

G Series

For: G16, G18 Machines

Parts / Service Manual



Parts Ordering Information

To order basic parts and assemblies for the G Series repair system or to request assistance from a Chief Service Representative, contact the Chief Automotive Systems, Inc. toll-free hotline answering service in Nebraska (800-445-9262) and leave a message. If located outside the United States, contact nearest Chief Automotive Systems, Inc. representative.

When contacting Chief Automotive by telephone (800-445-9262) or mail, provide the following information: name, name of shop, shop telephone number, and shop address. Additional information needed when ordering includes: description of part(s), part number(s) and method of payment and shipping.

When ordering, refer to listing of basic parts and assemblies and related illustrations presented in this manual.

NOTE: Chief Automotive Systems, Inc. reserves the right to alter product specifications and/or package components without notice.

CHIEF'S LIMITED ONE-YEAR WARRANTY & LIABILITY

Chief Automotive Systems, Inc. warrants for one year from date of installation and/or purchase any of its products which do not perform satisfactorily due to defect caused by faulty material or workmanship. Chief's obligation under this warranty is limited to the repair or replacement of products which are defective and which have not been misused, carelessly handled, or defaced by repair or repairs made or attempted by others.

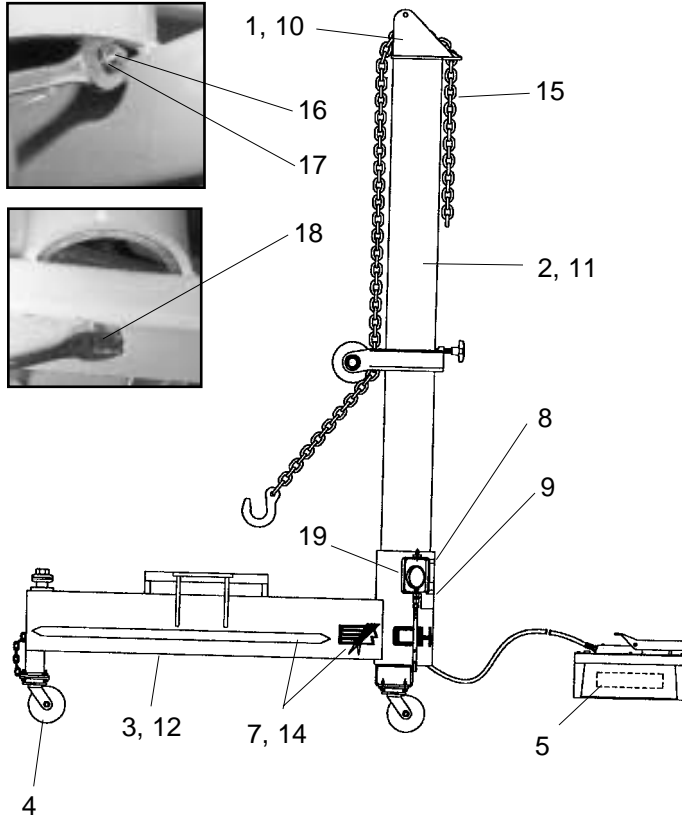
CHIEF AUTOMOTIVE SYSTEMS, INC. DOES NOT ASSUME RESPONSIBILITY FOR ANY DEATH, INJURY OR PROPERTY DAMAGE RESULTING FROM THE OPERATOR'S NEGLIGENCE OR MISUSE OF THIS PRODUCT OR ITS ATTACHMENTS. CHIEF MAKES NO WRITTEN, EXPRESS OR IMPLIED WARRANTY WHATSOEVER OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE REGARDING THE EQUIPMENT OR ANY PART OF THE PRODUCT OTHER THAN THE LIMITED ONE-YEAR WARRANTY STATED ABOVE.

Returned merchandise requires a "RETURNED GOODS AUTHORIZATION NUMBER" on the package. Authorization numbers can be obtained by calling or writing the Customer Service Department, Chief Automotive Systems, Inc. No returned merchandise will be accepted without an authorization number. All returned merchandise must be shipped freight prepaid (and may be subject to a 15 percent handling and restocking charge) to:

Chief Automotive Systems, Inc.
Attn: Returned Goods Dept.
1924 E. Fourth St.
P.O. Box 1368
Grand Island, Ne. 68802
800-445-9262

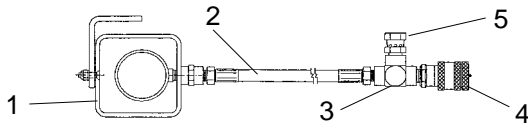
or Your Authorized
Chief Automotive Systems, Inc.
Representative

Parts (Numbers / Descriptions)



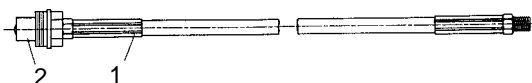
Ref.	Part No.	Description
1	690611	Tower Head, 5 Ton
2	772182	Tower Pipe Assembly, 5 Ton
3	772181	Tower Swing Arm Assembly, 5 Ton
4	092443	Caster, Swivel, 5"
5	090507	Foot Pump, Hydraulic
6	770191	Decal, Chief, 5 Ton Tower
**	770203	Decal, Ind. Hd./Arrow, 5 Ton, left
7	770204	Decal, Ind. Hd./Arrow, 5 Ton, right
8	693337	Decal, Warning, DO NOT Position
9	682770	Decal, DO NOT Exceed 6,500 PSI
10	610001	Tower Head, 10 Ton
11	772152	Tower Pipe Assembly, 10 Ton
12	772141	Tower Swing Arm Assembly, 10 Ton
13	770176	Decal, Chief, 10 Ton Tower
**	770179	Decal, Ind. Hd./Arrow, left, 10 Ton
14	770166	Decal, Ind. Hd./Arrow, right, 10 Ton
**	770158	Decal, CAUTION, Always Push
*	689859	Ram Assembly, 5 Ton
*	772160	Ram Assembly, 10 Ton
*	349014	Hose Assembly
15	602870	Chain, Tower, 1/2" w/hook
**	782053	Tower Stop Assembly
**	770132	Plate Spacer, 1/8"
**	770133	Plate Spacer, 3/16"
*	772159	Handle Assembly, 10 Ton
*	772022	Handle Assembly, 5 Ton
*	610386	Tower Collar Assembly, 10 Ton
*	690793	Tower Collar Assembly, 5 Ton
**	770150	Decal, CAUTION, To Avoid
16	604656	Bolt, 1/2-13NC x 1 1/4 (5-ton tower)
17	770193	Lock Nut, 1/2-13NC (5 ton tower)
18	606045	Bolt, 3/4-10NC x 5 (10 ton tower)
19	772163	Hydraulic Pressure Gauge Ass'y

* (See illustration below or on next pages) ** (Not shown)

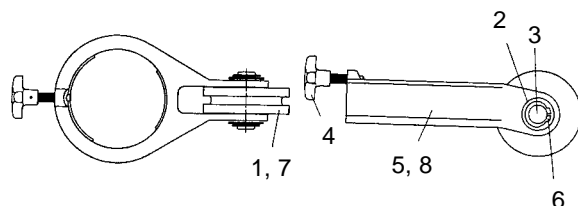


Ref.	Part No.	Description
	772163	Hyd. Pressure Gauge Ass'y
1	649080	Portable Gauge Ass'y
2	649286	Hose, 18 1/2 x 3/8 x 3/8" SWVLM
3	682726	Tee, 3/8 x 3/8 x 3/8" Female
4	604939	Quick Coupler, Female
5	602562	Swivel Coupler

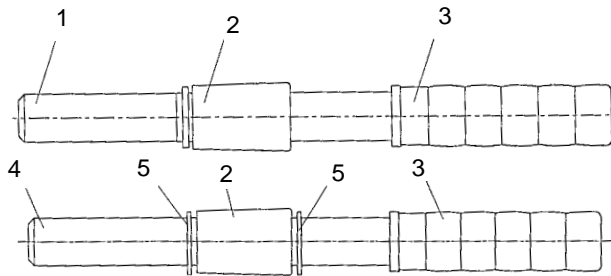
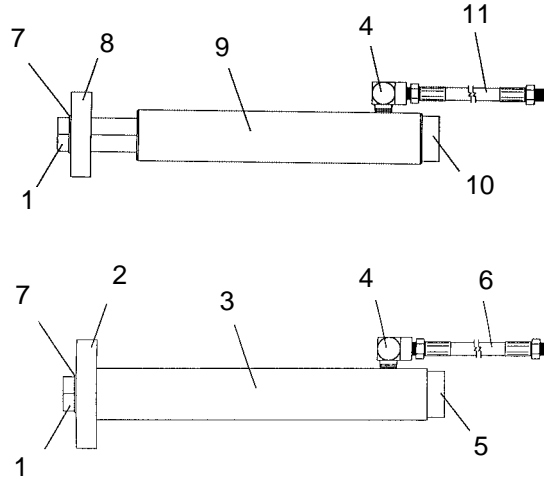
Ref.	Part No.	Description
	349014	Hose Assembly
1	090023	120" Hose, 3/8" NPT
1	090023CE	120" Hose, 3/8" NPTF, CE
2	602407	Quick Coupler, Male End



Ref.	Part No.	Description
	610386	Tower Collar Assembly, 10Ton
	690793	Cast Collar Assembly, 5 Ton
1	601201	Roller, 5" x 1/2" Chain, Collar, 10Ton
2	707487	Flat Washer, 1 1/4" ID x 1 7/8" OD x 14Ga.
3	680747	Pin, Grooved, Cast Collar
4	602829	Clamp Knob For Idler Collar
5	607161	Collar, Drilled & Tapped, 10 Ton
6	693468	Retaining Ring, Heavy Duty Ext. Series, 5160
7	680755	Roller, 4 x 3/8 Chain, Collar, 5 Ton
8	684975	Cast Collar, 3/93



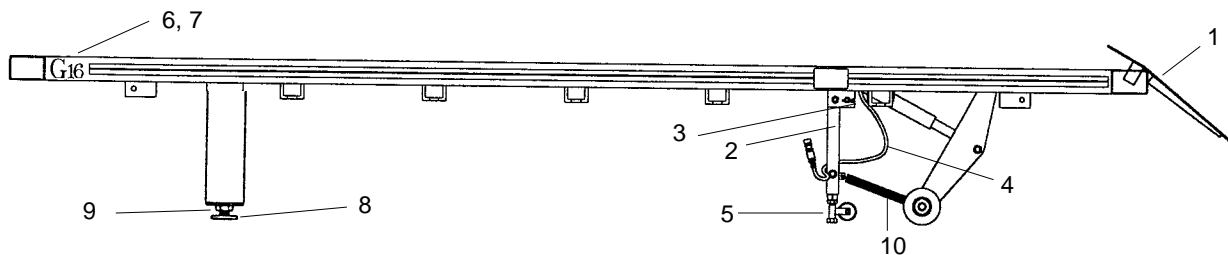
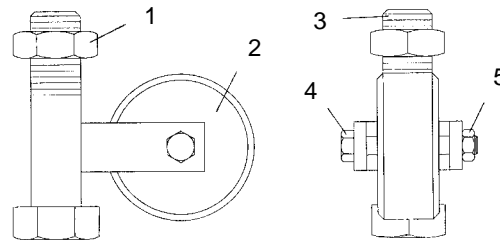
Ref.	Part No.	Description
	772160	Ram Assembly, Tower, 10 Ton
	689861	Ram Assembly, Tower, 5 Ton
1	602619	Ram Bolt
2	601237	Flange, Tower
3	602378	Ram, Tower, 10" Stroke, 10 Ton
4	602547	Elbow, 90 degree, Female/Male NPT
5	610407	Ram Base, Flange, Tower Ram (10T)
6	602520	Hose, 59" x 3/8" NPT
7	770147	Washer, 1", Int. Tooth Lock Type A
8	680617	Flange, Tower
9	693847	Ram 5 Ton, 8" Stroke, Aux. Tower
10	690160	Ram Base, Flange, Tower Ram
11	685100	Hose, 49" x 3/8" NPT Couplings

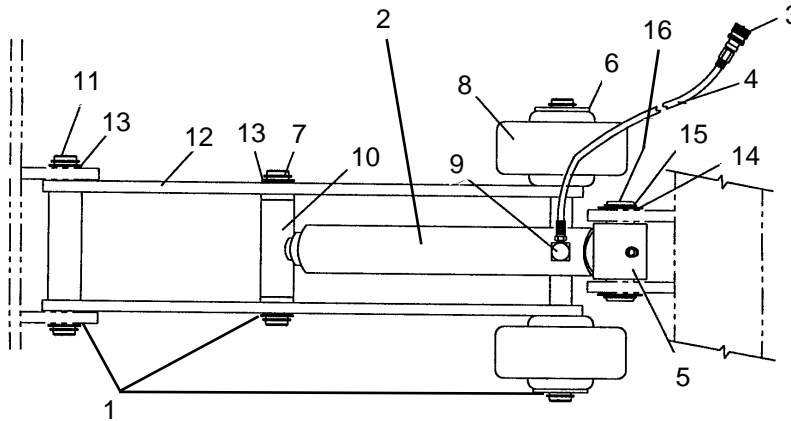


Ref.	Part No.	Description
	772159	Handle Assembly, 10 Ton
	772022	Handle Assembly, 5 Ton
1	772158	Bar, Handle, 10 Ton
2	770104	Bushing, Handle
3	657782	Grip
4	770103	Bar, Handle, 5 Ton
5	770105	Retaining Ring, 1" Bar.

Ref.	Part No.	Description
		Mainframe Related
1	772161	Ramp
2	772000	Stiff Leg
3	770148	Pin, Locking, 3/4"
4	685100	Hose, 49" x 3/8" NPT Coupling
4	685100CE	Hose, 49" x 3/8" NPTF Coupling CE
5	782092	Roller Assembly
*	770059	Plate, Rear Crossmember
*	770187	Chief Mainframe Decal
*	692107	Decal, Serial Number, MF
6	770178	Chief G16 Decal
7	770177	Chief G18 Decal
8	772047	Ready Rod / Pad Assembly - Le
9	629095	Nut, 1 1/2-6NC, Hex Jam, Gr. , BI
10	602570	Spring, Stiff Leg, 105", Wire

Ref.	Part No.	Description
	772011	Roller Assembly, Stiff Leg
1	692254	Nut, 1-8NC Hex Jam, PI.
2	657889	Roller, 3" OD x 1 1/4" Wide
3	772010	Bolt-Bracket Assembly
4	629431	Bolt, 3/8-16 x 2 1/2" Lg., Gr. 2 Hex, PI.
5	629440	Nut, Lock, 3/8-16NC, PI.

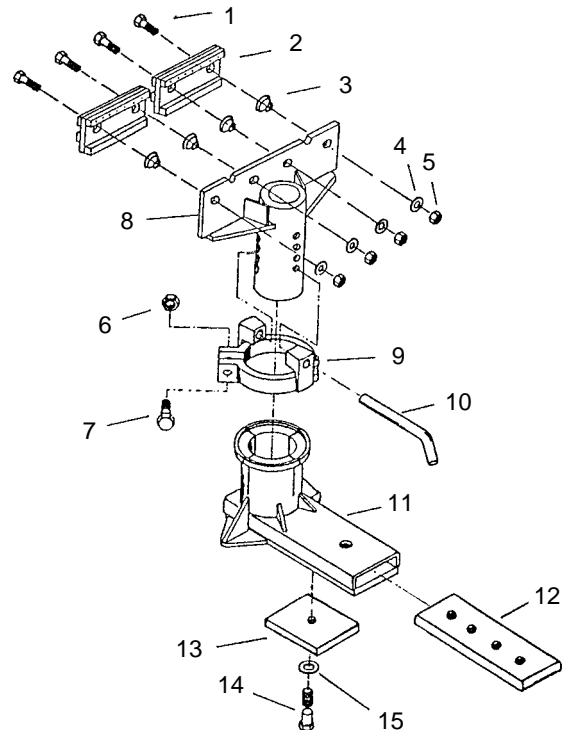




Ref.	Part No.	Description
	409023	Lift Assembly
1	770105	Retainer Ring, 1" Bar
2	602378	Ram, Tower, (10" Stroke), 10 Ton
3	604939	Quick Coupler, Female End
4	685100	Hose, 49" x 3/8" NPT Coupling
4	685100CE	Hose, 49" x 3/8" NPTF Coupling CE
5	610124	Jack T Assembly
6	019010	Wrought Washer, 1" ZP
7	770139	Pin, Grooved, 1.00 x 6.813

Ref.	Part No.	Description
8	092094	Wheel, 6" Lift
9	602545	Elbow, 90°, Fem/Male NPTF (.016)
10	408016	Lift Cylinder Pivot Assembly, Bottom
11	770124	Pin, Grooved, 1.00 x 8
12	408001	Lift Frame Assembly
13	707479	Washer, 1" Thrust, Plated
14	707487	Washer, 1 1/4" Flat, Plated
15	693468	Retaining Ring, 5160, Heavy Duty
16	770083	Pin, Grooved, 1 1/4" x 4 7/16"


Ref.	Part No.	Description
	702077	Universal Anchoring System, G Series, one stand, complete
1	010630	Bolt, 1/2-13 x 2 1/2 Gr. 8
2	498102	Pinch Weld Clamp Jaw
3	092110	Spring, Compression, .720 x 1
4	019095	Washer, 1/2 A-325 ZP
5	620736	Nut, 1/2-13NC, Gr. 8
6	601682	Nut, 5/8-11NC, Gr. 8
7	601666	Bolt, 5/8-11NC x 2.25, Gr. 5
8	508281	Adapter Tube, UMS (Chief Clamp, Pl.)
9	607380	Locking Collar
10	606686	Height Adjusting Pin
11	702068	Stand Base, Standard Size, G Series
12	606855	Fastener Bar
13	770092	Tie-Down Plate
14	010079	Bolt (G Series), 3/4-10NC x 6, A-325
15	601738	Washer, 3/4 A-325 ZP



Machine Maintenance


Check and Inspect

These components should be checked prior to use and anytime a problem is suspected.

-  **CAUTION:** To avoid personal injury when performing any maintenance function, always wear safety glasses and safety shoes.

Tower Chains

1. Clean chain before inspecting.
2. Inspect each link for wear, nicks, gouges, stretched or bent links.

-  **CAUTION:** To avoid personal injury or damage to property, DO NOT:
- Heat chain or hook while repairing vehicle.
 - Tip load chain hook.
 - Pull with twisted chain links.

Air Hoses / Hydraulic Lines

Inspect air hoses, hydraulic lines and all couplers for damage and replace as needed.

Cleaning and Lubricating

Tower Heads

Grease tower heads every six months.

1. Remove tower chain from tower head.
2. Remove tower head from tower pipe.
3. Clean dirt from tower head rub pads and where tower head pipe rubs on inside of tower pipe.
4. Apply grease to tower head pipe and rub pads.
5. Reinstall tower head and tower chain.


Swing Arm Track

Clean tower arm pivot pins and housings of dirt and debris. DO NOT lubricate.

Collars

Clean and lubricate collars monthly.

1. Use compressed air to blow out dirt or dust that collects between collar ears and rollers.

-  **CAUTION:** Wear safety glasses while using compressed air to blow out dirt and dust.

2. Lubricate roller pin and collar ears (each side). Then turn roller a few times. Roller must turn freely.

Lift Assembly / Stiff Leg Assemblies


Clean dirt and grease from all pivot points and lubricate every two months.

Air in Hydraulic System


All air has been removed from hydraulic system at the factory, but if hydraulic system is opened to replace one of the system components, it is necessary to bleed air from system prior to using it.

Bleeding Air From System At Quick Coupler

1. Separate quick coupler.
2. Place male end of quick coupler in a container and hold a rag over container and quick coupler.

-  **CAUTION:** To avoid personal injury or damage to property, wear safety glasses to protect eyes from hydraulic oil in the event it squirts out of container and past rag.

3. Press ball check at end of quick coupler against bottom of container.

-  **CAUTION:** To avoid personal injury or damage to property, DO NOT have any pressure on the system when pressing the ball check on quick coupler.

4. Press 'forward' on foot pump to pump air out of the system and continue until only hydraulic oil is being pumped out.

5. Reconnect the quick coupler.

6. With pressure released from system, refill foot pump reservoir with hydraulic fluid as per manufacturer's recommendations (packaged with foot pump).

Bleeding Air Beyond Quick Coupler

Contact Chief Automotive Service representative.

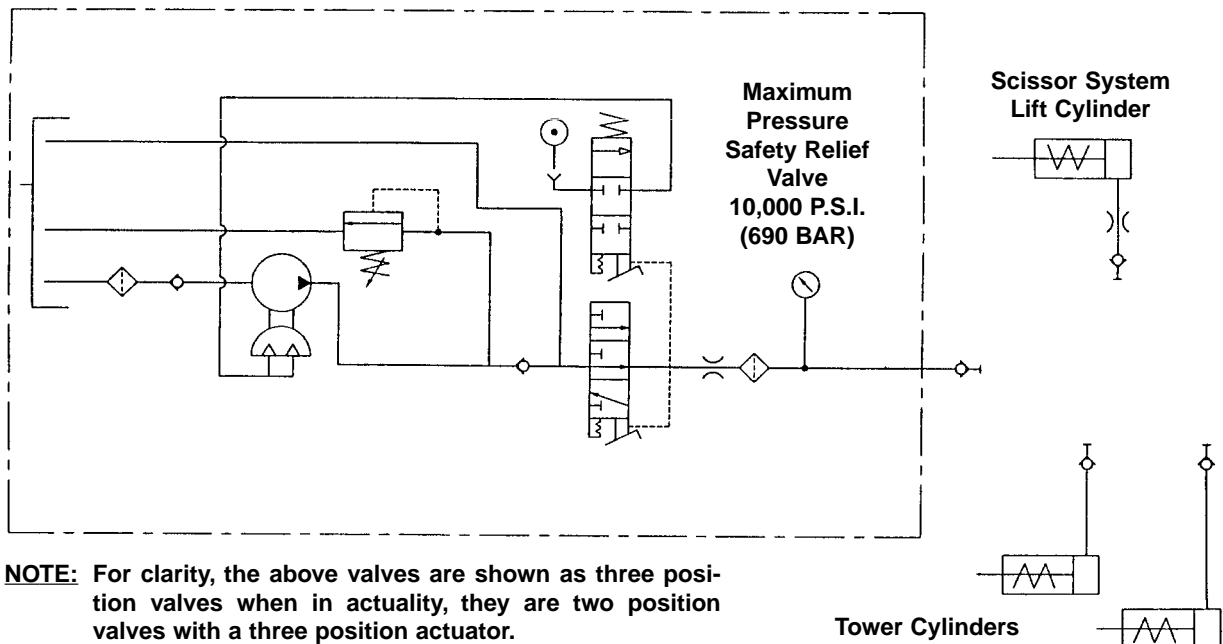
Specifications (G Series Systems)

	G16	G18
Length	16" (4.88m)	18' (5.5m)
Length with Towers Extended	18'4" (5.58m)	20'4" (6.27m)
Width	6'10" (2.1m)	6'10" (2.1m)
Width with Towers Extended	9'7" (2.92m)	9'7" (2.92m)
Width of Treadway	22 1/2" (571mm)	22 1/2" (571mm)
Width between Treadways	36 1/2" (927mm)	36 1/2" (927mm)
Tower Height (5 Ton)	7'3" (2.2m)	7' 3" (2.2m)
Tower Height (10Ton)	8'2" (2.5m)	8' 2" (2.5m)
Work Height	25" (635mm)	25" (635mm)
Weight	3,450 lbs. (1,565 kg.)	4,150 lbs. (1,882 kg.)
Lifting Capacity	6,500 lbs. (2,950 kg.)	6,500 lbs. (2,950 kg.)
Power Required	100 PSI Air Supply (7.0 Bar)	100 PSI Air Supply (7.0 Bar)
Hydraulics	10 Ton (88kN) Hydraulic Rams	10 Ton (88 kN) Hydraulic Rams
Hydraulic Fluid	1.7L-SUS 215 Viscosity 100° F, 10w Hyd. Fluid	1.7L-SUS 215 Viscosity 100° F, 10w Hydraulic Fluid
Radius of Pull	360°	360°
Controls	Air-Over-Hydraulic Foot Pump	Air-Over-Hydraulic Foot Pump
Sound Pressure Level		
At Control Positions	82dB(A)	82dB(A)

Optional: Removable Crossmembers, Down Pull Attachment, Portable Wheel Package, Electric Winch

G Series machines are compatible with Genesis, UMS and UGMS for the ultimate in measuring precision.

Hydraulic / Pneumatic Diagram (G Series Machines)



NOTE: For clarity, the above valves are shown as three position valves when in actuality, they are two position valves with a three position actuator.



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