8300



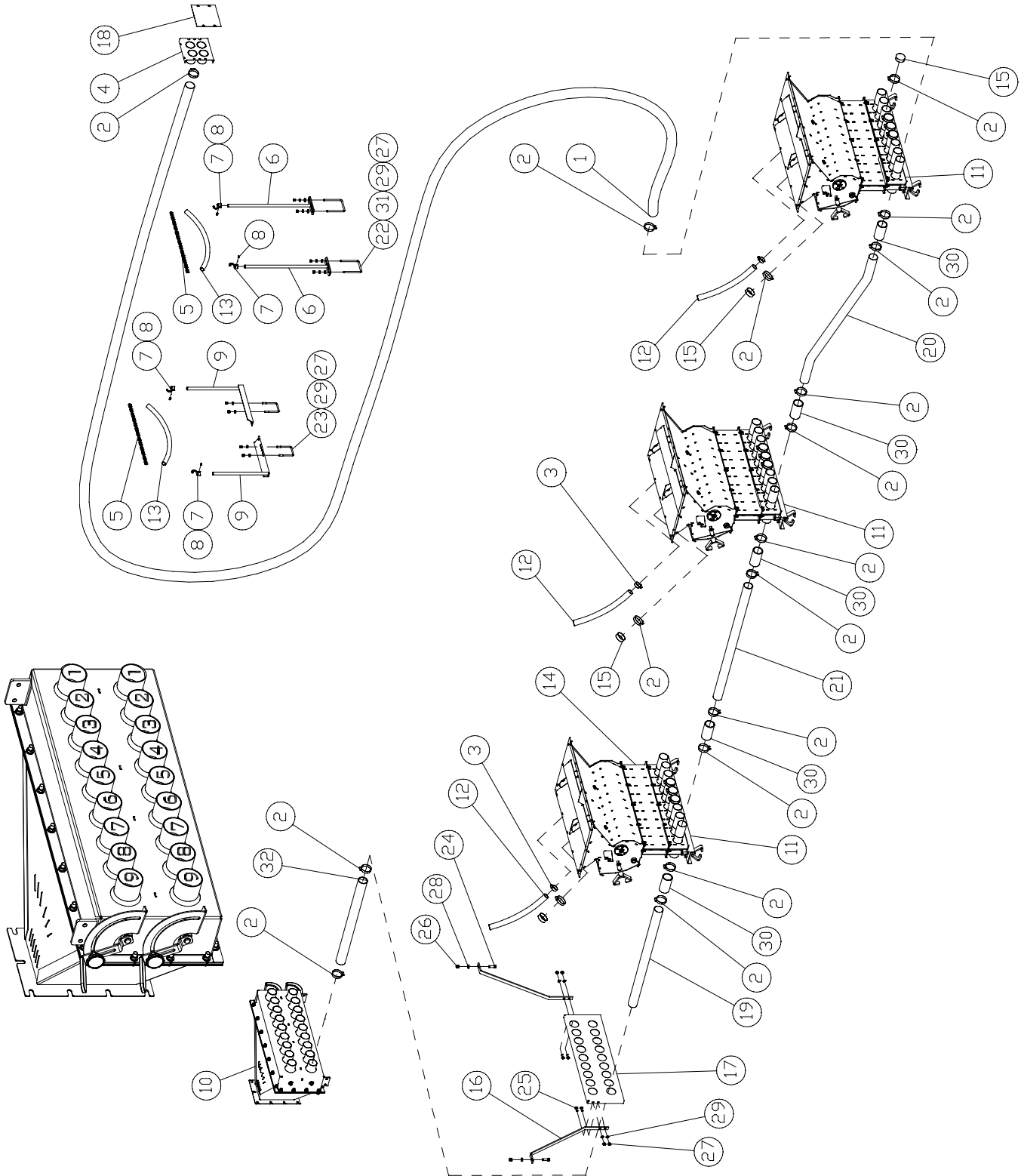
Single Shoot -Tow Between Cont'd

Item	Part No.	Description	No. Used						
			Number of Primaries						
			3	4	5	6	7	8	9
1	R480055	Hose 2 1/2 ID Goodyear x 17 Ft	3	4	5	6	7	8	9
2	N11905	Hose Clamp - Hs-20	71	76	81	86	91	96	101
3	N11906	Hose Clamp - 1 1/2 Dia.....	2	2	2	2	2	2	2
4	N19398	Hose Coupler	1	1	2	2	2	2	3
5	N19448	Chain - 3/16 x 80 Links	2	2	2	2	2	2	2
6	N19531	Support 24" Lg.....	2	2	2	2	2	2	2
7	N19717	Chain Hook	4	4	4	4	4	4	4
8	N24396	Set Screw - 1/4 x 1/2 Lg Sq Head.....	4	4	4	4	4	4	4
9	N33834	Bracket.....	2	2	2	2	2	2	2
10	N37459	Plenum Assembly - 18 Outlet.....	1	1	1	1	1	1	1
11	*****	Single Shoot Collector.....	2	2	2	2	2	2	2
12	R480056	Hose - 1 1/2 ID x 26" Lg	2	2	2	2	2	2	2
13	R480034	Hose .929 ID x 1.169 ODx18" Lg	2	2	2	2	2	2	2
14	N37865	Single Shoot Collector Spacer	2	2	2	2	2	2	2
15	N11907	Plastic Cap.....	41	36	31	26	21	16	11
16	N37951	Hanger Strap.....	2	2	2	2	2	2	2
17	N37950	Dist Pipe Support Plate	1	1	1	1	1	1	1
18	N19573	Blank Off	1	1	2	2	2	2	3
19	N37952	Distribution Pipe.....	3	3	3	3	3	3	3
20	N36281	Distribution Pipe.....	3	3	3	3	3	3	3
21	N15098	U-Bolt - 3/8 x 4 x 5	2	2	2	2	2	2	2
22	N36148	U-Bolt - 3/8 x 3 x 4	2	2	2	2	2	2	2
23	W-486	Hex Bolt - 1/2 x 1 1/2 Lg - 3/4 Lg Thread	2	2	2	2	2	2	2
24	W-475	Hex Bolt - 3/8 x 1 Lg.....	4	4	4	4	4	4	4
25	W-516	Hex Nut - 1/2.....	2	2	2	2	2	2	2
26	W-514	Hex Nut - 3/8.....	12	12	12	12	12	12	12
27	W-525	Lockwasher - 1/2.....	2	2	2	2	2	2	2
28	W-523	Lockwasher - 3/8.....	12	12	12	12	12	12	12
29	N19428	Hose - 2.52 ID x 2.77 OD x 5 Lg.....	9	12	15	18	21	24	27
30	D-5489	Washer - 13/32 ID x 13/16 OD x 16 Ga.....	4	4	4	4	4	4	4
31	R480055	Hose 2 1/2 ID Goodyear x 32" Lg.....	3	4	5	6	7	8	9

Metering

Single Shoot -Tow Between Cont'd

Tow Between - Three Tank Models - 8240 & 8300 with Third Tank



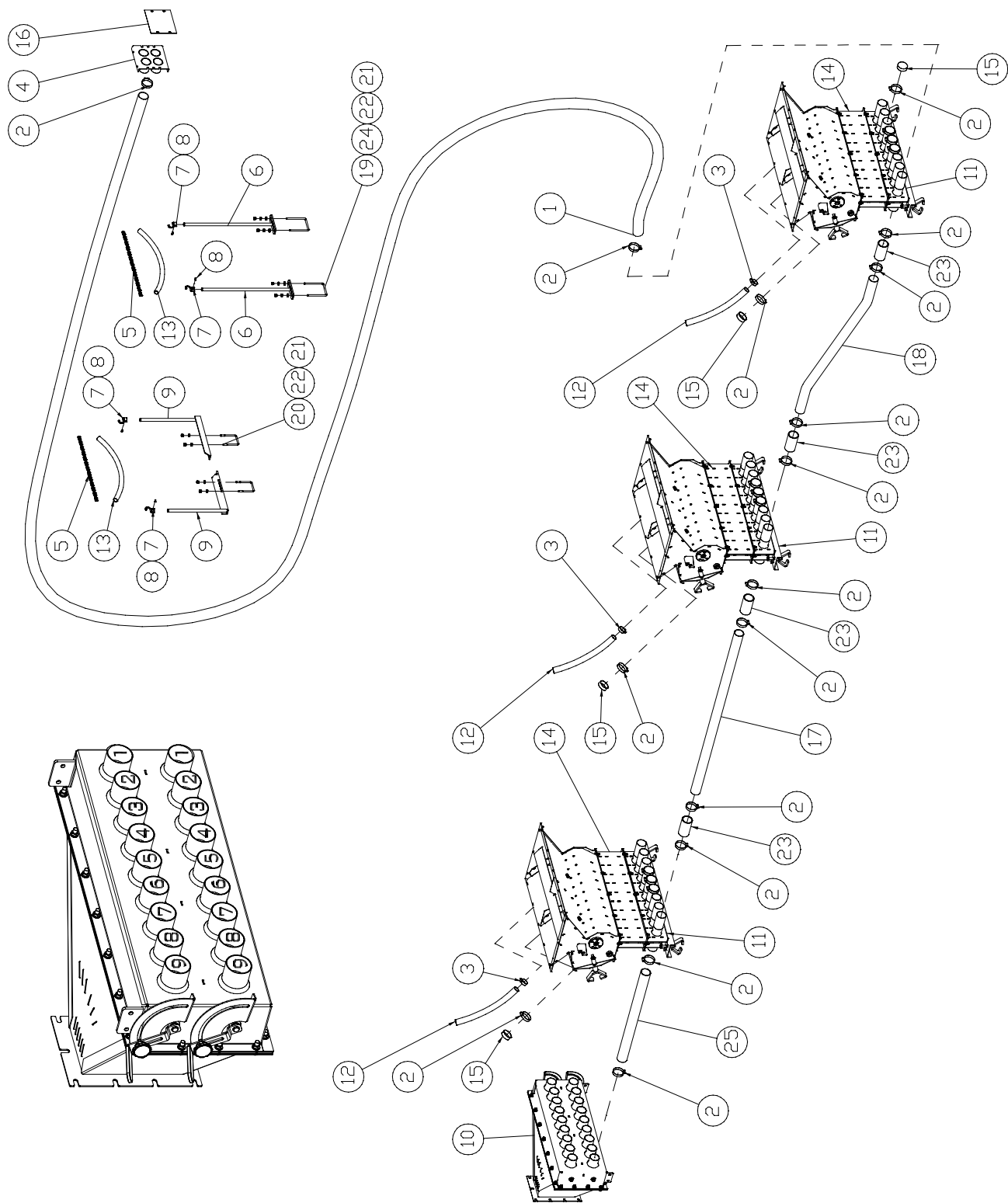
Single Shoot -Tow Between Cont'd

Item	Part No.	Description	No. Used						
			Number of Primaries						
			3	4	5	6	7	8	9
1	R480055	Hose 2 1/2 ID Goodyear x 17 Ft	3	4	5	6	7	8	9
2	N11905	Hose Clamp - Hs-20	75	82	99	106	113	120	127
3	N11906	Hose Clamp - 1 1/2 Dia.....	3	3	3	3	3	3	3
4	N19398	Hose Coupler	1	1	2	2	2	2	3
5	N19448	Chain - 3/16 x 80 Links	2	2	2	2	2	2	2
6	N19531	Support 24" Lg.....	2	2	2	2	2	2	2
7	N19717	Chain Hook	4	4	4	4	4	4	4
8	N24396	Set Screw - 1/4 x 1/2 Lg Sq Head.....	4	4	4	4	4	4	4
9	N33834	Divider Head Bracket #2	2	2	2	2	2	2	2
10	N37459	Plenum Assembly - 18 Outlet.....	1	1	1	1	1	1	1
11	*****	Single Shoot Collector.....	3	3	3	3	3	3	3
12	R480056	Hose - 1 1/2 ID x 26" Lg	3	3	3	3	3	3	3
13	R480034	Hose .929 ID x 1.169 ODx18" Lg	2	2	2	2	2	2	2
14	N37865	Single Shoot Collector Spacer	3	3	3	3	3	3	3
15	N11907	Plastic Cap.....	54	47	40	33	26	19	12
16	N37951	Hanger Strap.....	2	2	2	2	2	2	2
17	N37950	Dist Pipe Support Plate	1	1	1	1	1	1	1
18	N19573	Blank Off	1	1	2	2	2	2	3
19	N37953	Distribution Pipe.....	3	4	5	6	7	8	9
20	N36281	Distribution Pipe.....	3	4	5	6	7	8	9
21	N37898	Distribution Pipe.....	3	4	5	6	7	8	9
22	N15098	U-Bolt - 3/8 x 4 x 5	2	2	2	2	2	2	2
23	N36148	U-Bolt - 3/8 x 3 x 4	2	2	2	2	2	2	2
24	W-486	Hex Bolt - 1/2 x 1 1/2 Lg - 3/4 Lg Thread	2	2	2	2	2	2	2
25	W-475	Hex Bolt - 3/8 x 1 Lg.....	4	4	4	4	4	4	4
26	W-516	Hex Nut - 1/2.....	2	2	2	2	2	2	2
27	W-514	Hex Nut - 3/8.....	12	12	12	12	12	12	12
28	W-525	Lockwasher - 1/2.....	2	2	2	2	2	2	2
29	W-523	Lockwasher - 3/8.....	12	12	12	12	12	12	12
30	N19428	Hose - 2.52 ID x 2.77 OD x 5 Lg.....	15	20	25	30	35	40	45
31	D-5489	Flatwasher - 13/32 ID x 13/16 OD x 16 Ga	4	4	4	4	4	4	4
32	R480055	Hose 2 1/2 ID Goodyear x 32" Lg.....	3	4	5	6	7	8	9

Metering

Single Shoot - Tow Between Cont'd

Tow Between - Three Tank Models - 8336



Single Shoot -Tow Between Cont'd

Item	Part No.	Description	No. Used						
			Number of Primaries						
			3	4	5	6	7	8	9
1	R480055	Hose 2 1/2 ID Goodyear x 17 Ft	3	4	5	6	7	8	9
2	N11905	Hose Clamp - Hs-20	90	95	100	105	110	115	120
3	N11906	Hose Clamp - 1 1/2 Dia.....	3	3	3	3	3	3	3
4	N19398	Hose Coupler	1	1	2	2	2	2	3
5	N19448	Chain - 3/16 x 80 Links	2	2	2	2	2	2	2
6	N19531	Support 24" Lg.....	2	2	2	2	2	2	2
7	N19717	Chain Hook	4	4	4	4	4	4	4
8	N24396	Set Screw - 1/4 x 1/2 Lg Sq Head.....	4	4	4	4	4	4	4
9	N33834	Bracket.....	2	2	2	2	2	2	2
10	N37459	Plenum Assembly - 18 Outlet.....	1	1	1	1	1	1	1
11	*****	Single Shoot Collector.....	3	3	3	3	3	3	3
12	R480056	Hose - 1 1/2 ID x 26" Lg	3	3	3	3	3	3	3
13	R480034	Hose .929 ID x 1.169 ODx18" Lg	2	2	2	2	2	2	2
14	N37865	Single Shoot Collector Spacer	3	3	3	3	3	3	3
15	N11907	Plastic Cap.....	48	42	36	30	24	18	12
16	N19573	Blank Off	1	1	2	2	2	2	3
17	N37806	Distribution Pipe.....	3	3	3	3	3	3	3
18	N36281	Distribution Pipe.....	3	2	3	3	4	4	5
19	N15098	U-Bolt - 3/8 x 4 x 5	2	2	2	2	2	2	2
20	N36148	U-Bolt - 3/8 x 3 x 4	2	2	2	2	2	2	2
21	W-514	Hex Nut - 3/8.....	8	8	8	8	8	8	8
22	W-523	Lockwasher - 3/8.....	8	8	8	8	8	8	8
23	N19428	Hose - 2.52 ID x 2.77 OD x 5 Lg.....	8	12	16	20	24	28	32
24	D-5489	Flatwasher - 13/32 ID x 13/16 OD x 16 Ga	4	4	4	4	4	4	4
25	R480055	Hose 2 1/2 ID Goodyear x 59" Lg.....	3	4	5	6	7	8	9

Metering

Double Shoot

General

Double shooting is where TWO DIFFERENT products are placed at TWO DIFFERENT positions in the ground.

There has to be two separate air systems to be able to Double Shoot and two different collector systems are used to direct the air to the correct area of the seedboot.

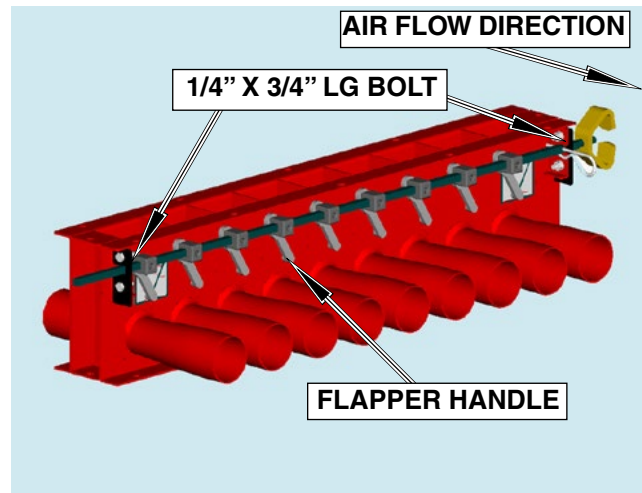
The air plenum is supplied mounted to the fan and connected to pressurize the metering body.

- Connection of hoses from the plenum to the collector will depend on the number of primary runs used.
- Before mounting the collector to the metering body check the function and set up of the “**collector valve**”. See Below for correct set up.

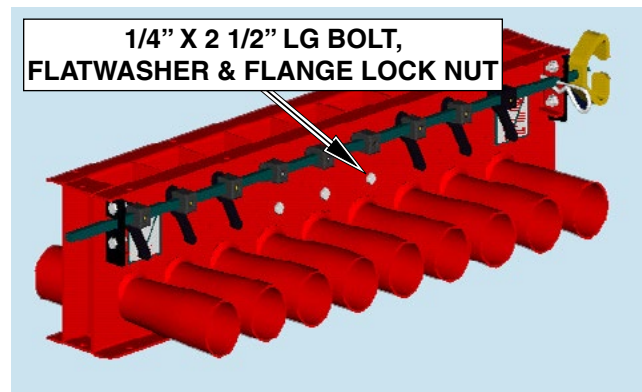
Double Shoot Collector

The Double Shoot Collector Body comes with all the flaps installed. The flaps corresponding to a primary run that is “**blanked off**” must be fixed in the “**calibration**” position as described below.

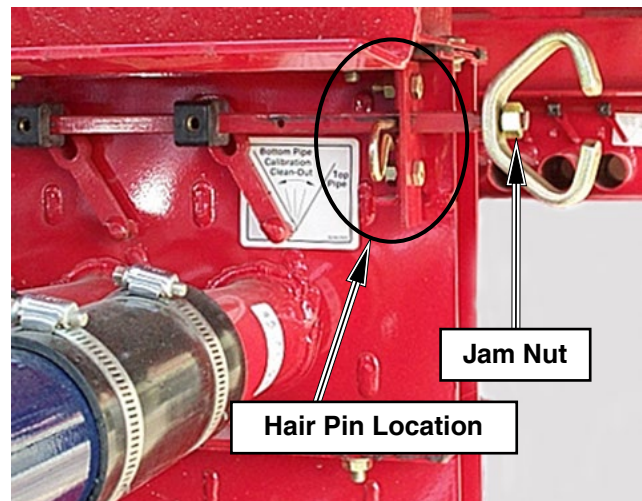
- Remove the four 1/4" x 3/4" lg bolts holding the Flapper Control Rod. **Do not loosen** the Hex Socket screws holding the drive connector. Remove the control rod and drive connectors by moving control rod in the direction of the air flow.
- Select the Flappers that must be fixed. Remove the Retaining Clips on the rear of the collector body holding the Flapper Handle and remove the required Flapper Handles.
- Replace the removed Flapper Handles with 1/4" x 2 1/2" lg bolts, flat washer and flange locknut. Ensure that the flapper is in “**calibration**” position and tighten bolts. See Decal on front of Collector Body for Flapper position. Silicone around Blank Off Flapper.
- Reinstall Flapper Control Rod Assembly leaving all drive connectors intact. Insert drive connectors with corresponding Flapper handles.
- Ensure the control rod mounting bracket is installed to the outer face of the corresponding bracket welded to the collector body.
- Reinstall four 1/4" x 3/4" lg bolts.



Flapper Control Rod



Double Shoot Collector



Control Rod Mounting Bracket Assembly

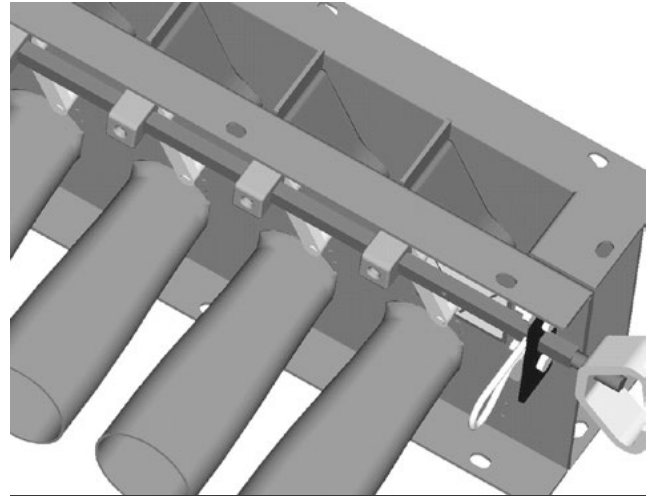
Double Shoot - continued

- Confirm Flapper valve operation. All flappers must be firmly against the vertical plate in the collector body when set in both positions.

Important: Ensure the “Air Flow” decal on the collector is pointing in the correct direction.

- Mount the Double Shoot Collector Body to the bottom of the metering body using (12) 5/16” x 3/4” lg bolts.
- Mount the Single Shoot Collector Body to the bottom of the Double Shoot Collector Body using (12) 5/16” x 3/4” lg bolts.
- Assemble the collector bottom to the Single Shoot Collector Body using the large wing nuts.
- Cut 2 1/2” diameter primary hose to the required length to connect the ports on the front face of the plenum to the collectors.
- Connection of hoses from the plenum to the collectors will depend on the number of primary runs used.
- All unused ports must be blanked off using a plastic cap and hose clamp.
- Ensure the unused ports in the collectors correspond with the blanked off runs in the metering body.

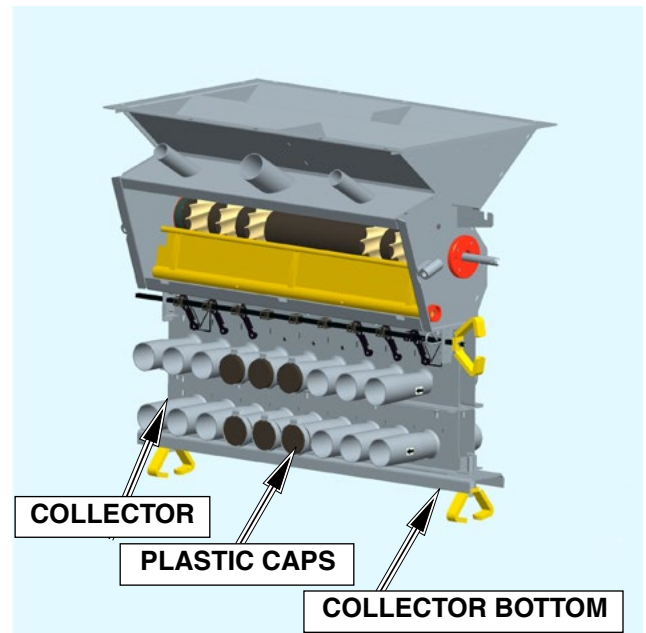
Note: The collector interior is not painted to allow free movement of the flapper valves.



Flapper in Calibration Setting



Plenum - Tow Behind



Collector Assembly

Metering

Double Shoot - Continued

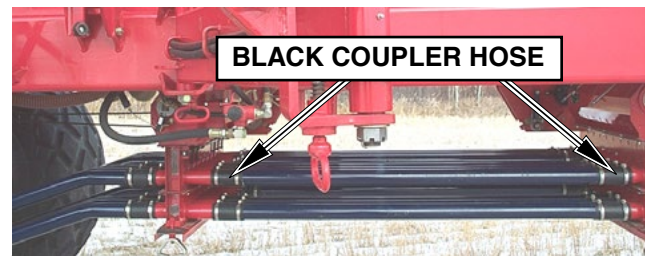
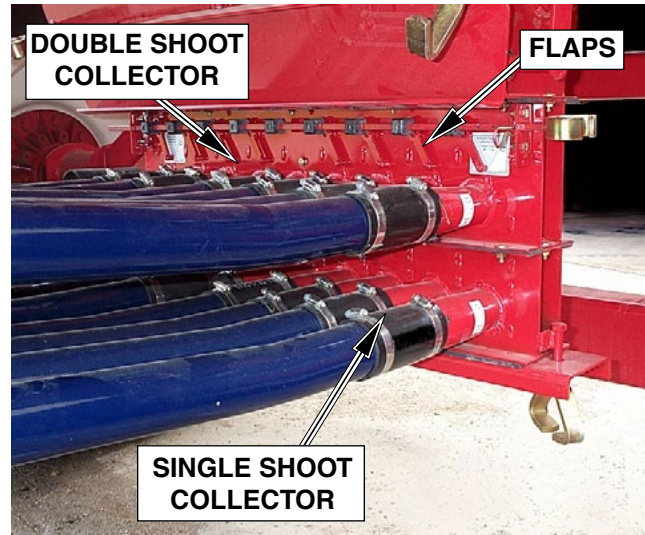
- Install steel pipes between rear and middle tanks, middle and front tanks, and front tank and mounting plate.
- Use 5" lg black coupler hose and hose clamps to connect the steel distribution pipes to the collector bodies.

Tow Behind

- Install the primary tube holder onto the front of the Air Cart, using two - 3/8" x 1" bolts, lockwashers and nuts.
- Slide the 5" length of the 2 1/2" black plastic pipe onto the front side of the front collector.
- Insert the top steel tubes between the front collector and the primary tube holder.

Note: Ensure collector outlets and tube holder holes correspond.

- Secure the steel tubes to the front collector with hose clamps.
- Apply 3/8" x 1" seal strip to each distribution pipe retainer.
- Attach distribution pipe retainer to steel primary tubes with 1/4" x 3 1/2" bolts and 1/4" locknut. The pipe retainer should be snug against the primary tube holder.
- Route clutch and monitor wires and hydraulic lines through hose holder retaining chain with the secondary hose over the bottom half of the chain.



Double Shoot Shown

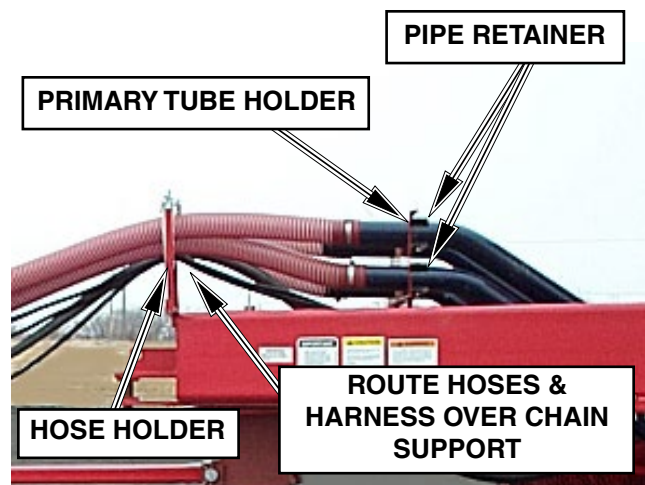
Important

Hot water is the only acceptable lubricant for the installation of the 2 1/2" Black Coupler Hose.

WD-40 or any other lubricant (i.e. liquid detergent) will have a negative effect on the chemical stability of the hose, resulting in the degradation and failure of the hose due to Environmental Stress Cracking.

Important

Ensure the top heads are connected to the seed hoses from Air Cart.



Double Shoot Shown

Double Shoot - Continued

Tow Between

Important: Ensure the “Air Flow” decal on the collectors are pointing in the correct direction.

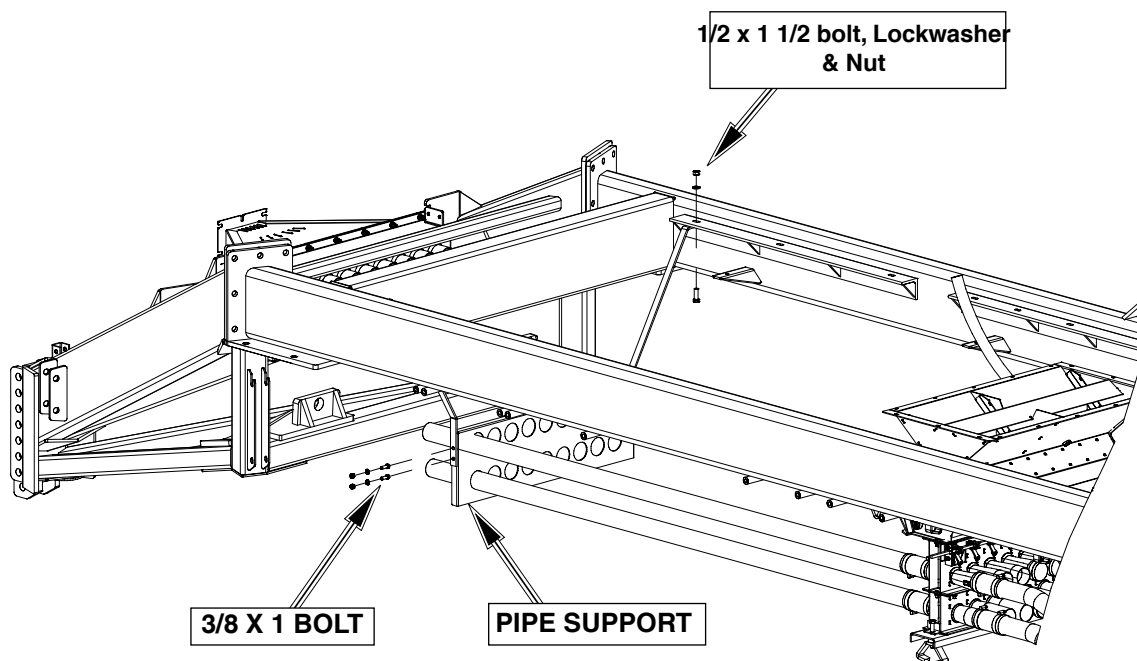
Distribution Steel Tube Installation - 8240 & 8300

- Mount support bracket straps to the frame using 1/2" x 1 1/2" bolts nuts and lockwashers.
- Install the primary tube holder to the support straps using four - 3/8" x 1" bolts, lockwashers and nuts.
- Insert the bare end of the steel primary tubes into the holder and install the other end onto the respective collector outlets.
- Ensure collector outlets and tube holder holes correspond.
- Cut 2 1/2" diameter primary hose to the required length to connect the plenum to the steel pipes.
- Connection of hoses from the plenum to the pipes will depend on the number of primary runs used.
- Slide the 5" length of 2 1/2" black coupler hose onto either end of the steel tubes.
- Insert the steel tubes between the collectors the rear and middle tanks.
- Slide the 5" length hose onto the collector outlets.
- Secure the steel tubes with hose clamps.
- Install the front primary steel tubes to the front collector outlets with 5" length hose.

- Secure the steel tubes with hose clamps.
- Repeat above for the steel pipes between the middle and front tanks if so equipped.

Distribution Steel Tube Installation - 8336

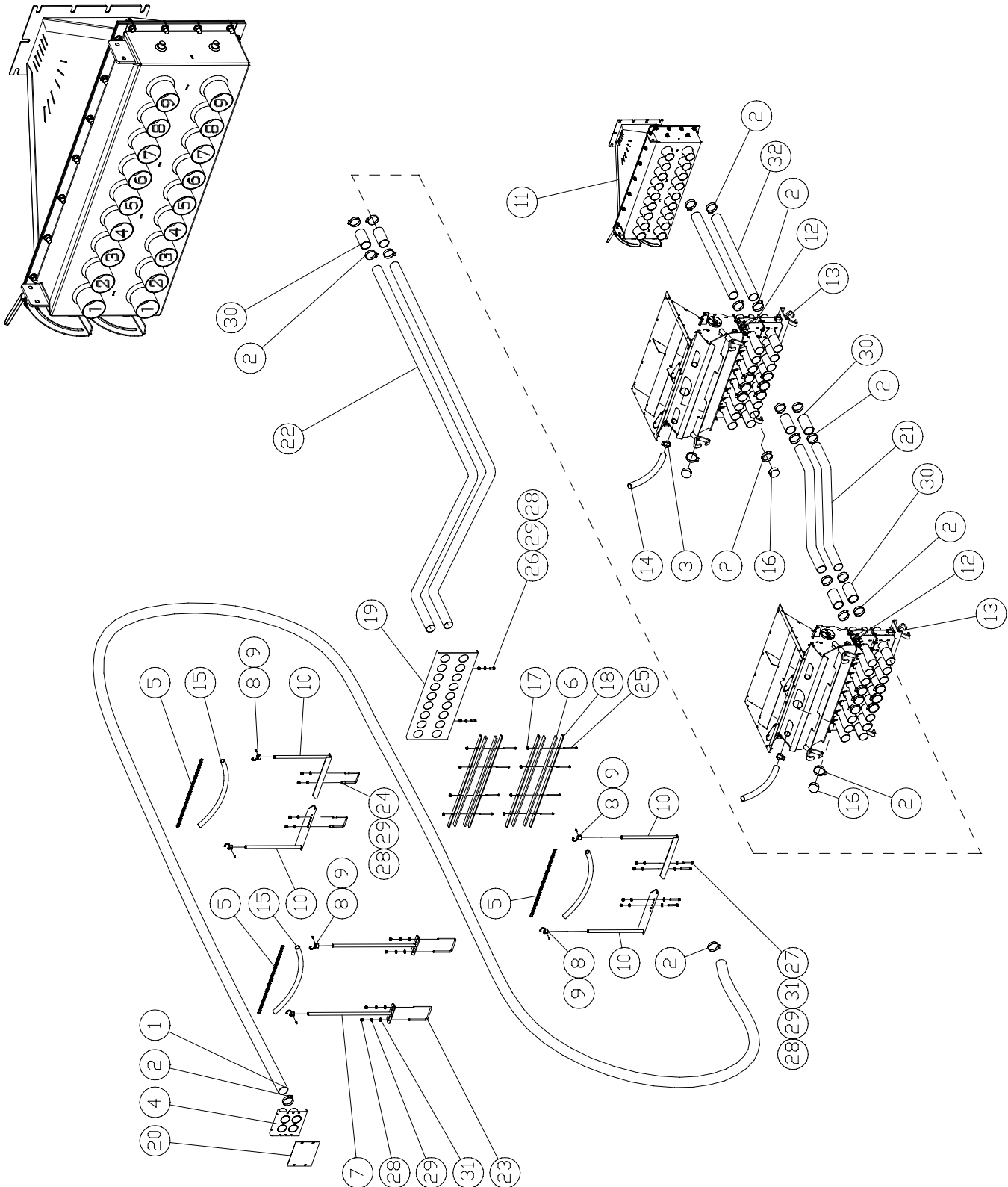
- Cut 2 1/2" diameter primary hose to the required length to connect the plenum to the collector.
- Connection of hoses from the plenum to the collector will depend on the number of primary runs used.
- Slide the 5" length of 2 1/2" black coupler hose onto either end of the steel tubes.
- Insert the steel tubes between the collectors the rear and middle tanks.
- Slide the 5" length hose onto the collector outlets.
- Secure the steel tubes with hose clamps.
- Install the front primary steel tubes to the front collector outlets with 5" length hose.
- Secure the steel tubes with hose clamps.
- Repeat above for the steel pipes between the middle and front tanks if so equipped.



Metering

Double Shoot -Tow Behind

Tow Behind - Two Tank Models - 8240, 8300 & 8370



Double Shoot - Tow Behind Continued

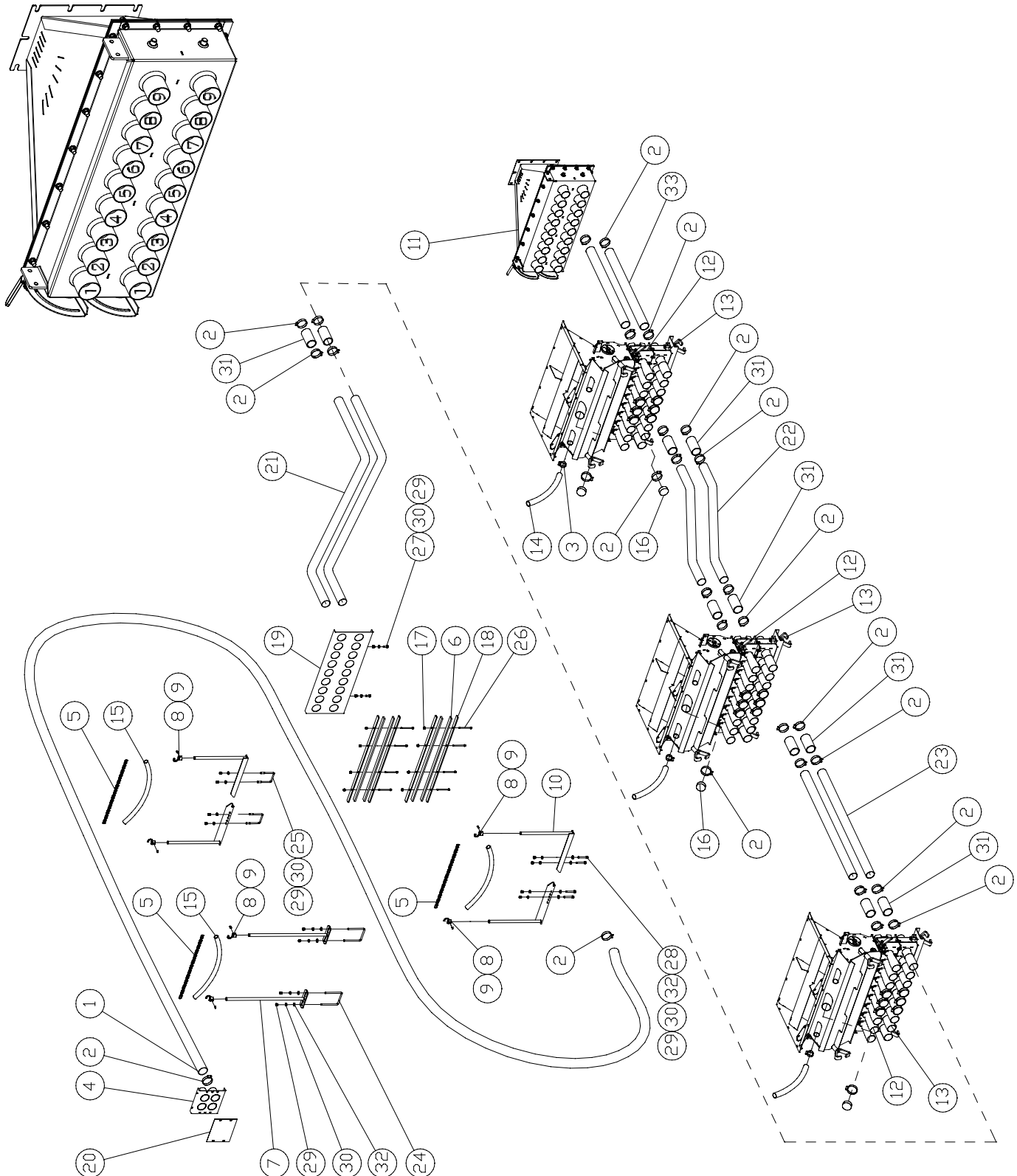
Item	Part No.	Description	No. Used						
			Number of Primaries						
			3	4	5	6	7	8	9
1	R480055	Hose 2 1/2 ID Goodyear x 17 Ft	6	8	10	12	14	16	18
2	N11905	Hose Clamp - HS-20.....	123	133	143	153	163	173	183
3	N11906	Hose Clamp - 1 1/2 Dia.....	2	2	2	2	2	2	2
4	N19398	Hose Coupler	2	2	3	3	4	4	5
5	N19448	Chain - 3/16 x 80 Links	3	3	3	3	3	3	3
6	N19449	Seal Strip 3/8 x 1 x 2.583 Ft.....	4	4	4	4	4	4	4
7	N19531	Support 24" Lg.....	2	2	2	2	2	2	2
8	N19717	Chain Hook	6	6	6	6	6	6	6
9	N24396	Set Screw - 1/4 x 1/2 Lg Sq Head.....	6	6	6	6	6	6	6
10	N33834	Bracket	4	4	4	4	4	4	4
11	N37459	Plenum Assembly - 18 Outlet.....	1	1	1	1	1	1	1
12	*****	Double Shoot Collector	2	2	2	2	2	2	2
13	*****	Single Shoot Collector.....	2	2	2	2	2	2	2
14	R480056	Hose - 1 1/2 ID x 26" Lg	2	2	2	2	2	2	2
15	R480034	Hose .929 ID x 1.169 ODx18" Lg	3	3	3	3	3	3	3
16	N11907	Plastic Cap	63	53	43	33	23	13	3
17	D-5277	1/4 Flange Lock Nut.....	8	8	8	8	8	8	8
18	N36146	Distribution Pipe Retainer	4	4	4	4	4	4	4
19	N36440	Mount Plate - Primary Tube Double	1	1	1	1	1	1	1
20	N19573	Blank Off	2	2	3	3	4	4	5
21	N36281	Distribution Pipe (8240 & 8300)	6	8	10	12	14	16	18
	N37794	Distribution Pipe (8370)	6	8	10	12	14	16	18
	N37806	Distribution Pipe Straight (8370)	6	8	10	12	14	16	18
22	N37443	Distribution Pipe (8240 & 8300)	6	8	10	12	14	16	18
	N37808	Distribution Pipe (8370)	6	8	10	12	14	16	18
23	N15098	U-Bolt - 3/8 x 4 x 5	2	2	2	2	2	2	2
24	N36148	U-Bolt - 3/8 x 3 x 4	2	2	2	2	2	2	2
25	N12882	Hex Bolt - 1/4 x 3 1/2.....	8	8	8	8	8	8	8
26	W-475	Hex Bolt - 3/8 x 1 Lg.....	2	2	2	2	2	2	2
27	W-480	Hex Bolt - 3/8 x 2 1/2 Lg.....	4	4	4	4	4	4	4
28	W-514	Hex Nut - 3/8.....	14	14	14	14	14	14	14
29	W-523	Lockwasher - 3/8.....	14	14	14	14	14	14	14
30	N19428	Hose - 2.52 ID x 2.77 OD x 5 Lg.....	18	24	30	36	42	48	54
31	D-5489	Flatwasher - 13/32 ID x 13/16 OD x 16 Ga	8	8	8	8	8	8	8
32	R480055	Hose 2 1/2 ID Goodyear x 32" Lg.....	6	8	10	12	14	16	18

Metering

Double Shoot -Tow Behind Continued

Tow Behind - Three Tank Models - 8240, 8300 & 8370 including Third Tank

Tow Behind - Three Tank Models - 8336, 8425



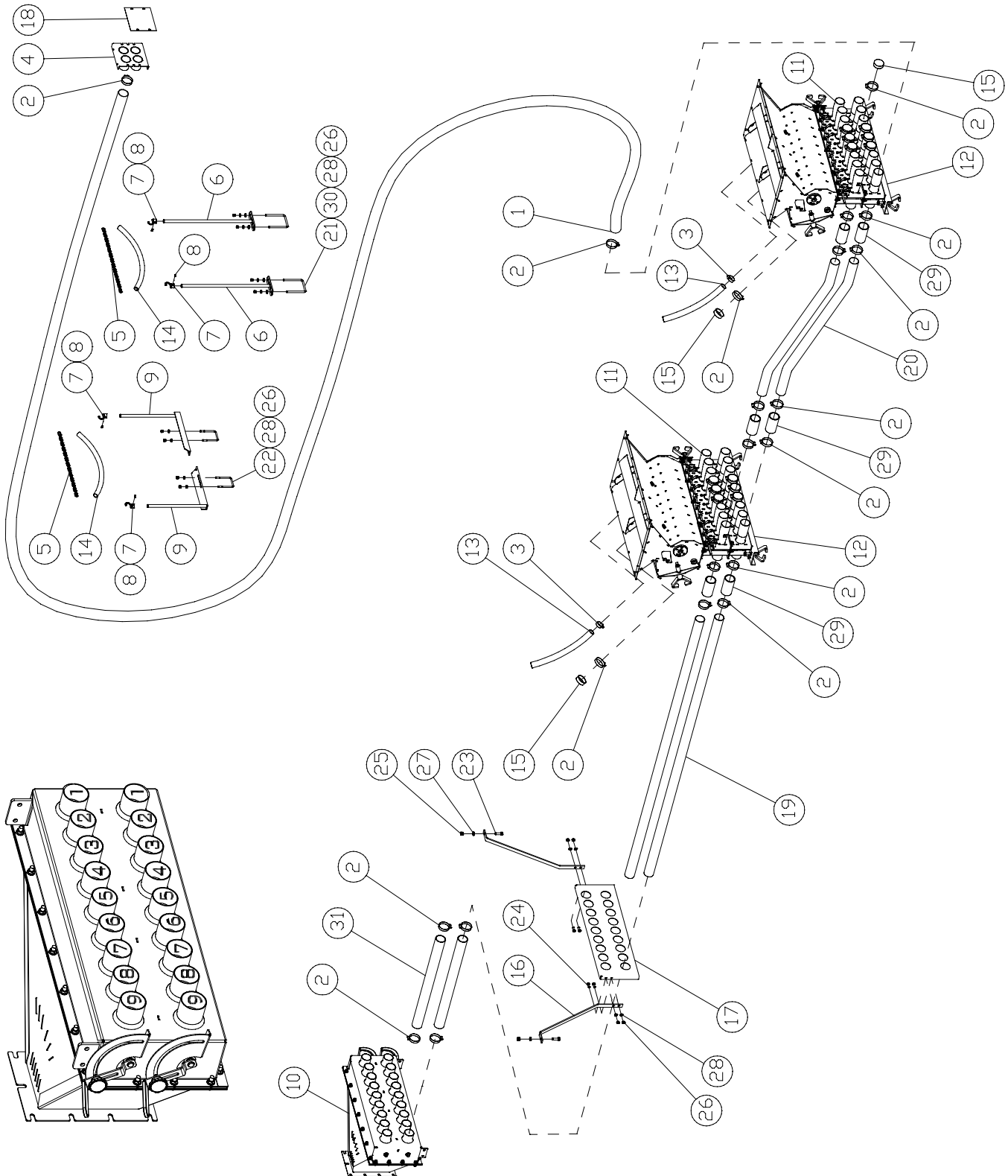
Double Shoot - Tow Behind Continued

Item	Part No.	Description	No. Used						
			Number of Primaries						
			3	4	5	6	7	8	9
1	R480055	Hose 2 1/2 ID Goodyear x 17 Ft	6	8	10	12	14	16	18
2	N11905	Hose Clamp - HS-20.....	171	185	199	213	227	241	255
3	N11906	Hose Clamp - 1 1/2 Dia.....	3	3	3	3	3	3	3
4	N19398	Hose Coupler	2	2	3	3	4	4	5
5	N19448	Chain - 3/16 x 80 Links	3	3	3	3	3	3	3
6	N19449	Seal Strip 3/8 x 1 x 2.583 Ft.....	4	4	4	4	4	4	4
7	N19531	Support 24" Lg.....	2	2	2	2	2	2	2
8	N19717	Chain Hook	6	6	6	6	6	6	6
9	N24396	Set Screw - 1/4 x 1/2 Lg Sq Head.....	6	6	6	6	6	6	6
10	N33834	Bracket	4	4	4	4	4	4	4
11	N37459	Plenum Assembly - 18 Outlet.....	1	1	1	1	1	1	1
12	*****	Double Shoot Collector	3	3	3	3	3	3	3
13	*****	Single Shoot Collector.....	3	3	3	3	3	3	3
14	R480056	Hose - 1 1/2 ID x 26" Lg	3	3	3	3	3	3	3
15	R480034	Hose .929 ID x 1.169 ODx18" Lg	3	3	3	3	3	3	3
16	N11907	Plastic Cap.....	87	73	59	45	31	17	3
17	D-5277	1/4 Flange Lock Nut.....	8	8	8	8	8	8	8
18	N36146	Distribution Pipe Retainer	4	4	4	4	4	4	4
19	N36440	Mount Plate - Primary Tube Double	1	1	1	1	1	1	1
20	N19573	Blank Off	2	2	3	3	4	4	5
21	N37899	Distribution Pipe (8240 & 8300)	6	8	10	12	14	16	18
	N37875	Distribution Pipe (8370)	6	8	10	12	14	16	18
	N36283	Distribution Pipe (8336 & 8425)	6	8	10	12	14	16	18
22	N36281	Distribution Pipe (8240 & 8300)	6	8	10	12	14	16	18
	N37794	Distribution Pipe (8370)	6	8	10	12	14	16	18
	N36281	Distribution Pipe (8336 & 8425)	6	8	10	12	14	16	18
23	N37898	Distribution Pipe (8240 & 8300)	6	8	10	12	14	16	18
	N37796	Distribution Pipe (8370)	6	8	10	12	14	16	18
	N37806	Distribution Pipe (8336 & 8425)	6	8	10	12	14	16	18
24	N15098	U-Bolt - 3/8 x 4 x 5	2	2	2	2	2	2	2
25	N36148	U-Bolt - 3/8 x 3 x 4	2	2	2	2	2	2	2
26	N12882	Hex Bolt - 1/4 x 3 1/2.....	8	8	8	8	8	8	8
27	W-475	Hex Bolt - 3/8 x 1 Lg.....	2	2	2	2	2	2	2
28	W-480	Hex Bolt - 3/8 x 2 1/2 Lg.....	4	4	4	4	4	4	4
29	W-514	Hex Nut - 3/8.....	14	14	14	14	14	14	14
30	W-523	Lockwasher - 3/8.....	14	14	14	14	14	14	14
31	N19428	Hose - 2.52 ID x 2.77 OD x 5 Lg.....	30	40	50	60	70	80	90
32	D-5489	Flatwasher - 13/32 ID x 13/16 OD x 16 Ga	8	8	8	8	8	8	8
33	R480055	Hose 2 1/2 ID Goodyear x 32" Lg.....	6	8	10	12	14	16	18

Metering

Double Shoot -Tow Between

Tow Between - Two Tank Models - 8240 & 8300



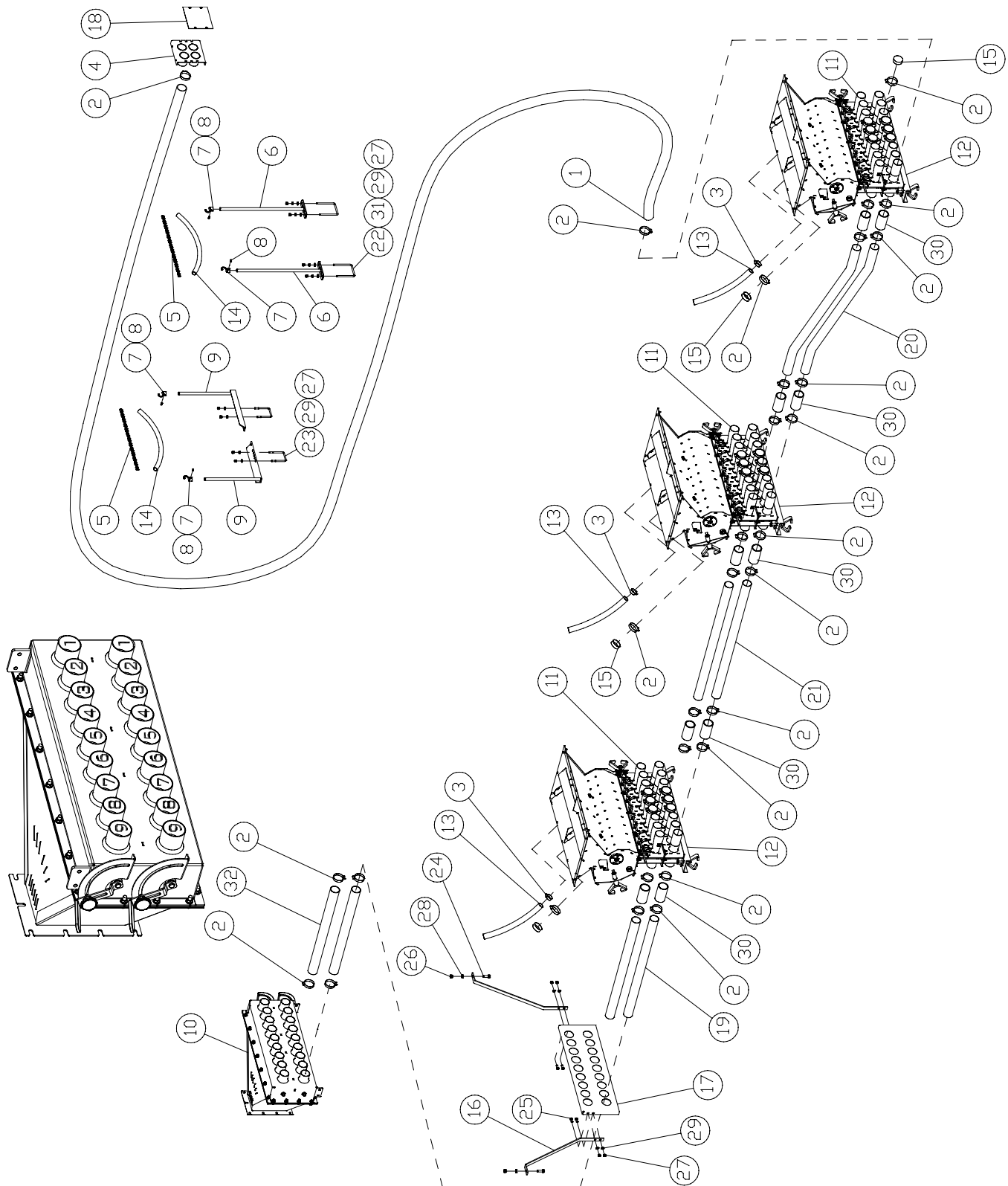
Double Shoot - Tow Between Cont'd

Item	Part No.	Description	No. Used						
			Number of Primaries						
			3	4	5	6	7	8	9
1	R480055	Hose 2 1/2 ID Goodyear x 17 Ft	6	8	10	12	14	16	18
2	N11905	Hose Clamp - Hs-20	122	132	142	152	162	172	182
3	N11906	Hose Clamp - 1 1/2 Dia.....	2	2	2	2	2	2	2
4	N19398	Hose Coupler	2	2	3	3	4	4	5
5	N19448	Chain - 3/16 x 80 Links	2	2	2	2	2	2	2
6	N19531	Support 24" Lg.....	2	2	2	2	2	2	2
7	N19717	Chain Hook	4	4	4	4	4	4	4
8	N24396	Set Screw - 1/4 x 1/2 Lg Sq Head.....	4	4	4	4	4	4	4
9	N33834	Bracket.....	2	2	2	2	2	2	2
10	N37459	Plenum Assembly 18 Outlet	1	1	1	1	1	1	1
11	*****	Double Shoot Collector	2	2	2	2	2	2	2
12	*****	Single Shoot Collector.....	2	2	2	2	2	2	2
13	R480056	Hose - 1 1/2 ID x 26" Lg	2	2	2	2	2	2	2
14	R480034	Hose .929 ID x 1.169 ODx18" Lg	2	2	2	2	2	2	2
15	N11907	Plastic Cap.....	62	52	42	32	22	12	2
16	N37951	Hanger Strap.....	2	2	2	2	2	2	2
17	N37950	Dist Pipe Support Plate	1	1	1	1	1	1	1
18	N19573	Blank Off	2	2	3	3	4	4	5
19	N37952	Distribution Pipe.....	2	8	10	12	14	16	18
20	N36281	Distribution Pipe.....	2	8	10	12	14	16	18
21	N15098	U-Bolt - 3/8 x 4 x 5	2	2	2	2	2	2	2
22	N36148	U-Bolt - 3/8 x 3 x 4	2	2	2	2	2	2	2
23	W-486	Hex Bolt - 1/2 x 1 1/2 Lg - 3/4 Lg Thread	2	2	2	2	2	2	2
24	W-475	Hex Bolt - 3/8 x 1 Lg.....	4	4	4	4	4	4	4
25	W-516	Hex Nut - 1/2.....	2	2	2	2	2	2	2
26	W-514	Hex Nut - 3/8.....	12	12	12	12	12	12	12
27	W-525	Lockwasher - 1/2.....	2	2	2	2	2	2	2
28	W-523	Lockwasher - 3/8.....	12	12	12	12	12	12	12
29	N19428	Hose - 2.52 ID x 2.77 OD x 5 Lg.....	18	24	30	36	42	48	54
30	D-5489	Flatwasher - 13/32 ID x 13/16 OD x 16 Ga	4	4	4	4	4	4	4
31	R480055	Hose 2 1/2 ID Goodyear x 32" Lg.....	2	2	2	2	2	2	2

Metering

Double Shoot -Tow Between Cont'd

Tow Between - Three Tank Models - 8240 & 8300 including Third Tank



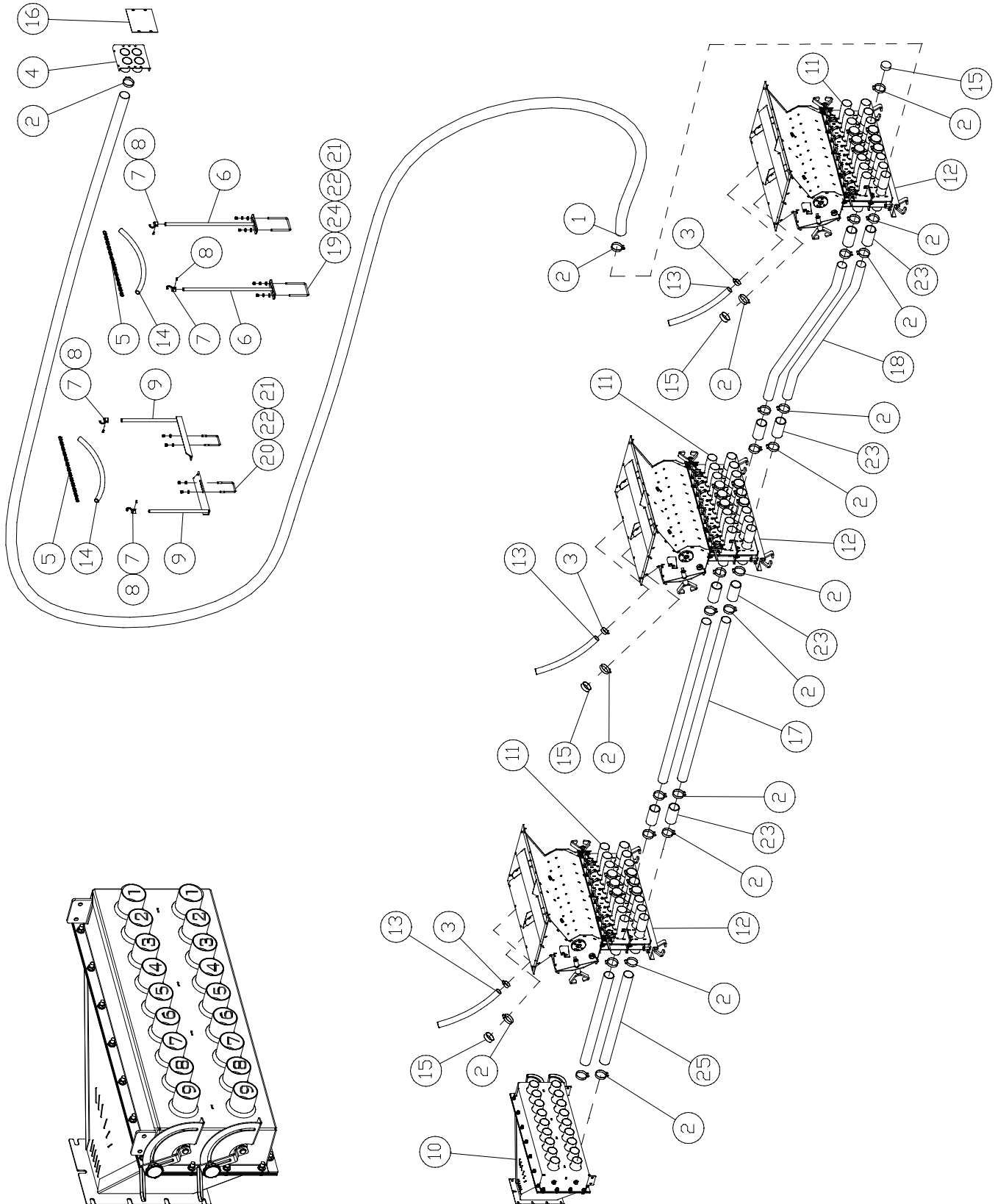
Double Shoot - Tow Between Cont'd

Item	Part No.	Description	No. Used						
			Number of Primaries						
			3	4	5	6	7	8	9
1	R480055	Hose 2 1/2 ID Goodyear x 17 Ft	6	8	10	12	14	16	18
2	N11905	Hose Clamp - Hs-20	181	195	209	223	237	251	265
3	N11906	Hose Clamp - 1 1/2 Dia.....	3	3	3	3	3	3	3
4	N19398	Hose Coupler	2	2	3	3	4	4	5
5	N19448	Chain - 3/16 x 80 Links	2	2	2	2	2	2	2
6	N19531	Support 24" Lg.....	2	2	2	2	2	2	2
7	N19717	Chain Hook	4	4	4	4	4	4	4
8	N24396	Set Screw - 1/4 x 1/2 Lg Sq Head.....	4	4	4	4	4	4	4
9	N33834	Bracket.....	2	2	2	2	2	2	2
10	N37459	Plenum Assembly - 18 Outlet.....	1	1	1	1	1	1	1
11	*****	Double Shoot Collector	3	3	3	3	3	3	3
12	*****	Single Shoot Collector.....	3	3	3	3	3	3	3
13	R480056	Hose - 1 1/2 ID x 26" Lg	3	3	3	3	3	3	3
14	R480034	Hose .929 ID x 1.169 ODx18" Lg	2	2	2	2	2	2	2
15	N11907	Plastic Cap.....	87	73	59	45	31	17	3
16	N37951	Hanger Strap.....	2	2	2	2	2	2	2
17	N37950	Dist Pipe Support Plate	1	1	1	1	1	1	1
18	N19573	Blank Off	2	2	3	3	4	4	5
19	N37953	Distribution Pipe.....	6	8	10	12	14	16	18
20	N36281	Distribution Pipe.....	6	8	10	12	14	16	18
21	N37898	Distribution Pipe.....	6	8	10	12	14	16	18
22	N15098	U-Bolt - 3/8 x 4 x 5	2	2	2	2	2	2	2
23	N36148	U-Bolt - 3/8 x 3 x 4	2	2	2	2	2	2	2
24	W-486	Hex Bolt - 1/2 x 1 1/2 Lg - 3/4 Lg Thread	2	2	2	2	2	2	2
25	W-475	Hex Bolt - 3/8 x 1 Lg.....	4	4	4	4	4	4	4
26	W-516	Hex Nut - 1/2.....	2	2	2	2	2	2	2
27	W-514	Hex Nut - 3/8.....	12	12	12	12	12	12	12
28	W-525	Lockwasher - 1/2.....	2	2	2	2	2	2	2
29	W-523	Lockwasher - 3/8.....	12	12	12	12	12	12	12
30	N19428	Hose - 2.52 ID x 2.77 OD x 5 Lg.....	30	40	50	60	70	80	90
31	D-5489	Flatwasher - 13/32 ID x 13/16 OD x 16 Ga	4	4	4	4	4	4	4
32	R480055	Hose 2 1/2 ID Goodyear x 32" Lg.....	6	8	10	12	14	16	18

Metering

Double Shoot -Tow Between Cont'd

Tow between - Three Tank Models - 8336



Double Shoot - Tow Between Cont'd

Item	Part No.	Description	No. Used						
			Number of Primaries						
			3	4	5	6	7	8	9
1	R480055	Hose 2 1/2 ID Goodyear x 17 Ft	6	8	10	12	14	16	18
2	N11905	Hose Clamp - Hs-20	159	169	179	189	199	209	229
3	N11906	Hose Clamp - 1 1/2 Dia.....	3	3	3	3	3	3	3
4	N19398	Hose Coupler	2	2	3	3	4	4	5
5	N19448	Chain - 3/16 x 80 Links	2	3	4	5	6	6	7
6	N19531	Support 24" Lg.....	2	2	2	2	2	2	2
7	N19717	Chain Hook	4	4	4	4	4	4	4
8	N24396	Set Screw - 1/4 x 1/2 Lg Sq Head.....	4	4	4	4	4	4	4
9	N33834	Bracket.....	2	2	2	2	2	2	2
10	N37459	Plenum Assembly 18 Outlet	1	1	1	1	1	1	1
11	*****	Double Shoot Collector	3	3	3	3	3	3	3
12	*****	Single Shoot Collector.....	3	3	3	3	3	3	3
13	R480056	Hose - 1 1/2 ID x 26" Lg	3	3	3	3	3	3	3
14	R480034	Hose .929 ID x 1.169 ODx18" Lg	2	2	2	2	2	2	2
15	N11907	Plastic Cap.....	87	73	59	45	31	17	3
16	N19573	Blank Off	2	2	3	3	4	4	5
17	N37806	Distribution Pipe.....	6	8	10	12	14	16	18
18	N36281	Distribution Pipe.....	6	8	10	12	14	16	18
19	N15098	U-Bolt - 3/8 x 4 x 5	2	2	2	2	2	2	2
20	N36148	U-Bolt - 3/8 x 3 x 4	2	3	4	5	6	6	7
21	W-514	Hex Nut - 3/8.....	8	8	8	8	8	8	8
22	W-523	Lockwasher - 3/8.....	8	3	4	5	6	6	7
23	N19428	Hose - 2.52 ID x 2.77 OD x 5 Lg.....	24	32	40	48	56	64	72
24	D-5489	Flatwasher - 13/32 ID x 13/16 OD x 16 Ga	4	4	4	4	4	4	4
25	R480055	Hose 2 1/2 ID Goodyear x 59" Lg.....	6	12	15	18	21	24	27

Metering

Triple Shoot

General

Triple shooting is where THREE DIFFERENT products are placed at THREE DIFFERENT positions in the ground.

There has to be two separate air systems to be able to Triple Shoot and two different collector systems are used to direct the air to the correct area of the seedboot.

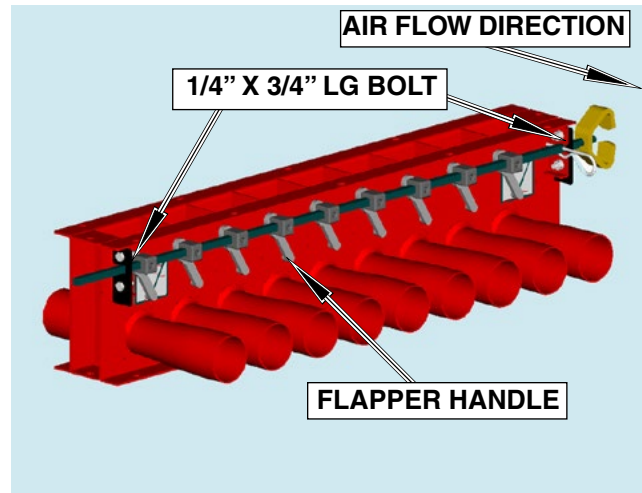
The air plenum is supplied mounted to the fan and connected to pressurize the metering body.

- Connection of hoses from the plenum to the collector will depend on the number of primary runs used.
- Before mounting the collector to the metering body check the function and set up of the “**collector valve**”. See Below for correct set up.

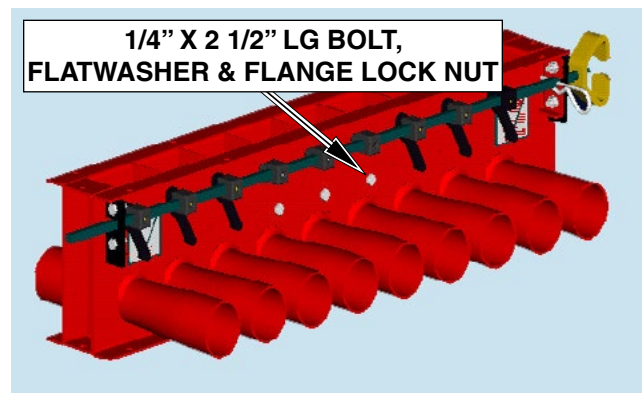
Double Shoot Collector

The Double Shoot Collector Body comes with all the flaps installed. The flaps corresponding to a primary run that is “**blanked off**” must be fixed in the “**calibration**” position as described below.

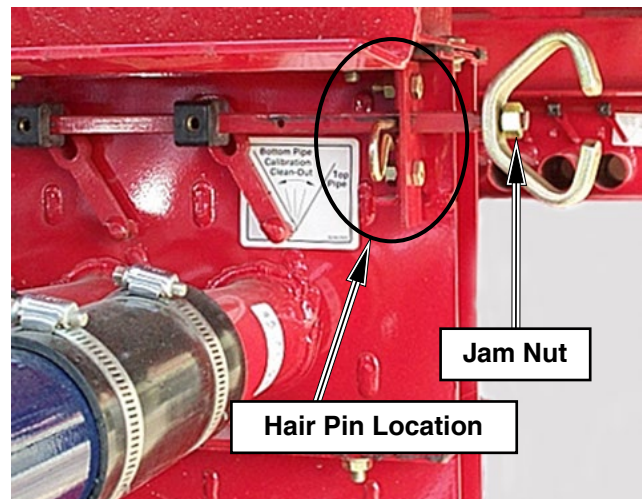
- Remove the four 1/4" x 3/4" lg bolts holding the Flapper Control Rod. **Do not loosen** the Hex Socket screws holding the drive connector. Remove the control rod and drive connectors by moving control rod in the direction of the air flow.
- Select the Flappers that must be fixed. Remove the Retaining Clips on the rear of the collector body holding the Flapper Handle and remove the required Flapper Handles.
- Replace the removed Flapper Handles with 1/4" x 2 1/2" lg bolts, flat washer and flange locknut. Ensure that the flapper is in “**calibration**” position and tighten bolts. See Decal on front of Collector Body for Flapper position. Silicone around Blank Off Flapper.
- Reinstall Flapper Control Rod Assembly leaving all drive connectors intact. Insert drive connectors with corresponding Flapper handles.
- Ensure the control rod mounting bracket is installed to the outer face of the corresponding bracket welded to the collector body.
- Reinstall four 1/4" x 3/4" lg bolts.



Flapper Control Rod



Double Shoot Collector



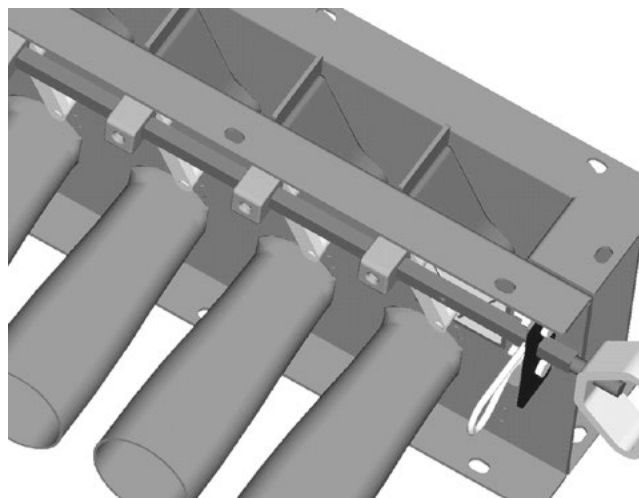
Control Rod Mounting Bracket Assembly

Triple Shoot - continued

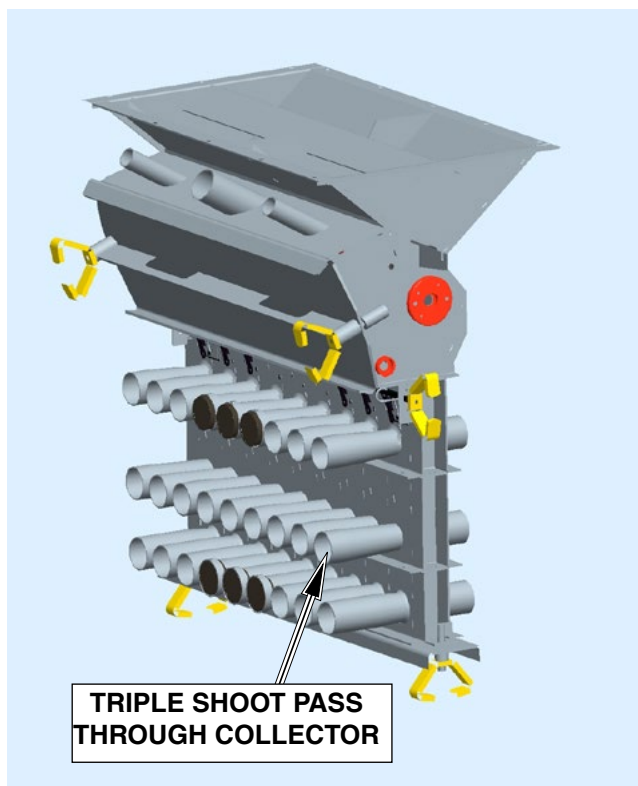
- Confirm Flapper valve operation. All flappers must be firmly against the vertical plate in the collector body when set in both positions.

Important: Ensure the “Air Flow” decal on the collector is pointing in the correct direction.

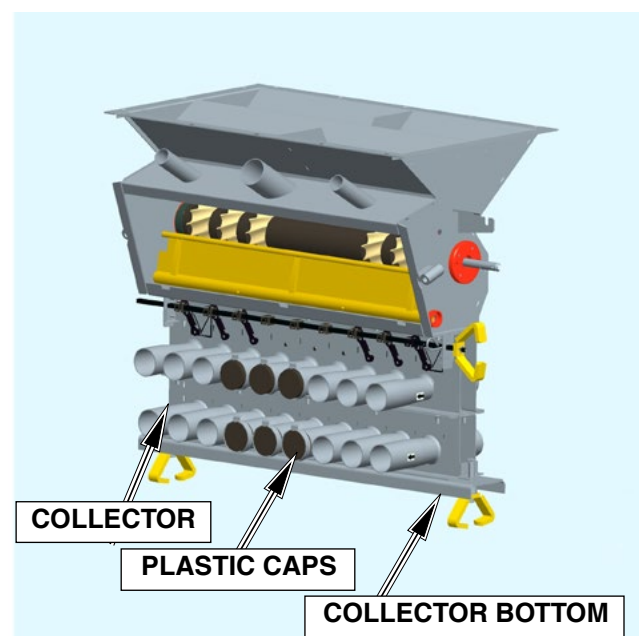
- Mount the one Double Shoot Collector Body to the bottom of each metering body using (12) 5/16" x 3/4" lg bolts.
- Mount the one Single Shoot Collector Body to the bottom of the Double Shoot Collector Body on the **Rear Tank Only** using (12) 5/16" x 3/4" lg bolts.
- Assemble the collector bottom to the Single Shoot Collector Body using the large wing nuts.
- Mount the Triple Shoot Pass Through Collector Body to the bottom of Double Shoot Collector Body the using (12) 5/16" x 3/4" lg bolts on the **Front and Middle Tanks Only**.
- Mount the Single Shoot Collector Body to the bottom of the Triple Shoot Pass Through Collector using (12) 5/16" x 3/4" lg bolts on the **Front and Middle Tanks Only**.



Flapper in Calibration Setting



Front and Middle Tank Assembly



Rear Tank Assembly

Metering

Triple Shoot - Continued

- Assemble the collector bottom to the Single Shoot Collector Body using the large wing nuts.
- Cut 2 1/2" diameter primary hose to the required length to connect the ports on the front face of the plenum to the collectors.
- Connection of hoses from the plenum to the collectors will depend on the number of primary runs used.
- All unused ports must be blanked off using a plastic cap and hose clamp.
- Ensure the unused ports in the collectors correspond with the blanked off runs in the metering body.

Note: The collector interior is not painted to allow free movement of the flapper valves.

Tow Behind

- Remove blank off plates on front and back sloped panels of the rear tank. Install Rear tank Flow Through Pipes using the same hardware that held the blank off plates in place.
- Cut 2 1/2" diameter primary hose to the required length to connect the plenum to the rear collectors.
- Connection of hoses from the plenum to the collectors will depend on the number of primary runs used.
- Cut 2 1/2" diameter primary hose to the required length to connect the rear collectors and tank flow through pipes.
- Slide the 5" length of 2 1/2" black coupler hose onto either end of the steel tubes.
- Insert the steel tubes between the collectors on the rear and middle tanks.
- Secure the steel tubes with hose clamps.

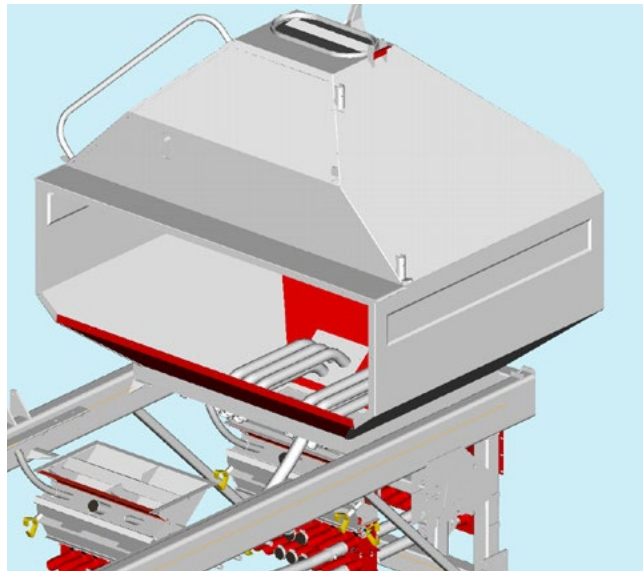
Important

Hot water is the only acceptable lubricant for the installation of the 2 1/2" Black Coupler Hose.

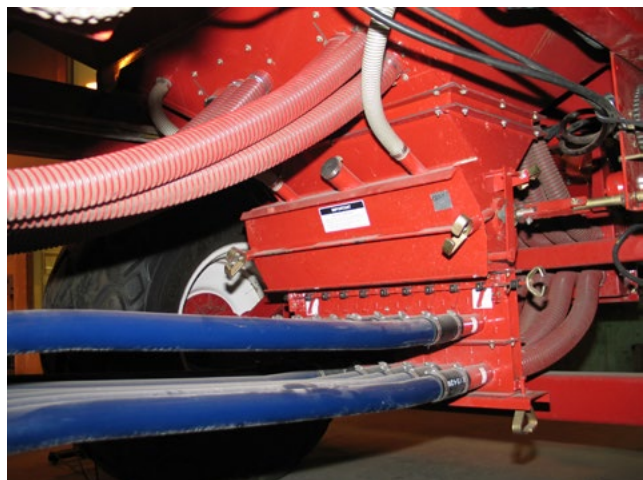
WD-40 or any other lubricant (i.e. liquid detergent) will have a negative effect on the chemical stability of the hose, resulting in the degradation and failure of the hose due to Environmental Stress Cracking.



Plenum - Tow Behind



Installation of Rear Tank Flow Through Pipes



Rear Tank Tow Behind

Triple Shoot - Continued

- Repeat above for the steel pipes between the middle and front tanks.
- Install the primary tube holder onto the front of the Air Cart, using two - 3/8" x 1" bolts, lockwashers and nuts.
- Slide the 5" length of the 2 1/2" black plastic pipe onto the front side of the front collector.
- Insert the top steel tubes between the front collector and the primary tube holder.

Note: Ensure collector outlets and tube holder holes correspond.

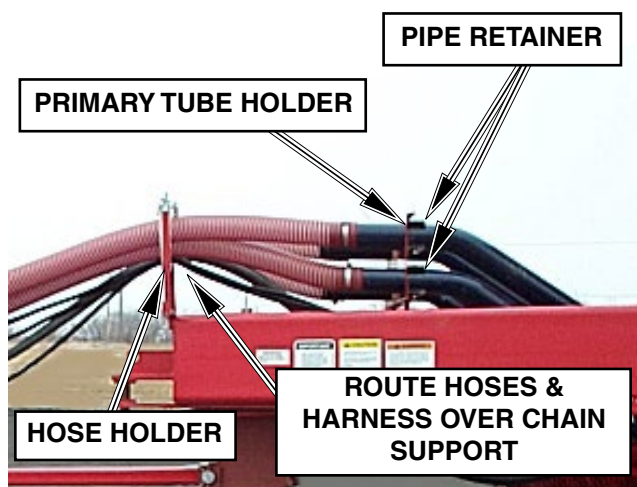
- Secure the steel tubes to the front collector with hose clamps.
- Apply 3/8" x 1" seal strip to each distribution pipe retainer.
- Attach distribution pipe retainer to steel primary tubes with 1/4" x 3 1/2" bolts and 1/4" locknut. The pipe retainer should be snug against the primary tube holder.
- Route clutch and monitor wires and hydraulic lines through hose holder retaining chain with the secondary hose over the bottom half of the chain.

Important

Ensure the top heads are connected to the seed hoses from Air Cart.



Front Tank Tow Behind



Double Shoot Shown

Metering

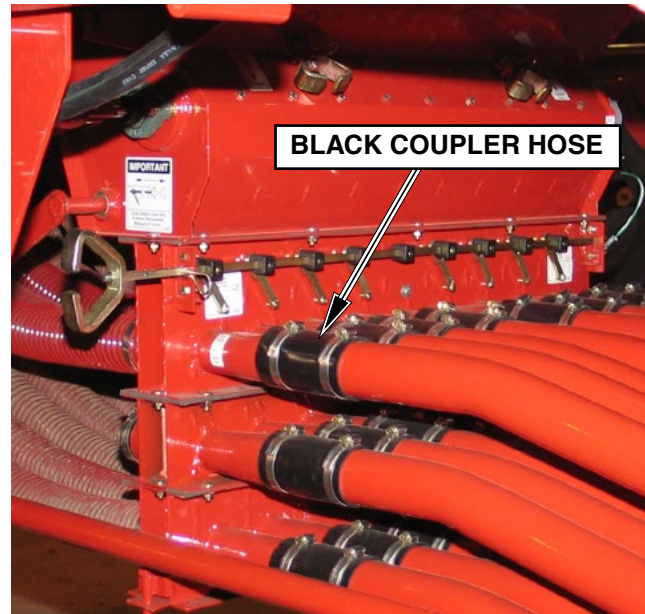
Triple Shoot - Continued

Tow Between

Important: Ensure the “Air Flow” decal on the collectors are pointing in the correct direction.

Distribution Steel Tube Installation - 8240 & 8300

- Mount support bracket straps to the frame using 1/2" x 1 1/2" bolts nuts and lockwashers.
- Install the primary tube holder to the support straps using four - 3/8" x 1" bolts, lockwashers and nuts.
- Insert the bare end of the steel primary tubes into the holder and install the other end onto the respective collector outlets.
- Ensure collector outlets and tube holder holes correspond.
- Cut 2 1/2" diameter primary hose to the required length to connect the plenum to the the steel pipes.
- Connection of hoses from the plenum to the pipes will depend on the number of primary runs used.
- Slide the 5" length of 2 1/2" black coupler hose onto either end of the steel tubes.
- Insert the steel tubes between the collectors the front and middle tanks.
- Secure the steel tubes with hose clamps.
- Repeat above for the steel pipes between the middle and rear tanks.

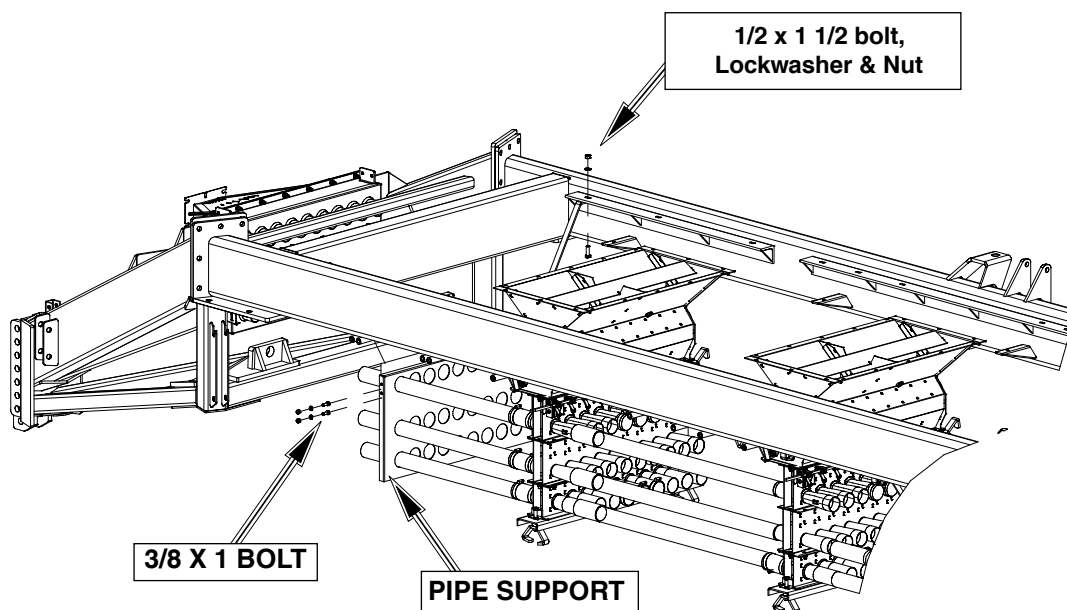


Front Tank Tow Between - 8336

Important

Hot water is the only acceptable lubricant for the installation of the 2 1/2" Black Coupler Hose.

WD-40 or any other lubricant (i.e. liquid detergent) will have a negative effect on the chemical stability of the hose, resulting in the degradation and failure of the hose due to Environmental Stress Cracking.



Triple Shoot - Continued

- Remove blank off plates on front and back sloped panels of the rear tank. Install Rear tank Flow Through Pipes using the same hardware that held the blank off plates inplace.
- Cut 2 1/2 hose to connect the middle tank Double Shoot Collector to the Flow Through Pipes in the rear tank.
- Cut 2 1/2" diameter primary hose to the required length to connect the rear collectors and rear Tank Flow Through pipes to the divider heads located on the seeding tool.
- Secure the 2 1/2 hose with hose clamps.

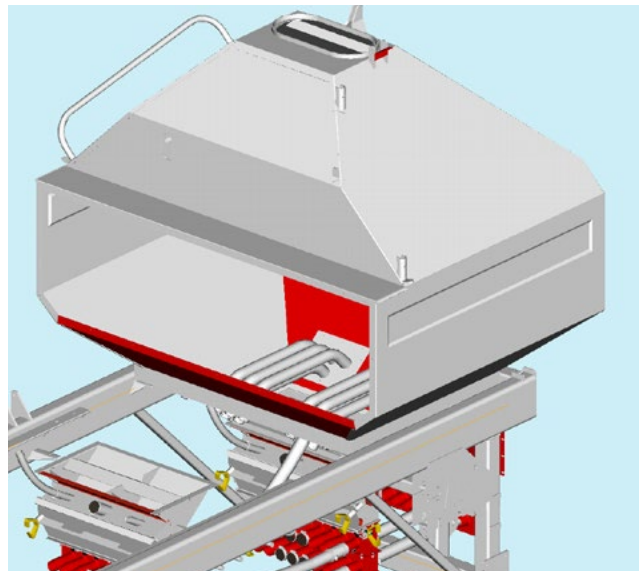
Important

Hot water is the only acceptable lubricant for the installation of the 2 1/2" Black Coupler Hose.

WD-40 or any other lubricant (i.e. liquid detergent) will have a negative effect on the chemical stability of the hose, resulting in the degradation and failure of the hose due to Environmental Stress Cracking.

Distribution Steel Tube Installation - 8336

- Cut 2 1/2" diameter primary hose to the required length to connect the plenum to the front collectors.
- Connection of hoses from the plenum to the collectors will depend on the number of primary runs used.
- Slide the 5" length of 2 1/2" black coupler hose onto either end of the steel tubes.
- Insert the steel tubes between the collectors the front and middle tanks.
- Secure the steel tubes with hose clamps.
- Repeat above for the steel pipes between the middle and rear tanks.
- Cut 2 1/2" diameter primary hose to the required length to connect the rear collectors and tank flow through pipes to the divider heads located on the seeding tool.
- Secure the 2 1/2 hose with hose clamps.



Installation of Rear Tank Flow Through Pipes



Rear Tank Tow Between

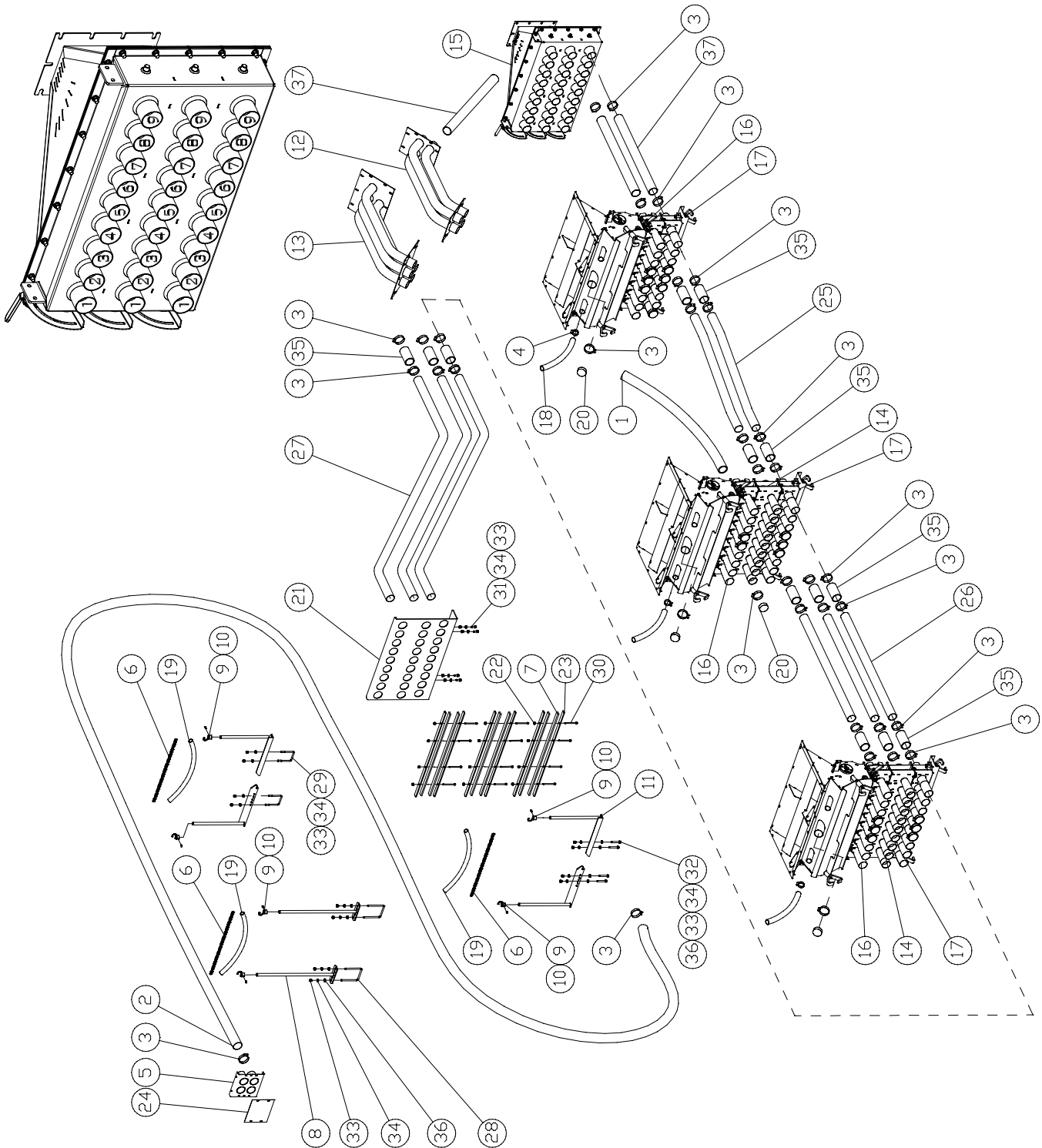
Important

Ensure the top heads are connected to the seed hoses from Air Cart.

Metering

Triple Shoot -Tow Behind

Tow Behind - Three Tank Models - 8240, 8300 & 8370 including Third Tank



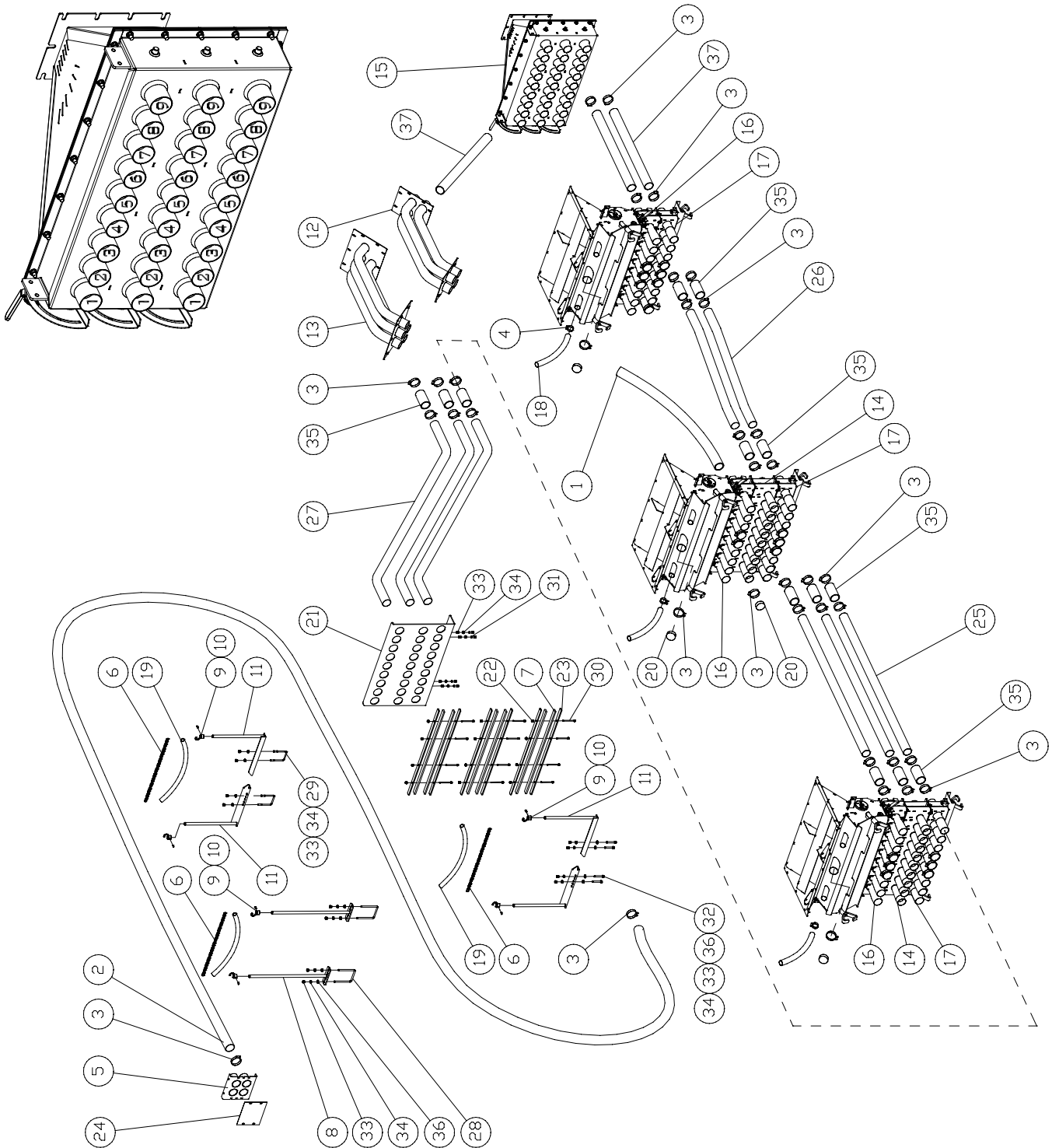
Triple Shoot - Tow Behind Continued

Item	Part No.	Description	No. Used						
			Number of Primaries						
			3	4	5	6	7	8	9
1	R480055	Hose 2 1/2 ID Goodyear x 50" Lg.....	3	4	5	6	7	8	9
2	R480055	Hose 2 1/2 ID Goodyear x 17 Ft	9	12	15	18	21	24	27
3	N11905	Hose Clamp - Hs-20	249	268	287	306	325	344	363
4	N11906	Hose Clamp - 1 1/2 Dia.....	3	3	2	2	2	2	3
5	N19398	Hose Coupler	2	3	3	4	5	6	6
6	N19448	Chain - 3/16 x 80 Links	3	3	3	3	3	3	3
7	N19449	Seal Strip 3/8 x 1 x 2.583 Ft.....	6	6	6	6	6	6	6
8	N19531	Support 24" Lg.....	2	2	2	2	2	2	2
9	N19717	Chain Hook	6	6	6	6	6	6	6
10	N24396	Set Screw - 1/4 x 1/2 Lg Sq Head.....	6	6	6	6	6	6	6
11	N33834	Bracket	4	4	4	4	4	4	4
12	N36835	Triple Shoot Pipes - 4Run.....	1	1	1	1	1	1	1
13	N36840	Triple Shoot Pipes - 5 Run.....	1	1	1	1	1	1	1
14	N37251	Triple Shoot Collector (8240 & 8300)	2	2	2	2	2	2	2
	N37843	Triple Shoot Collector (8370).....	2	2	2	2	2	2	2
15	N37454	Plenum - 27 Outlet.....	1	1	1	1	1	1	1
16	*****	Double Shoot Collector	3	3	3	3	3	3	3
17	*****	Single Shoot Collector.....	3	3	3	3	3	3	3
18	R480056	Hose - 1 1/2 ID x 26" Lg	3	3	3	3	3	3	3
19	R480034	Hose .929 ID x 1.169 ODx18" Lg	3	3	3	3	3	3	3
20	N11907	Plastic Cap.....	129	108	87	66	45	24	3
21	N37292	Plate - Pipe Support - Triple Shoot	1	1	1	1	1	1	1
22	D-5277	1/4 Flange Lock Nut.....	12	12	12	12	12	12	12
23	N36146	Distribution Pipe Retainer	6	6	6	6	6	6	6
24	N19573	Blank Off	2	3	3	4	5	6	6
25	N37291	Distribution Pipe (8240 & 8300)	6	8	10	12	14	16	18
	N37794	Distribution Pipe (8370)	6	8	10	12	14	16	18
26	N37898	Distribution Pipe (8240 & 8300)	9	12	15	18	21	24	27
	N37795	Distribution Pipe (8370)	9	12	15	18	21	24	27
27	N37918	Distribution Pipe (8240 & 8300)	9	12	15	18	21	24	27
	N37796	Distribution Pipe (8370)	9	12	15	18	21	24	27
28	N15098	U-Bolt - 3/8 x 4 x 5	2	2	2	2	2	2	2
29	N36148	U-Bolt - 3/8 x 3 x 4	2	2	2	2	2	2	2
30	N12882	Hex Bolt - 1/4 x 3 1/2.....	12	12	12	12	12	12	12
31	W-475	Hex Bolt - 3/8 x 1 Lg.....	4	4	4	4	4	4	4
32	W-480	Hex Bolt - 3/8 x 2 1/2 Lg.....	4	5	6	7	8	9	10
33	W-514	Hex Nut - 3/8.....	16	16	16	16	16	16	16
34	W-523	Lockwasher - 3/8.....	16	16	16	16	16	16	16
35	N19428	Hose - 2.52 ID x 2.77 OD x 5 Lg.....	39	52	65	78	91	104	117
36	D-5489	Flatwasher - 13/32 ID x 13/16 OD x 16 Ga	8	8	8	8	8	8	8
37	R480055	Hose 2 1/2 ID Goodyear x 32" Lg.....	6	8	10	12	14	16	18

Metering

Triple Shoot -Tow Behind Continued

Tow Behind - Three Tank Models - 8336 & 8425



Triple Shoot - Tow Behind Continued

Item	Part No.	Description	No. Used						
			Number of Primaries						
			3	4	5	6	7	8	9
1	R480055	Hose 2 1/2 ID Goodyear x 50" Lg.....	3	4	5	6	7	8	9
2	R480055	Hose 2 1/2 ID Goodyear x 17 Ft	9	12	15	18	21	24	27
3	N11905	Hose Clamp - Hs-20	249	268	287	306	325	344	363
4	N11906	Hose Clamp - 1 1/2 Dia.....	3	3	2	2	2	2	3
5	N19398	Hose Coupler	2	3	3	4	5	6	6
6	N19448	Chain - 3/16 x 80 Links	3	3	3	3	3	3	3
7	N19449	Seal Strip 3/8 x 1 x 2.583 Ft.....	6	6	6	6	6	6	6
8	N19531	Support 24" Lg.....	2	2	2	2	2	2	2
9	N19717	Chain Hook	6	6	6	6	6	6	6
10	N24396	Set Screw - 1/4 x 1/2 Lg Sq Head.....	6	6	6	6	6	6	6
11	N33834	Bracket.....	4	4	4	4	4	4	4
12	N36835	Triple Shoot Pipes - 4 Run.....	1	1	1	1	1	1	1
13	N36840	Triple Shoot Pipes - 5 Run.....	1	1	1	1	1	1	1
14	N37251	Collector Triple Shoot.....	2	2	2	2	2	2	2
15	N37454	Plenum - 27 Outlet.....	1	1	1	1	1	1	1
16	*****	Double Shoot Collector	3	3	3	3	3	3	3
17	*****	Single Shoot Collector.....	3	3	3	3	3	3	3
18	R480056	Hose - 1 1/2 ID x 26" Lg	3	3	3	3	3	3	3
19	R480034	Hose .929 ID x 1.169 ODx18" Lg	3	3	3	3	3	3	3
20	N11907	Plastic Cap.....	129	108	87	66	45	24	3
21	N37292	Plate - Pipe Support Triple Shoot.....	1	1	1	1	1	1	1
22	D-5277	1/4 Flange Lock Nut.....	12	12	12	12	12	12	12
23	N36146	Distribution Pipe Retainer	6	6	6	6	6	6	6
24	N19573	Blank Off	2	3	3	4	5	6	6
25	N37806	Distribution Pipe.....	9	12	15	18	21	24	27
26	N37291	Distribution Pipe.....	6	8	10	12	14	16	18
27	N37293	Distribution Pipe.....	9	12	15	18	21	24	27
28	N15098	U-Bolt - 3/8 x 4 x 5	2	2	2	2	2	2	2
29	N36148	U-Bolt - 3/8 x 3 x 4	2	2	2	2	2	2	2
30	N12882	Hex Bolt - 1/4 x 3 1/2.....	12	12	12	12	12	12	12
31	W-475	Hex Bolt - 3/8 x 1 Lg.....	4	4	4	4	4	4	4
32	W-480	Hex Bolt - 3/8 x 2 1/2 Lg.....	4	5	6	7	8	9	10
33	W-514	Hex Nut - 3/8.....	16	16	16	16	16	16	16
34	W-513	Lockwasher - 3/8.....	16	16	16	16	16	16	16
35	N19428	Hose - 2.52 ID x 2.77 OD x 5 Lg.....	39	52	65	78	91	104	117
36	D-5489	Flatwasher - 13/32 ID x 13/16 OD x 16 Ga	8	8	8	8	8	8	8
37	R480055	Hose 2 1/2 ID Goodyear x 32" Lg.....	6	8	10	12	14	16	18

Tow Between - Three Tank Models - 8240 & 8300 including Third Tank



Triple Shoot - Tow Between Continued

Item	Part No.	Description	No. Used						
			Number of Primaries						
			3	4	5	6	7	8	9
1	R480055	Hose 2 1/2 ID Goodyear x 50" Lg.....	3	4	5	6	7	8	9
2	R480055	Hose 2 1/2 ID Goodyear x 17 Ft	9	12	15	18	21	24	27
3	N11905	Hose Clamp - HS-20.....	249	269	289	309	329	349	369
4	N11906	Hose Clamp - 1 1/2 Dia.....	3	3	3	3	3	3	3
5	N19398	Hose Coupler	3	3	4	5	6	6	7
6	N19448	Chain - 3/16 x 80 Links	2	2	2	2	2	2	2
7	N19531	Support 24" Lg.....	2	2	2	2	2	2	2
8	N19717	Chain Hook	4	4	4	4	4	4	4
9	N24396	Set Screw - 1/4 x 1/2 Lg Sq Head.....	4	4	4	4	4	4	4
10	N33834	Bracket.....	2	2	2	2	2	2	2
11	N36835	Triple Shoot Pipes - 4 Run.....	1	1	1	1	1	1	1
12	N36840	Triple Shoot Pipes - 5 Run.....	1	1	1	1	1	1	1
13	N37251	Triple Shoot Collector	2	2	2	2	2	2	2
14	N37454	Plenum - 27 Outlet	1	1	1	1	1	1	1
15	*****	Double Shoot Collector	3	3	3	3	3	3	3
16	*****	Single Shoot Collector.....	3	3	3	3	3	3	3
17	R480056	Hose - 1 1/2 ID x 26" Lg	3	3	3	3	3	3	3
18	R480034	Hose .929 ID x 1.169 ODx18" Lg	2	2	2	2	2	2	2
19	N11907	Plastic Cap.....	129	108	87	66	45	24	3
20	N37951	Hanger Strap.....	2	3	4	5	6	6	7
21	N37954	Dist Pipe Support Plate	1	1	1	1	1	1	1
22	N19573	Blank Off	3	3	4	5	6	6	7
23	N37953	Distribution Pipe.....	9	12	15	18	21	24	27
24	N37291	Distribution Pipe.....	6	8	10	12	14	16	18
25	N37898	Distribution Pipe.....	9	12	15	18	21	24	27
26	N15098	U-Bolt - 3/8 x 4 x 5	2	2	2	2	2	2	2
27	N36148	U-Bolt - 3/8 x 3 x 4	2	2	2	2	2	2	2
28	W-486	Hex Bolt - 1/2 x 1 1/2 Lg - 3/4 Lg Thread	2	2	2	2	2	2	2
29	W-475	Hex Bolt - 3/8 x 1 Lg.....	4	12	15	18	21	24	27
30	W-516	Hex Nut - 1/2.....	2	2	2	2	2	2	2
31	W-514	Hex Nut - 3/8.....	12	12	12	12	12	12	12
32	W-525	Lockwasher - 1/2.....	2	2	2	2	2	2	2
33	W-523	Lockwasher - 3/8.....	12	12	12	12	12	12	12
34	N19428	Hose - 2.52 ID x 2.77 OD x 5 Lg.....	39	52	65	78	91	114	127
35	D-5489	Flatwasher - 13/32 ID x 13/16 OD x 16 Ga	4	4	4	4	4	4	4
36	R480055	Hose 2 1/2 ID Goodyear x 32" Lg.....	9	12	15	18	21	24	27

Triple Shoot - Tow Between Continued

Item	Part No.	Description	No. Used						
			Number of Primaries						
			3	4	5	6	7	8	9
1	R480055	Hose 2 1/2 ID Goodyear x 50" Lg.....	3	4	5	6	7	8	9
2	R480055	Hose 2 1/2 ID Goodyear x 17 Ft	9	12	15	18	21	24	27
3	N11905	Hose Clamp - HS-20.....	231	244	257	270	283	296	312
4	N11906	Hose Clamp - 1 1/2 Dia.....	3	3	3	3	3	3	3
5	N19398	Hose Coupler	3	3	4	5	6	6	7
6	N19448	Chain - 3/16 x 80 Links	2	2	2	2	2	2	2
7	N19531	Support 24" Lg.....	2	2	2	2	2	2	2
8	N19717	Chain Hook	4	4	4	4	4	4	4
9	N24396	Set Screw - 1/4 x 1/2 Lg Sq Head.....	4	4	4	4	4	4	4
10	N33834	Bracket.....	2	2	2	2	2	2	2
11	N36835	Triple Shoot Pipes 4 Run.....	1	1	1	1	1	1	1
12	N36840	Triple Shoot Pipes - 5 Run.....	1	1	1	1	1	1	1
13	N37251	Triple Shoot Collector	2	2	2	2	2	2	2
14	N37454	Plenum - 27 Outlet	1	1	1	1	1	1	1
15	*****	Double Shoot Collector	3	3	3	3	3	3	3
16	*****	Single Shoot Collector.....	3	3	3	3	3	3	3
17	R480056	Hose - 1 1/2 ID x 26" Lg	3	3	3	3	3	3	3
18	R480034	Hose .929 ID x 1.169 ODx18" Lg	2	2	2	2	2	2	2
19	N11907	Plastic Cap.....	129	108	87	66	45	24	3
20	N19573	Blank Off	1	3	4	5	6	6	7
21	N37806	Distribution Pipe.....	9	12	15	18	21	24	27
22	N37291	Distribution Pipe.....	6	8	10	12	14	16	18
23	N15098	U-Bolt - 3/8 x 4 x 5	2	2	2	2	2	2	2
24	N36148	U-Bolt - 3/8 x 3 x 4	2	2	2	2	2	2	2
25	W-514	Hex Nut - 3/8.....	8	8	8	8	8	8	8
26	W-523	Lockwasher - 3/8.....	8	8	8	8	8	8	8
27	N19428	Hose - 2.52 ID x 2.77 OD x 5 Lg.....	30	40	50	60	70	80	90
28	D-5489	Flatwasher - 13/32 ID x 13/16 OD x 16 Ga	4	4	4	4	4	4	4
29	R480055	Hose 2 1/2 ID Goodyear x 59" Lg.....	9	12	15	18	21	24	27

Metering

Notes