



Twin-Pack® Draft System Maintenance Manual

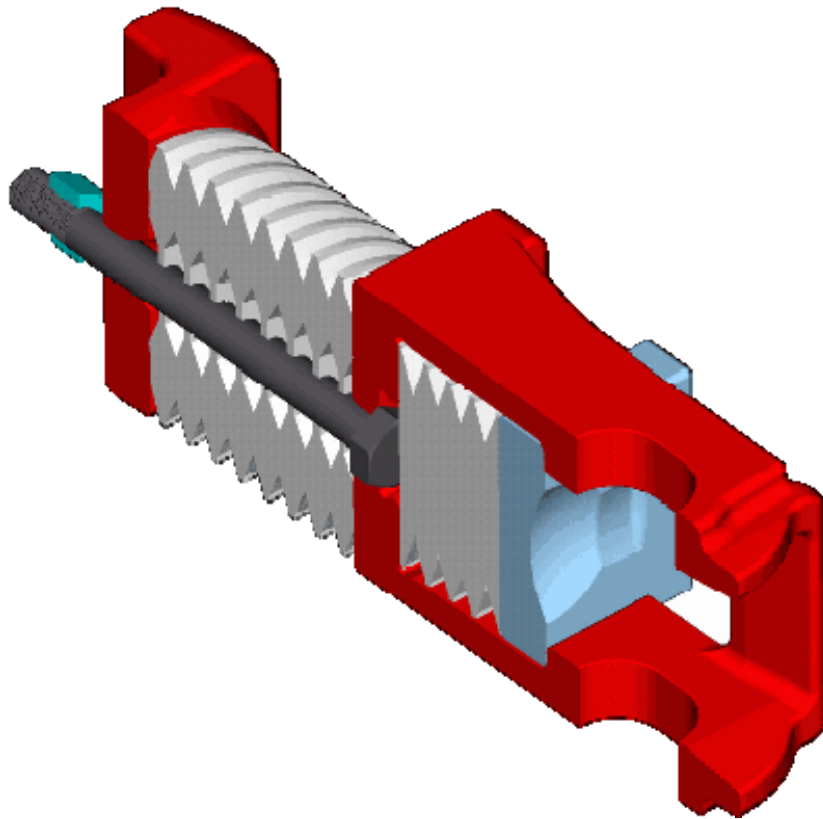


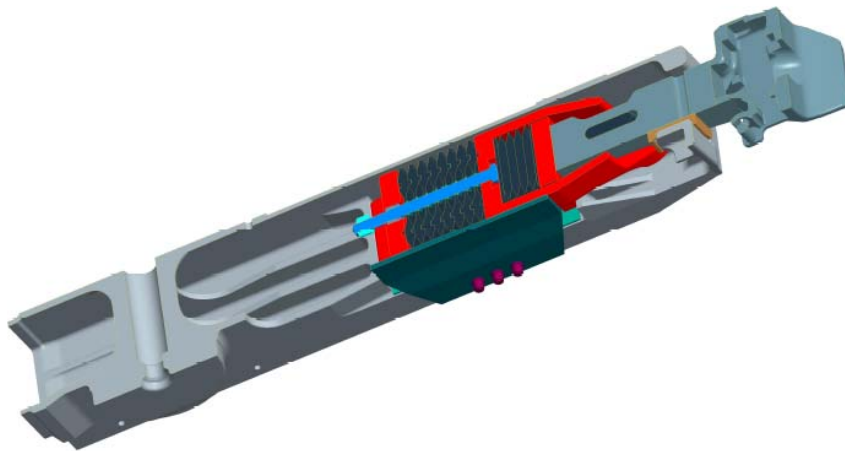


Table of Contents		
Topic	Page	Revision Date
General Product Information	3	
Nomenclature – Type E	6	
Nomenclature – Type F	7	
Nomenclature – Type Rotary	8	
Support Plate – Type E	9	
Support Plate – Type F and Type rotary	9	
Support Plate Application – Type E	10	
Support Plate Application – Type F	10	
Support Plate Application – Type Rotary	11	
Contacting Amsted Rail	11	
Rear Gag	12	
Inspection Criteria	12	
General	12	
Support Plate	13	
AAR Rule 21 Applies	13	
Lubrication	14	
Removing a Unit – normal condition	14	
Removing a Unit – abnormal condition	16	
Removal Tool	17	
“L” Bracket	20	
Installing a Unit	23	

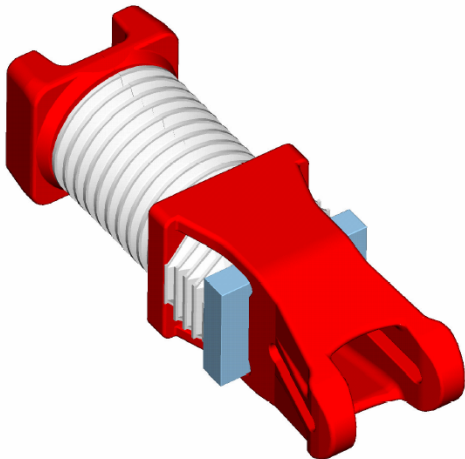
General Product Information

Twin-Pack® draft systems are offered in the following types:

- Type E (draft key)
- Type F (vertical pin)
- Rotary

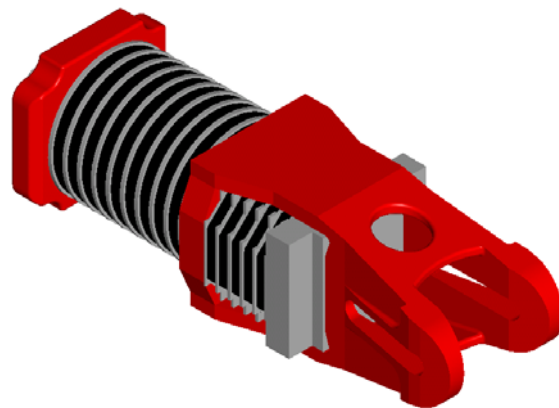


Type E Application



Type E-325G

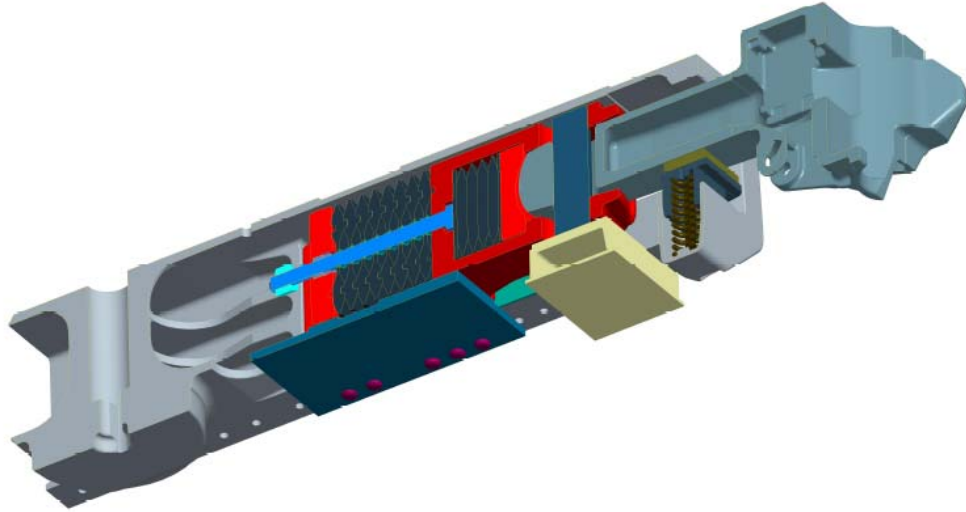
3.25" Buff Travel / 1.25" Draft Travel



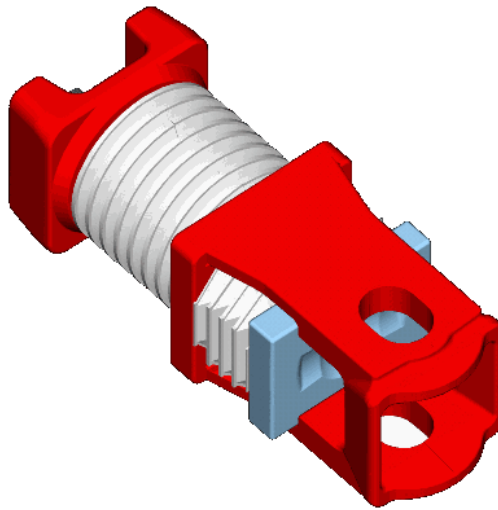
Type E-425G

4.25" Buff Travel / 1.25" Draft Travel

currently not offered

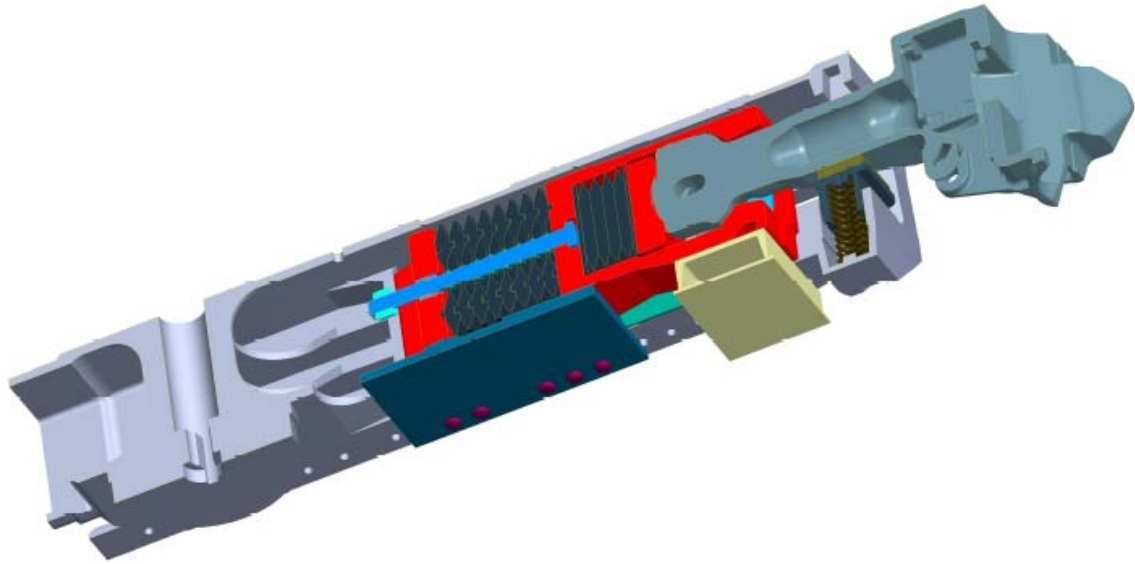


Type F Application

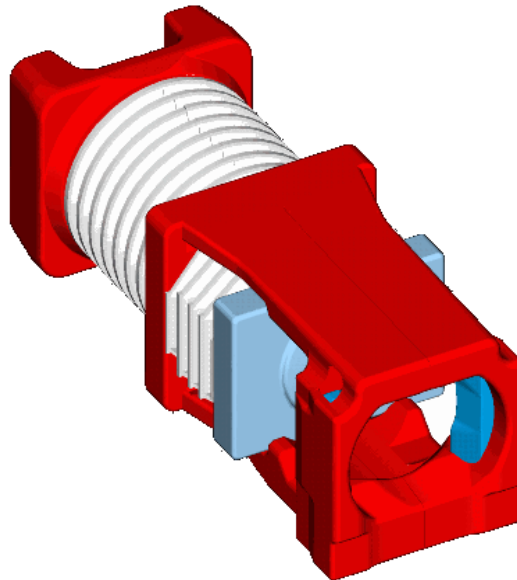


Type F-325G

3.25" Buff Travel / 1.25" Draft Travel



Type Rotary Application

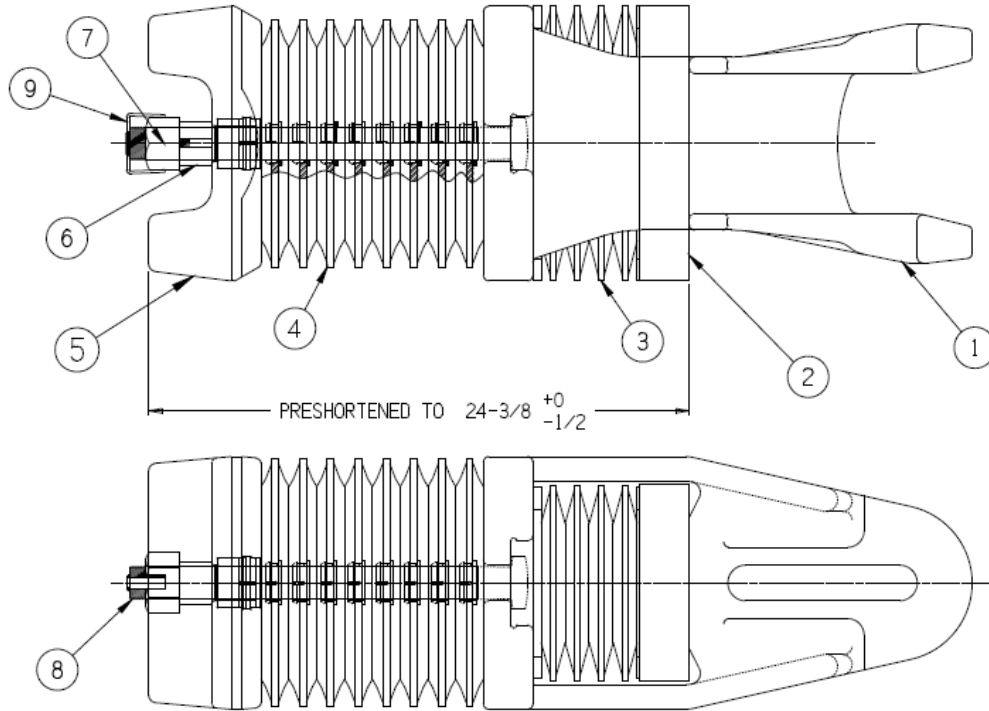


Type R-325G

3.25" Buff Travel / 1.25" Draft Travel

Nomenclature:

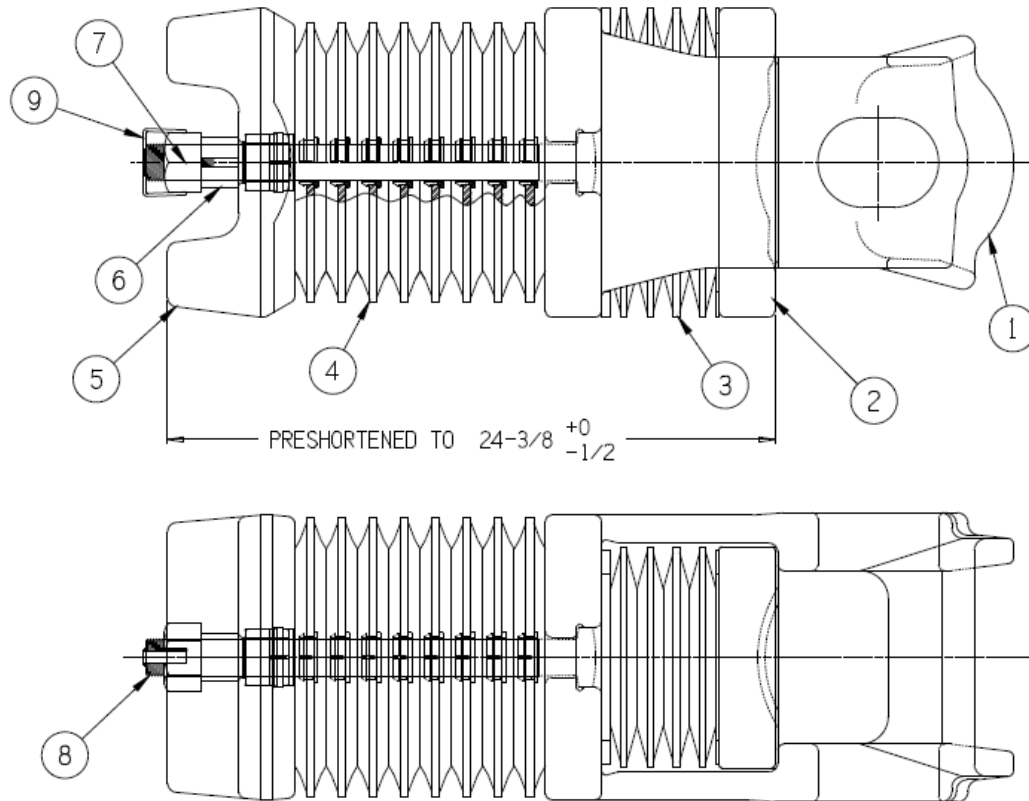
E325-G TWIN-PACK



ITEM	QTY	DESCRIPTION
1	1	CAST YOKE E-325C TWIN PACK
2	1	FOLLOWER AAR Y-11
3	1	ASSEMBLY TWIN PACK FRONT PAD STACK
4	1	ASSEMBLY RLAR PAD STACK
5	1	ASSY TWIN PACK REAR FOLLOWER
6	2	TWIN PACK REAR GAG
7	1	NUT 1-1/2-8
8	1	CENTER GUIDE ROD Ø1 1/2
9	1	TWIN PACK NUT RETAINER

Type E Nomenclature

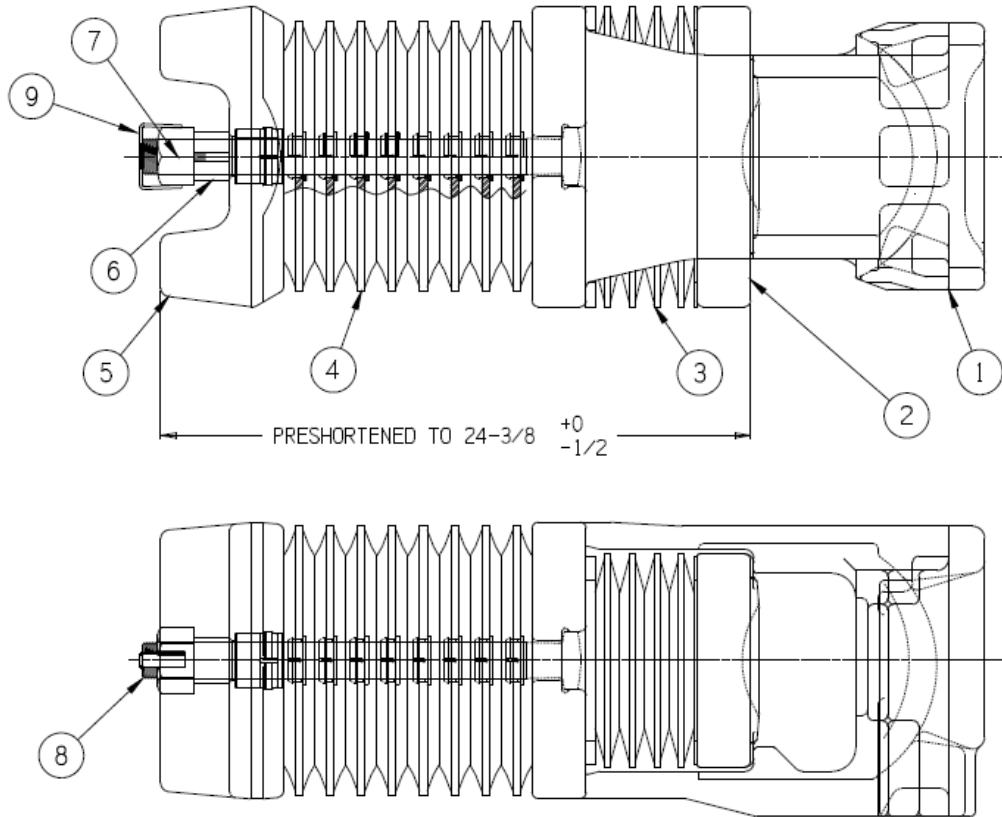
F325-G TWIN-PACK



ITEM	QTY	DESCRIPTION
1	1	CASI YOKE F 325G TWIN PACK
2	1	F TWIN PACK FRONT FOLLOWER
3	1	ASSEMBLY TWIN PACK FRONT PAD STACK
4	1	ASSI MBI Y REAR PAD STACK
5	1	ASSY TWIN PACK REAR FOLLOWER
6	2	TWIN PACK REAR GAG
7	1	NUT 1-1/2-8
8	1	CENTER GUIDE ROD Ø1 1/2
9	1	TWIN PACK NUT RETAINFR

Type F Nomenclature

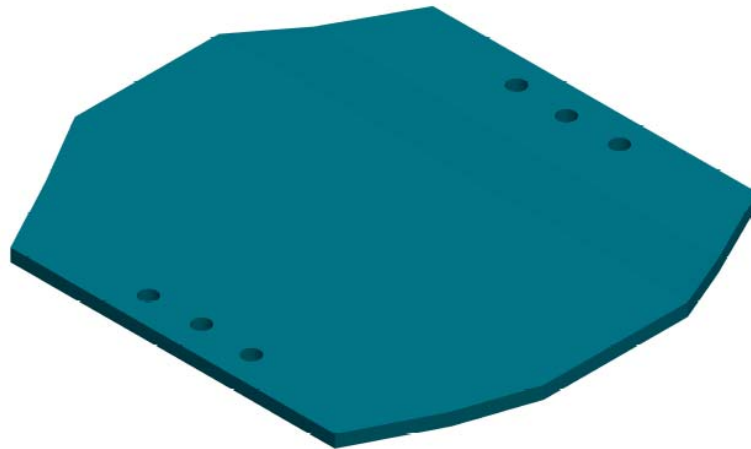
R325-G TWIN-PACK



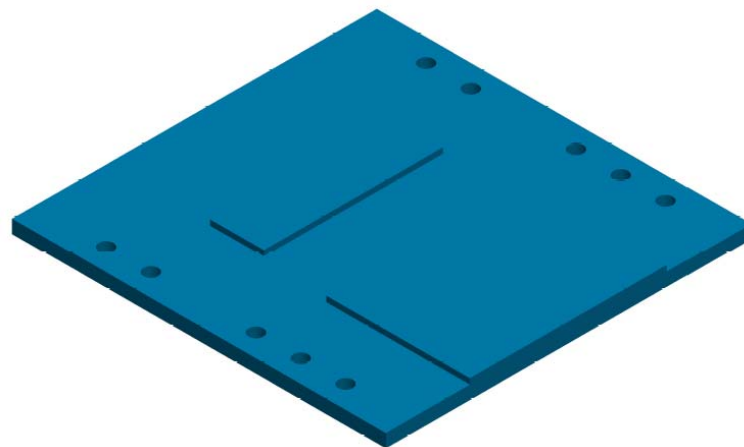
ITEM	QTY	DESCRIPTION
1	1	CAST YOKE R 325G TWIN PACK
2	1	ROTARY IRON FOLLOWER
3	1	ASSEMBLY TWIN PACK FRONT PAD STACK
4	1	ASSEMBLY REAR PAD STACK
5	1	ASSY TWIN PACK REAR FOLLOWER
6	2	TWIN PACK REAR GAG
7	1	NUT 1 1/2 8
8	1	CENTER GUIDE ROD \varnothing 1-1/2
9	1	TWIN PACK NUT RETAINER

Type Rotary Nomenclature

Support Plates:

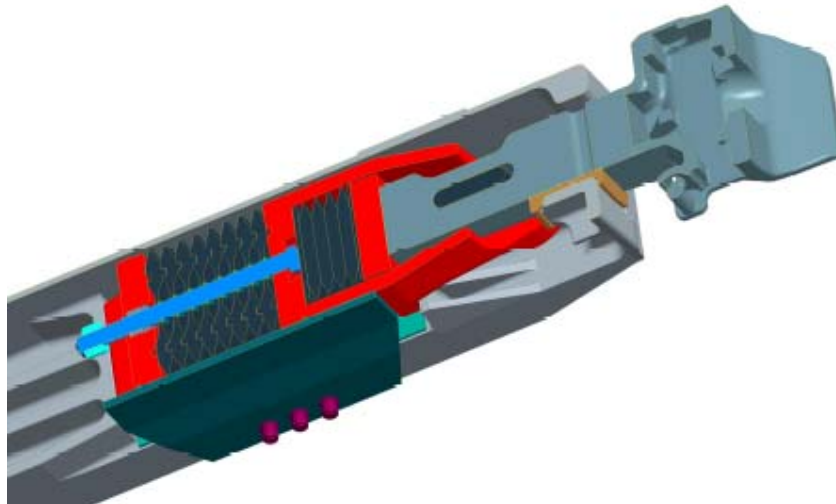


Support Plate – Type E

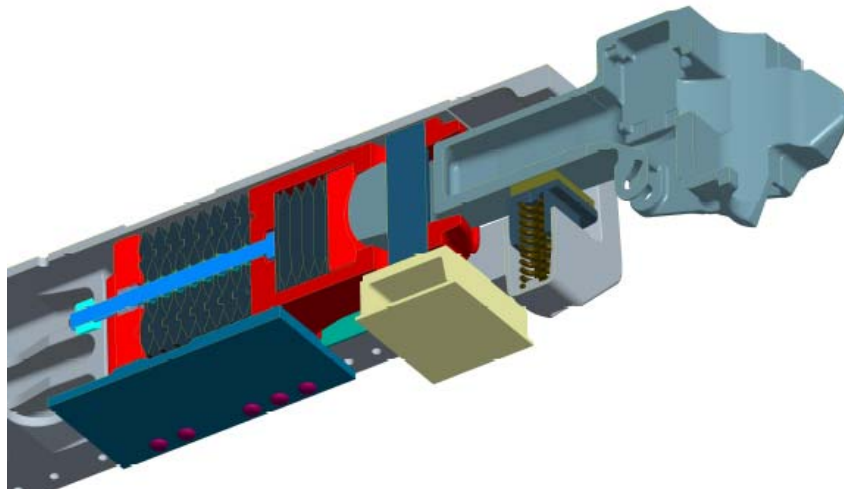


Support Plate – Type F and Type Rotary

Support Plate Applications:



Support Plate Application – Type E

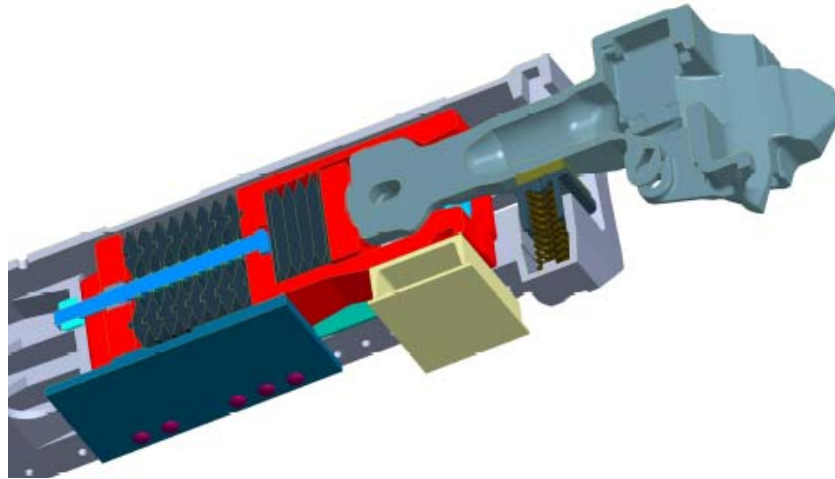


Support Plate Application – Type F

The 2 holes go towards
the center plate

The 3 holes go towards
the coupler

Amsted Rail



Support Plate Application – Type Rotary

The 2 holes go towards
the center plate

The 3 holes go towards
the coupler

[Contacting Amsted Rail](#)

To contact Amsted Rail regarding ordering new or replacement parts, or about information contained within this maintenance manual, please call 1-800-621-8442

Rear Gag

For ease of installation, all Twin-Pack® draft systems are preshortened at the factory. Rear gags will disengage after the first buff impact allowing the unit to expand against the draft gear pocket stops.

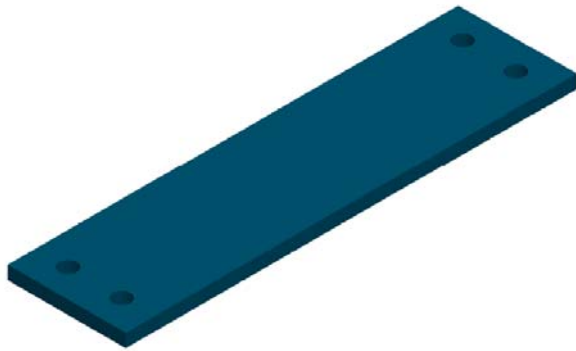


Inspection Criteria

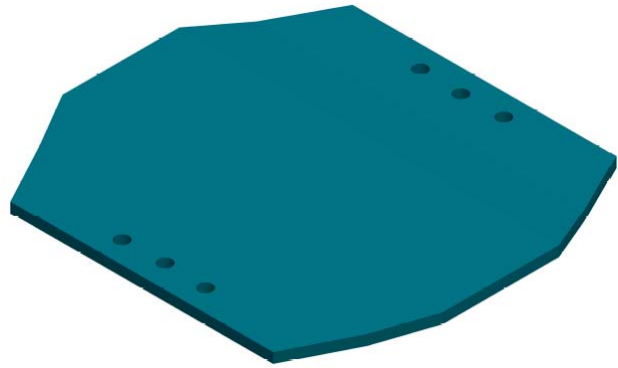
General Criteria:

- All applicable AAR and FRA rules apply
- Coupler free slack:
 - Type E and Type F units - If free slack exceeds 1.0" (per AAR RP-101), the total draft system should be removed and the system evaluated.

- Type Rotary - If free slack exceeds 1.5", the total draft system should be removed and the system evaluated.
- Support Plate:
 - If small support plate is installed, replace with large support plate. Contact Amsted Rail for large support plate details.



Small Support Plate



Large Support Plate

- **AAR Rule 21 Applies:**
 1. Condemnable at Any Time
 - a. Draft Gear
 - (1) Broken or cracked yoke castings that are an integral part of the draft gear assembly.
 - (2) Obvious heat or fire damage to rubber or rubber friction draft gears.
 - (3) Draft gear with broken or missing external retaining bolt or rod only shall not be considered defective.
 - b. Carriers
 - (1) Draft gear carrier cracked, broken, or worn more than 50% of the original thickness, wear plate missing or worn through.
 - (2) Wrong (not standard to car).
 - c. Followers
 - (1) Broken, bent ½ inch or more, or missing.
 - (2) Worn more than 1/8 inch in any location.

2. Condemnable When Car is on Shop or Repair Track for Any Reason

a. Draft Gear

- (1) When draft gear is removed in conjunction with other work, when defective or missing retaining bolts or rods are discovered.

Lubrication Requirements

- If the rotary Twin Pack® is used, lubricate the system per the Amsted Rail FR304 rotary dump coupler maintenance manual
- Type E and Type F units do not require lubrication
-

Removing a Twin Pack® Unit

Procedures for removing a Twin Pack® unit from a car:

- **Normal condition (no damage to unit):**
 - If possible, remove the tack weld holding the “nut” to the “nut retainer” and bend the tabs of the “nut retainer” out of the way. If the tack welds are not accessible, you will need to use gags between the “nut” and the “rear follower”. Contact Amsted Rail for replacement parts or product details.



- Place a lift table or other suitable device under the draft gear pocket and Twin Pack® unit
- Raise the lift table or other suitable device until it almost contacts the support plate
- Remove the support plate fasteners and support plate
- Raise the lift table or other suitable device up against the bottom of the sill or Twin Pack® unit
- Using a standard draft gear removal tool (jack) such as the HydroJack II or Hydra-Tech, compress the Twin Pack® unit until it is loose in the pocket (same as with any standard draft gear)

- Either:
 - Run the “nut” up against the rear follower and then back the “nut” off one (1) full turn
 - Use gags between the “nut” and the “rear follower”



- The draft gear removal tool (jack) can now be removed (the “nut” or gag will hold the Twin Pack® unit compressed)

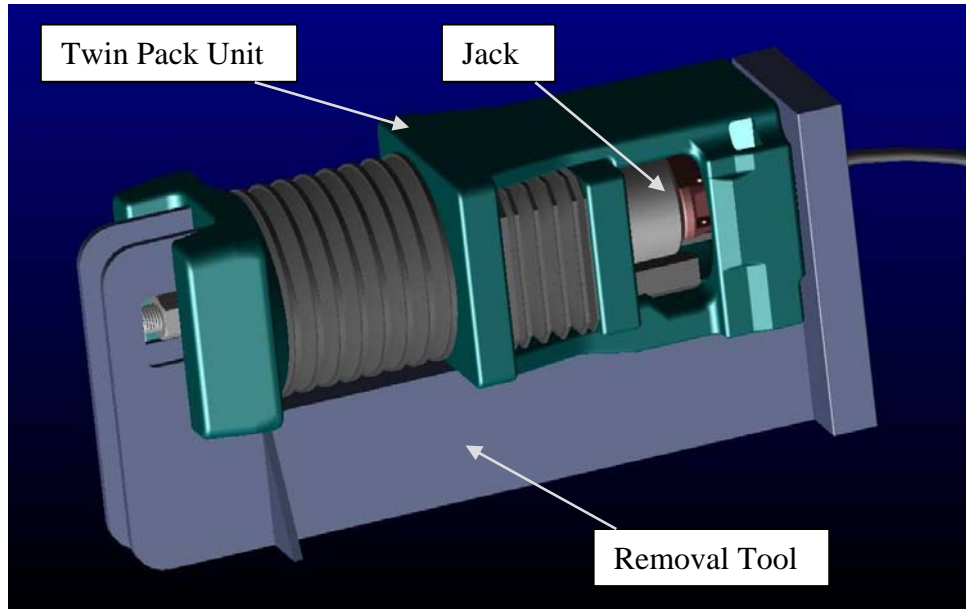


- Lower the Twin Pack® unit out of the sill using the lift table or other suitable device

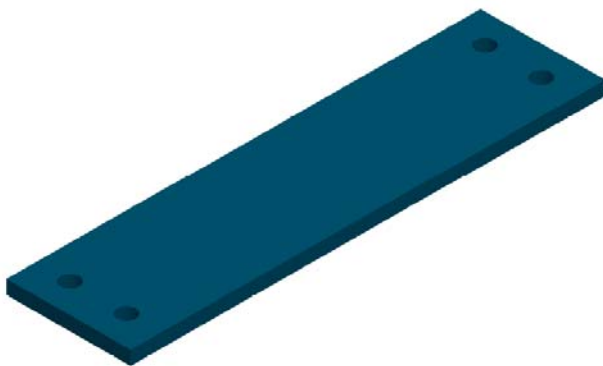
- **Abnormal condition (yoke is broken or damaged):**
 - If standard draft gear removal tool (jack) such as the HydroJack II or Hydra-Tech can not be used, or the guide rod is broken such that the “nut” will not function as a gag. Amsted Rail has developed 2 tools for removing a unit under these conditions:
 - Removal tool:
 - Can be used to remove a unit under either condition listed above
 - Eliminates overhead welding
 - Can be used multiple times
 - See instructions below
 - “L” bracket:
 - Can be used to remove a unit with a broken “guide rod”
 - Requires overhead welding
 - 1 time use bracket (bracket is shipped with unit)
 - See instructions below

- **Removal tool:**
 - This tool is used with a standard draft gear removal tool (with the “ears” removed). There are 2 different removal tool designs:
 - 1 for a type E Twin Pack® unit
 - 1 for either a type F Twin Pack® unit or a rotary Twin Pack® unit

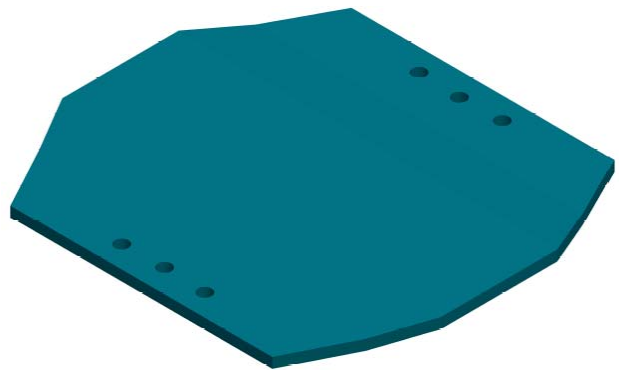
Amsted Rail



- Place a lift table or other suitable device under the draft gear pocket and Twin Pack® unit
- If a large support plate is installed:
 - Raise the lift table or other suitable device until it almost contacts the support plate
 - Remove the support plate fasteners and large support plate
 - Remove the large support plate and replace it with a small support plate (minimum of 1 fastener hand tight on each side)

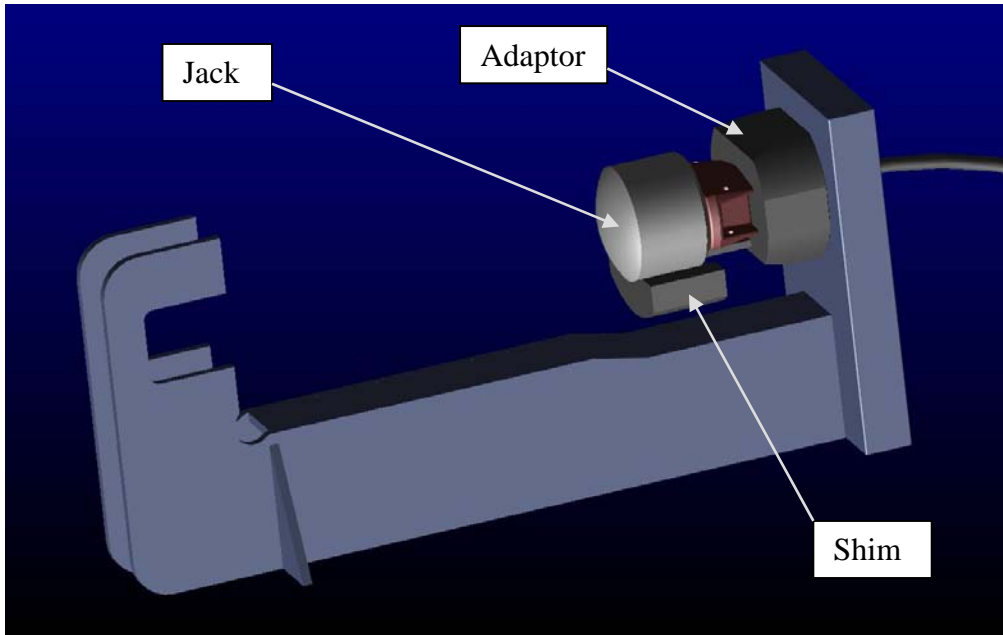


Small Support Plate



Large Support Plate

- Place the draft gear removal tool (jack), removal tool shim, and adaptor inside the coupler opening of the yoke



- Lower the lift table or other suitable device and place the removal tool onto it
- Raise the lift table or other suitable device until it almost contacts the small support plate
- Remove the small support plate
- Raise the lift table or other suitable device with the removal tool up against the bottom of the Twin Pack® unit
- Using the draft gear removal tool (jack), compress the Twin Pack® unit until it is loose in the pocket
- Following the operating instructions for the draft gear removal tool (jack), remove the hydraulic line while keeping the Twin Pack® unit compressed
- The Twin Pack® unit and removal tool may now be lowered out of the sill
- To remove the Twin Pack® unit from the removal tool, you may perform one of the following (with the Twin Pack® unit still compressed):

Amsted Rail

- Weld steel plates on each side and top (3 places) connecting the rear follower and the yoke

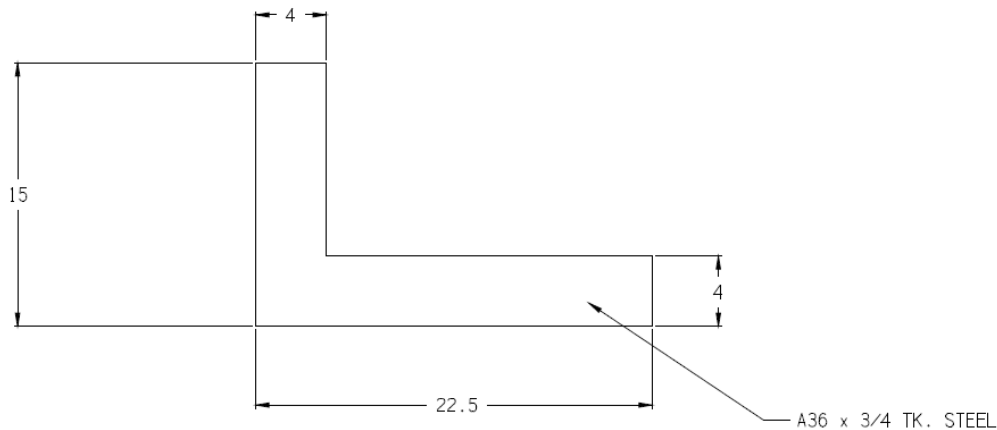


- Use a set of “picture frames” over the front follower and the rear follower (drawings available from Amsted Rail upon request)



- With either the plates welded on or “picture frames” applied, release the draft gear removal tool (jack).
- The Twin Pack® unit, draft gear removal tool (jack), shim, and adaptor can now be removed from the removal tool.

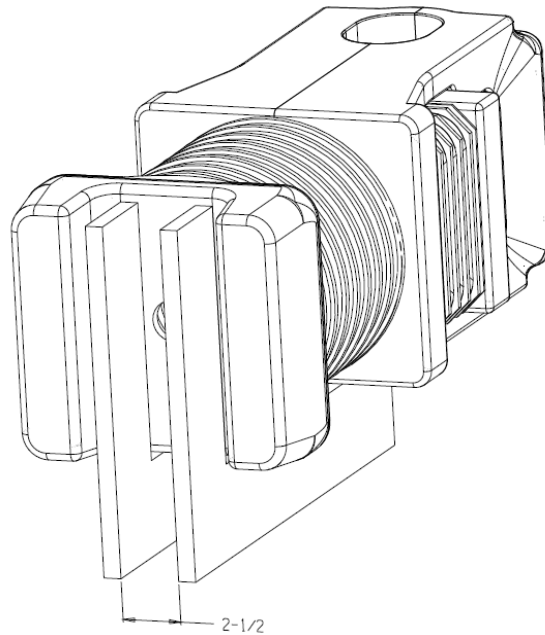
- **“L” bracket:**



“L” Bracket Details – 2 Required

- Place a lift table or other suitable device under the draft gear pocket and Twin Pack® unit
- Raise the lift table or other suitable device until it almost contacts the support plate
- Remove the support plate
- Lower the lift table or other suitable device enough to place the two (2) “L” brackets up against the bottom of the Twin Pack® unit
- Force the two (2) “L” brackets tight up against the “rear follower” on either side of the “guide rod” as follows

Amsted Rail

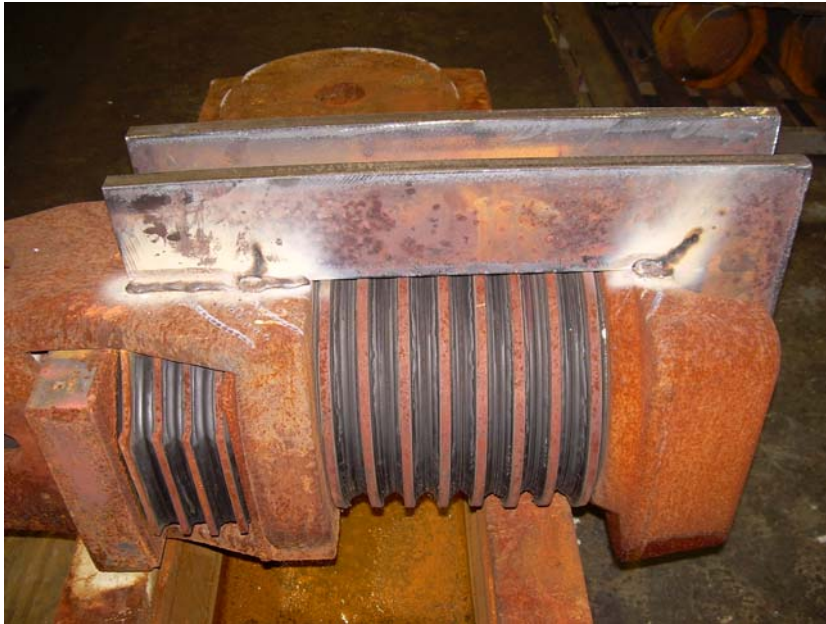


- Weld the two (2) “L” brackets securely to the “yoke” and “rear follower”. This will keep the “buff stack” from expanding while compressing the “draft stack”.



- Using a standard draft gear removal tool (jack) such as the HydroJack II or Hydra-Tech, compress the Twin Pack® unit until it is loose in the pocket (same as with any standard draft gear)

- Following the operating instructions for the draft gear removal tool (jack), remove the hydraulic line while keeping the Twin Pack® unit compressed
- The Twin Pack® unit with “L” brackets attached may now be lowered out of the sill

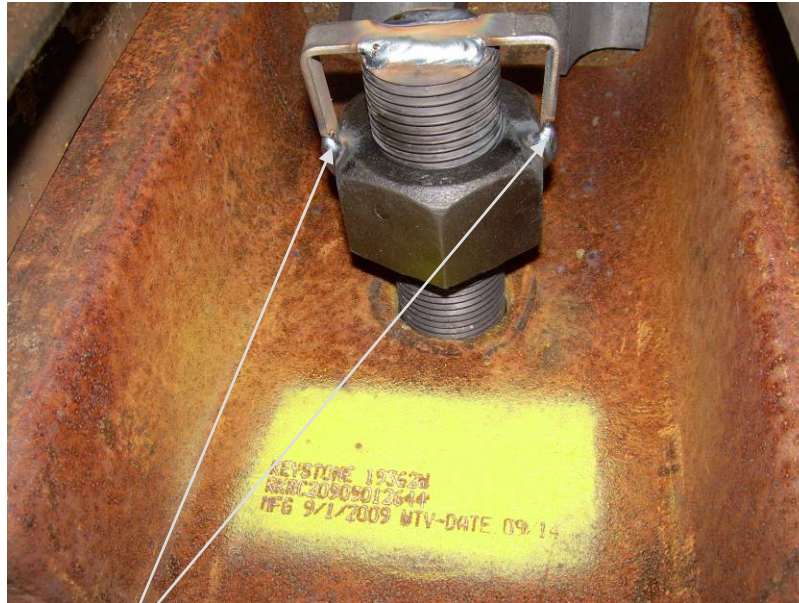


- The draft gear removal tool (jack) can now be removed

Installing a Twin Pack® Unit

Procedures for installing a Twin Pack® unit to a car:

- Inspect the Twin Pack® unit to ensure:
 - No visible handling damage is present that would affect operation
 - The “nut” and “nut retainer” are in place and tack welded together



← **Tack Welds In Place**

- Place the support plate and Twin Pack® unit in their proper orientation on top of the lift table or other suitable device (see “support plate” and “support plate application” above)
- Lift the unit and support plate into place
- Apply fasteners to the support plate
- The “rear gags” will disengage after first buff impact allowing the unit to expand against unit stops



Rear Gag