



PARTS SUPPLEMENT R Series Trailers

H-9700 Spring Suspension Q495227
and
Q486569-06 Axle Assembly with 16.5 X 7 Brakes

ETNYRE TRAILER COMPANY, Oregon, Illinois 61061

Application

The 9700 series suspension is an indirect result of Hutchens' Rocker Bushing Improvement Program. It can be utilized anywhere a 7700 series suspension can and almost all of the suspension components are interchangeable. However, the 9700 series suspension offers several options that were previously unavailable with the 7700 series as well as numerous improvements that will now be incorporated into both units.

Capacity

Like our 7700 series the 9700 series suspension has a Gross Axle Weight Rating (G.A.W.R.) of 22,500 lbs. when equipped with single leaf, two leaf, standard three leaf and seven leaf springs. Heavy duty three leaf and eight leaf springs raise the G.A.W.R. to 24,000 lbs.

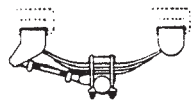
Standard Features

- A Huck "lockbolt" fastening system for the rocker/rocker hanger assembly that is virtually maintenance free.
- Lightweight, fabricated hangers and equalizers with 5/8" hardened wear pads to reduce wear at all spring contact points.
- Cast steel hangers and equalizers with increased wall thickness at spring contact points eliminating the need for additional wear pads.
- The industries finest rocker bushing. Combining a new rubber compound and improved bushing installation techniques coupled with dimensional changes in the bushing and fasteners.
- An improved spring seat design that more efficiently transfers forces from the axle to the springs.
- A redesigned top plate that is lighter and offers greater stability under u-bolt clamp loads.
- Wrapped fabricated torque arm eye ends that utilize a single 5/8" bolt and a higher clamp load to prevent separation under extreme conditions.
- Torque arm screws that are coated with "NEVER-SEEZ" and then painted to resist corrosion while allowing easy adjustment for suspension alignment.

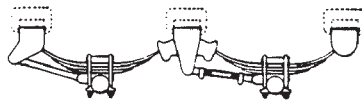
Except for the rockers and rocker hangers, the component parts of all 7700 and 9700 series suspensions are completely interchangeable.

Options

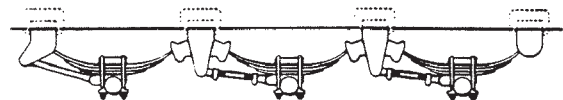
The 9700 series suspensions are available in single, tandem and multi-axle configurations.



Single Axle (S)

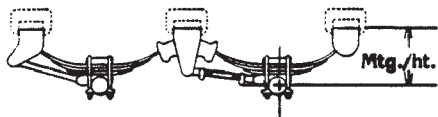


Tandem Axle (T)

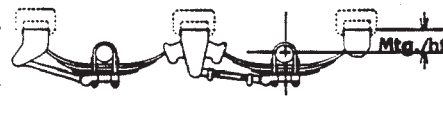


Tri-Axle (Tri)

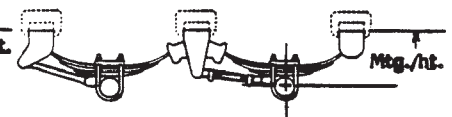
In addition to the standard overslung configuration an underslung configuration is available for reduced mounting heights. Mounting height (Mtg./ht) is the distance from the center line of the axle to the top of the spring hangers.



Overslung (OS)
w/ Standard U-Bolt Configuration



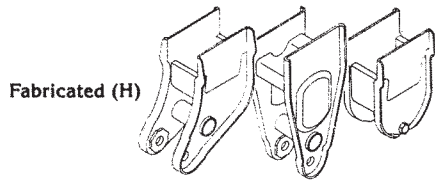
Underslung (US)



Inverted U-Bolt Configuration

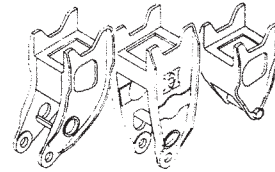
The standard 9700 series suspensions have u-bolts that point downward (threads and nuts below the axle). However, a model is available with inverted u-bolts (threads and nuts above the axle).

All 9700 series suspensions are available with either fabricated or cast steel hangers and rockers. These hangers come in various styles.



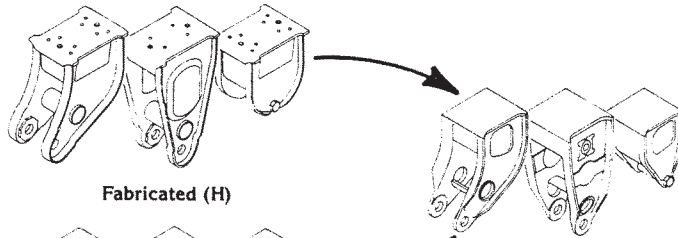
Fabricated (H)

Straddle Mount (Str/mt)
Straddle Mount hangers are for use with box type frames. Each hanger straddles the frame and is welded to both sides of the frame. This is our strongest hanger mounting.



Cast (CH)

Under Mount (Un/mt)
Under Mount hangers are welded flush to the bottom of the frame. For an added weight savings in I-beam applications special fabricated front and rear hangers without top plates are available.



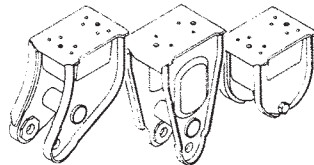
Fabricated (H)

Cast (CH)

Under Mount Weld-on (Un/mt/wo) and Side Mount Weld-on (Si/mt/wo)

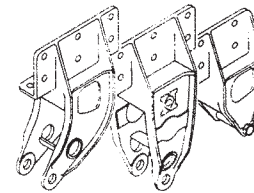
The versatile Weld-on hangers can be used for either under mount or side mount applications.

Side Mount (Si/mt)
Side Mount hangers are welded to the side of the frame. They are useful on flatbed sliders and "maximum cube" vans.



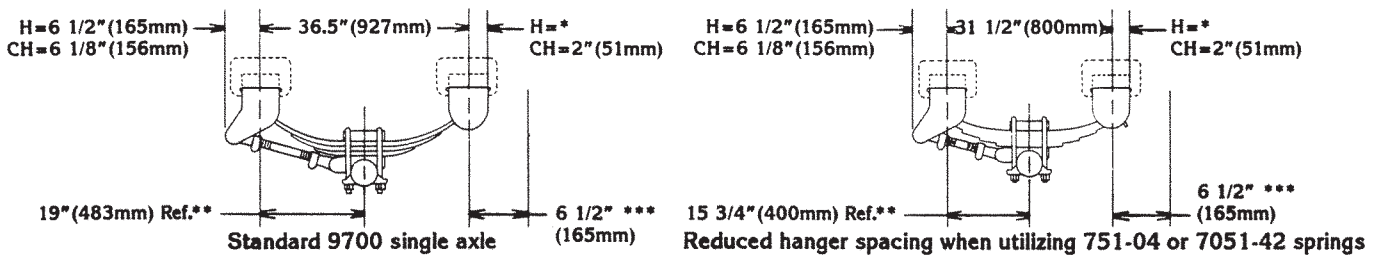
Fabricated (H)

Flange Mount (Fl/mt)
Flange mount hangers are available with or without bolt holes. Hangers may be bolted (Fl/mt/bo) or welded (Fl/mt/wo) to the frame or a combination of bolting and welding may be used.

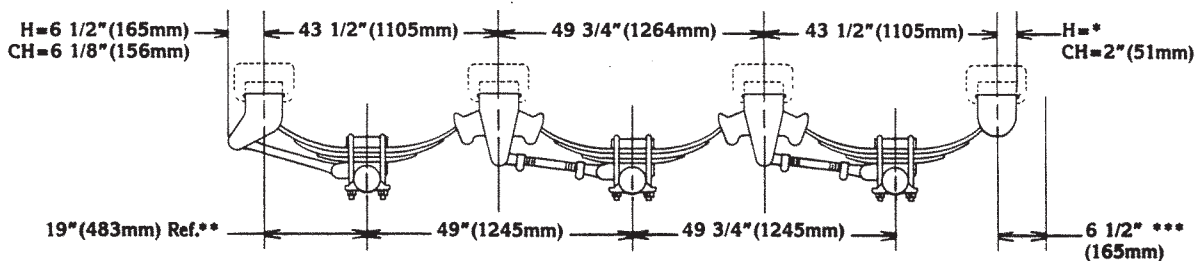


Cast (CH)

Axle spacings of 42½, 44 and 49 inches will be covered in this publication. Axle spacings greater than 49 inches will be covered in the widespread section. Unless otherwise specified, axle centers are assumed to be 49 inches. Hanger spacings for single axle units (H and CH models) are as follows;



Hanger spacings for tandem axle units with 42 1/2" and 44" axle centers (H and CH models) are covered on pages 17 and 18 of this publication. Hanger spacings for tandem axle units with 49" axle centers (H and CH models) are covered with their appropriate illustration. Hanger spacings for tri-axle units with 49" axle centers (H and CH models) are as follows;

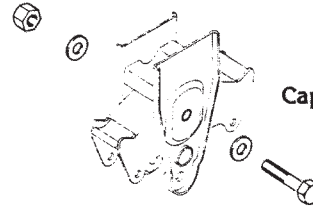


*Str/mt = 3 1/2" (89mm), Un/mt & Si/mt = 3 7/8" (99mm), Fl/mt = 5 1/2" (140mm)
**Ref.: This dimension may vary with changes in springs, spring seat heights, etc.
***Recommended spring clearance

As an option to the Huck fastener, a single cap screw fastener is available for the rocker and center rocker hanger. This system is also offered as a replacement for the Huck fastener should that become necessary.

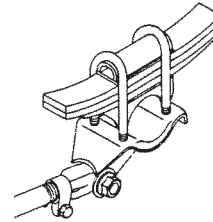


Huck Fastener (Std.)



Cap Screw (Opt.)

Spring seats and u-bolts to fit 5" round axles (shown below) are standard. These spring seats range in height from 3/4 of an inch to 4 3/4 inches. Spring seats and u-bolts for special axle shapes are available as an option.



No-Hop Attach Fitting
Rear Axle Only

A no-hop feature is available for rear axle application on overslung, H and CH 9700's with the standard u-bolt configuration. This feature is designed to prevent rear axle rotation and the resulting "chatter" or "hop" that sometimes occurs when an empty trailer brakes hard.

All overslung H and CH 9700 series suspensions are available with optional 3/4" u-bolts in lieu of the standard 7/8" u-bolts.

These model variations are standard catalog items. Many more combinations are possible. If your particular need is not covered in this publication please contact a Hutch representative for assistance.

How To Order Your 9700 Series Suspension System

With so many options available on the 9700 series suspensions, the basis of any order must begin with a complete description of the unit. The following procedure will provide the descriptive information required:

- 1) Determine the number of axles required and the spacing of these axles. (Unless otherwise specified tandem axles with 49" axle centers are assumed.)
- 2) Select the style of hangers required to mount the suspension on your particular frame or subframe. Specify whether these hangers are to be fabricated(H) or cast(CH) steel.
- 3) Determine the mounting height (Mtg/ht) your application requires. For your convenience a mounting height chart may be found on page 4 of this booklet.
From this chart please note that mounting height is dependent upon:
 - a) Suspension configuration - Overslung or Underslung. (Unless otherwise specified suspension configuration is assumed to be overslung.)
 - b) Axle size - 5" Round, or other. (Hutchens does not manufacture or sell axles.)
 - c) Spring seat height - 3/4" to 4 3/4" in 1/2 inch increments.
 - d) Spring type - Standard or heavy duty, number of leaves and spring arch. Hutchens Industries is not a spring manufacturer. As a service to our customers we will supply springs upon request. Whether or not we provide you with springs, we will need to know what springs you intend to use to assure we furnish the appropriate u-bolt for the spring and spring seat combination you've ordered.
- 4) Choose which u-bolt size you would like (either the standard 7/8" or the optional 3/4" size).

Note: In many instances more than one combination will result in the same mounting height. Therefore, all of the aforementioned factors should be taken into consideration when ordering.

EXAMPLE: A tandem axle (T) 9700 series suspension requiring a mounting height of 16" and fabricated (H) straddlemount hangers (Str/mt) for use with 3/4" u-bolts and 5" round axles with 354-00 springs would be ordered as follows:

Quantity	Fabricated Steel	Series No.	Tandem Axle	I-Beam Lw/MT Straddlemount Hangers	For use with 3/4" U-bolts	5" Round Axles	See Mtg/ht Chart	With 354-00 springs
1 ea.	H	9700	T	Str/mt	3/4" U-bolts	5" rd.	3/4" seat	W/354-00 sprgs.

1 ea. H9700 T · Str/mt · 3/4" u-bolts · 5" rd. · 3/4" seat · W/354-00 springs

Mounting Height Chart: Nominal Values For No-Load Conditions

5" (127mm) Round Axles With 3/4" (19mm) Spring Seats

Spring Part No.	Description	GAWR(lbs.)	Overslung Config.		Underslung Config.	
			Tandem Axle 49"(1245mm) Axle Centers	Single Axle 36.5"(927mm) Hgr. Spacing	Tandem Axle 49"(1245mm) Axle Centers	Single Axle 36.5"(927mm) Hgr. Spacing
324-00	Hi-arch, 2-leaf	22,400	16.00" (406mm)	15.50" (394mm)	7.50" (191mm)	7.00" (178mm)
325-00	Med-arch, 2-leaf	22,400	14.50 (368)	13.75 (349)	6.00 (152)	5.25 (133)
326-00	Low-arch, 2-leaf	22,400	13.75 (349)	13.25 (337)	5.25 (133)	4.75 (121)
354-00	Hi-arch, 3-leaf	22,400	16.00 (406)	15.75 (400)	7.00 (178)	6.75 (172)
355-00	Med-arch, 3-leaf	22,400	14.50 (368)	14.00 (356)	5.50 (140)	5.00 (127)
356-00	Low-arch, 3-leaf	22,400	13.75 (349)	13.25 (337)	4.50 (114)	4.00 (102)
360-00	Hi-arch, 1-leaf	22,400	16.00 (406)	15.25 (387)	8.00 (203)	7.25 (184)
363-00	Low-arch, 1-leaf	22,400	13.75 (349)	13.25 (337)	5.75 (146)	5.25 (133)
365-00	Hi-arch, 3-leaf H.D.	24,000	16.00 (406)	15.75 (400)	6.50 (165)	6.25 (159)
365-01	Low-arch, 3-leaf H.D.	24,000	13.75 (349)	13.25 (337)	4.25 (108)	3.75 (95)
751-01	Low-arch, 7-leaf	22,400	13.75 (349)	13.25 (337)	3.75 (95)	3.25 (83)
751-05	Hi-arch, 7-leaf	22,400	16.00 (406)	15.50 (394)	6.00 (152)	5.50 (140)
751-06	Hi-arch, 7-leaf	22,400	NR	16.50 (419)*	NR	6.50 (165)*
752-01	Low-arch, 8-leaf H.D.	24,000	14.25 (362)	13.75 (349)	3.75 (95)	3.25 (83)
752-05	Hi-arch, 8-leaf H.D.	24,000	16.50 (419)	16.25 (413)	6.00 (152)	5.75 (146)
752-06	Hi-arch, 8-leaf H.D.	24,000	NR	16.75 (426)*	NR	6.25 (159)*
16316-01	Low-arch, FRP H.D.**	24,000	14.50 (368)	14.25 (362)*	4.50 (114)	4.25 (108)*
16241-01	Med-arch, 2-leaf, 2 stage	22,400	14.75 (375)	14.25 (362)	5.25 (133)	4.75 (121)

In single axle applications use 38" (965mm) hanger spacings only.

** FRP mounting heights include additional 0.25" (6mm) for reinforced seats.

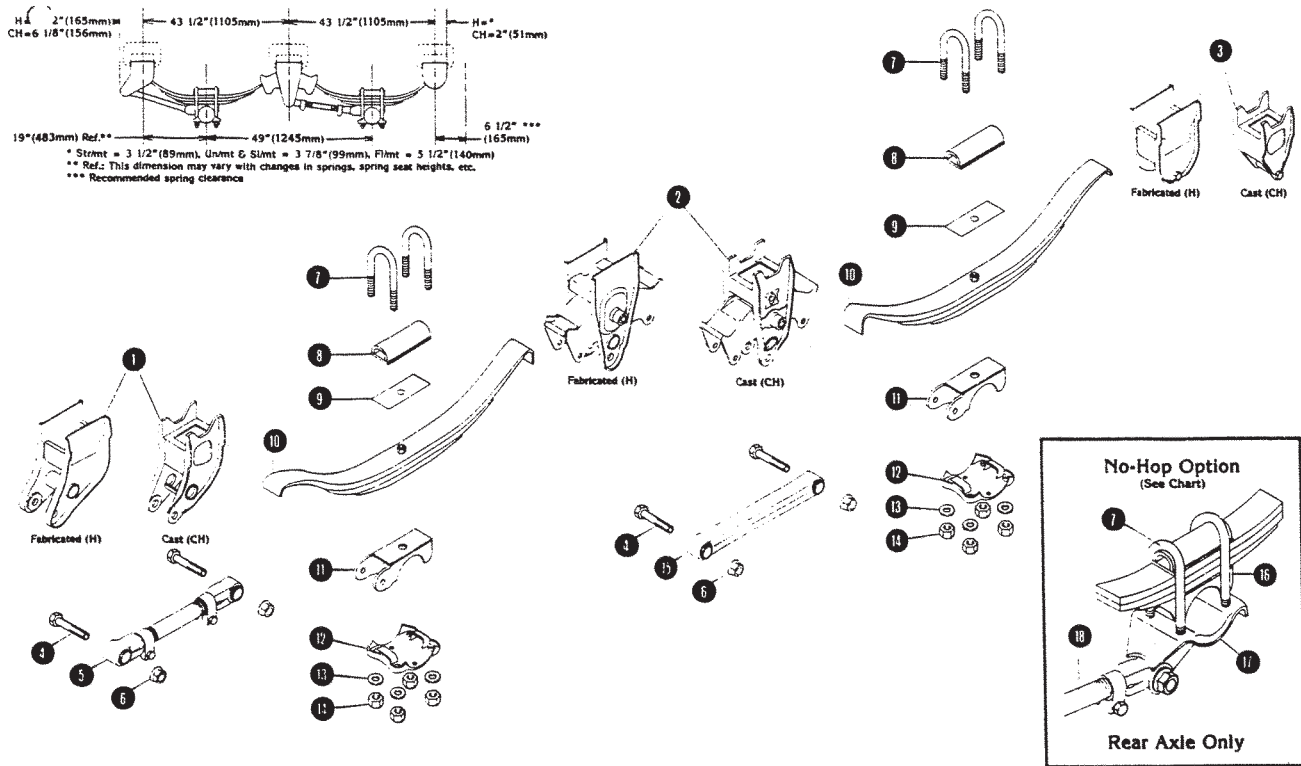
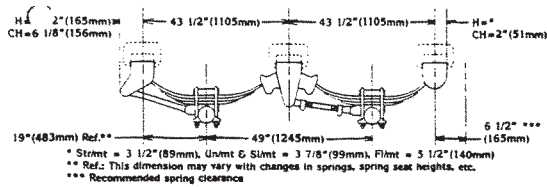
Notes:

1. Mounting heights given are for units with 5" (127mm) round axles and 3/4" (19mm) spring seats. Add 1/2" (13mm) to the mounting height shown for each 1/2" (13mm) increase in spring seat height.
2. The mounting heights for 5" x 5" (127mmx127mm) square axles are the same as those for 5" (127mm) round axles. To obtain the mounting heights for overslung 4" x 6" (102x152mm) rectangular axles **add** 1/2" (13mm) to the appropriate 5" (127mm) round mounting height. For underslung 4" x 6" (102x152mm) axles **subtract** 1/2" (13mm) from the appropriate 5" (127mm) round mounting height.
3. Mounting heights shown are for Undermount, Sidemount, and Flangemount hangers. Subtract 1/4" (6mm) for Straddlemount hangers.
4. **Mounting heights shown are for fabricated hangers...springs unloaded.** These dimensions should be considered approximations due to spring tolerances, etc.. Cast hangers produce slightly lower heights: 1/4" (6mm) - 3/8" (10mm).
5. Mounting heights must not exceed 17 1/4 inches (438mm) on No-Hop suspensions. For best performance, do not exceed 17 1/4" (438mm) mounting heights on any suspension.
6. For single axle units with 38" (965mm) hanger spacings add approximately 1/4" (6mm) to the 36.5" (927mm) mounting height.
7. It is recommended that a minimum of 4 1/2" (114mm) vertical clearance be maintained above the tires with trailer or chassis in an unloaded condition.

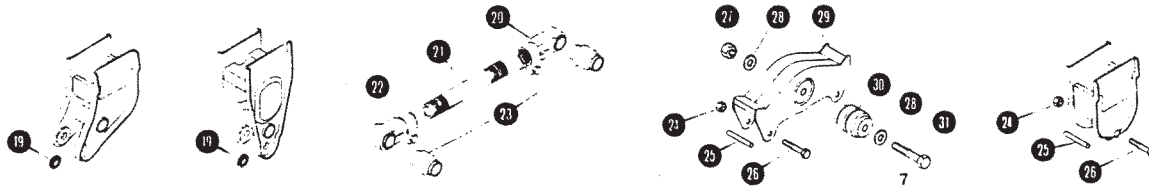
H-9700 Suspension

Q495227

H9700T-US-I-Beam, UN/MT, 5" RD, 3/4" Seat



Replacement Parts

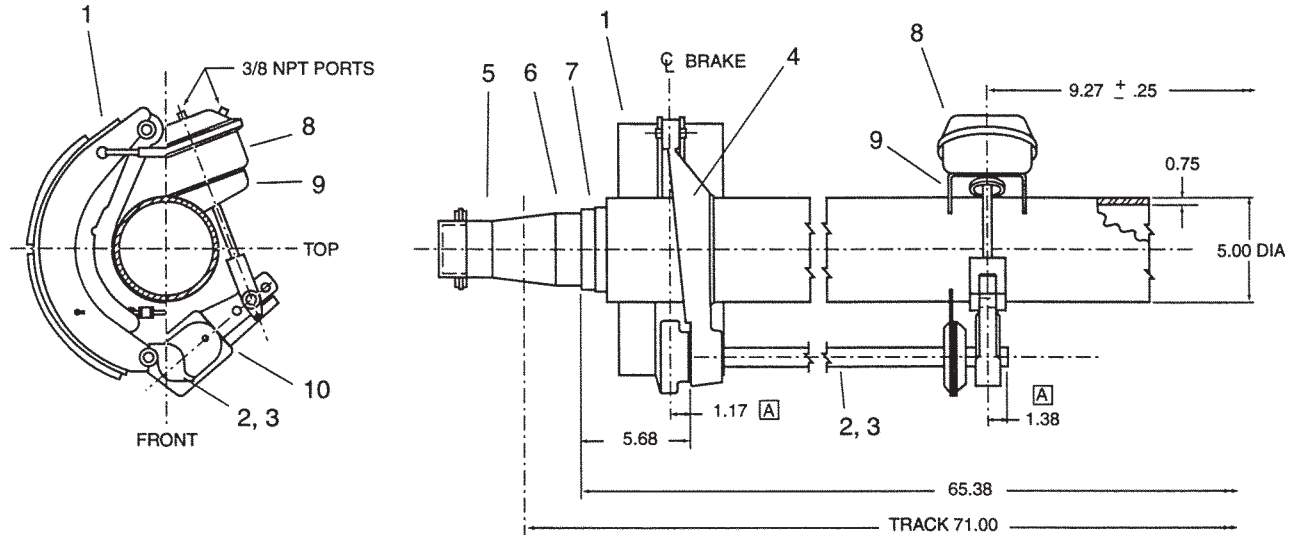


REF	PART NO.	QTY	DESCRIPTION	REF	PART NO.	QTY	DESCRIPTION
1	16481-01	2	Front Spring Hanger	20	16162-01	1/rod	Cast Eye End Assembly w/Rub Bush, Left Hand Threads
2	16319-02	2	Center Rocker and Hanger Assembly	21	9373-05	1/rod	Radius Rod Screw 14-1/2" Lg
	16171-01	2	Rocker Only	22	16162-02	1/rod	Cast Eye End Asm with Rubber Bushing, Left Hand Threads
3	7703-02	2	Rear Spring Hanger Assembly	23	722-00	2/rod	Radius Rod Bushing 3" Lg
4	719-02	8	Rad. Rod Bolt-Hex Bolt 1-1/4UNS X 5	24	37-03	2/rocker	Hex Lock Nut 5/8-18UNF, GrB (Shipped loose, not part of center rocker & hngr asm. It is part of the rear hanger assembly)
5	16398-04	2	Rad. Rod w/Bushing, 19.25 Lg.	25	756-00	2/rocker	Sleeve Spacer 3/4ODX18GAX3-1/4 (Shipped loose, not part of center rocker & hngr asm. It is part of the rear hanger assembly)
6	10562-00	8	Flange Locknut, 1-1/4UNS, Gr.F	26	759-00	2/rcker	Hex Bolt 5/8-18UNFX4.5(Shipped loose, not part of center rocker & hngr asm. It is part of the rear hanger asm)
7	16300-08	8	U-Bolt, 3/4 X 10-3/4	27	11154-00	1/rcker	Hex Lock Nut 1-1/8-7UNC, Gr5
8	7029-00	4	Top Plate	28	837-00	2/rcker	Washer 1/8" X 1-1/4ID x 2-1/4OD
9	7052-02	4	Derlin Liner	29	16158-01		Fabricated Rocker Asm w/Rub Bushing
10	365-00	4	Spring Assembly, 3-Leaf		16290-01		Cast Rocker Asm w/Rubber Bushing
11	705-01	4	Spring Seat - 5/8" Round	30	16146-01	1/rcker	Rocker Bushing Only, Rubber
12	16297-01	4	Bottom Plate - 5" Round	31	16150-01	1/rcker	Hex Cap Screw 1-1/8"X7X6.88" Lg, Gr5
13	817-00	16	Washer 1/8X13/16ID X 1-1/2OD				
14	16303-01	16	Hex Nut-3/4-16UNF				
15	715-00	2	Non-Adj Radius Rod w/Rub. Bushing				
16	301-01	2	No Hop-Spring Seat Replaces Rear				
17	16308-01	2	No Hop-Attach Fitting Replaces Rear Bottom Plate Only				
18	16398-06	2	No Hop-Adj. Radius Rod w/Bushing, Replaces 1 Adj. and 1 Non-Adj. Radius Rod on Rear Axle Only				
19	7717-01	2/hgr	Washer Bushing				

Specify Unit Serial No., Part No., & Part Description

AXLE ASSEMBLY

16.5 X 7 Brakes
Q486569-06



GENERAL SPECIFICATIONS & NOTES

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. No camber. 2. 16.5 X 7 cam type air brakes with welded spiders, fast change fabricated shoes, and tapered riveted linings. 3. Self aligning bushings with seals in cam shaft brackets. 4. Bronze bushings with seals in spiders. 5. Lube fittings in spiders and cam shaft brackets. 6. Oil type hub seals. 7. Finished spindle surfaces and spindle nuts to be protected from rust and damage. | <ol style="list-style-type: none"> 8. Bearing cones and hub seals to be shipped loose. 9. (1) pipe plug and (1) plastic plug for ports in each air chamber. 10. Service tube assembly to include welded brake spiders. 11. Brake rating 20,000 lb. minimum. 12. 28 spline camshafts. 13. Gunitite automatic slack adjusters unless otherwise specified. |
|--|---|

Ref.	Spicer Part No.	Etnyre Part No.	Description
1	M16WD122X	462945	Brake Assembly
2	M16WKR20-236	Q486576-12	Cam Shaft RH 1-1/2-28, 23.75 U.H.
3	M16WKL20-236	Q486576-11	Cam Shaft LH 1-1/2-28, 23.75 U.H.
4	M16WH113X	43095	Bracket-Cam Shaft
5	M10HB101	401262	Bearing Cone - Outer
6	M10HB100	435613	Bearing Cone - Inner
7	M10HH107	476230	Seal - Hub Set
8	M10WR300-710	462953	Air Chamber-Type 30, 7.11 Psh Rd Lg
9	M10WJ103	462934	Bracket-Air Chamber
10	A28SJS00-607	Q486620	Slack Adjuster-Auto, 6.00