

READ ALL INSTRUCTIONS COMPLETELY AND THOROUGHLY UNDERSTAND THEM BEFORE DOING ANYTHING.
CALL CHASSISWORKS TECH SUPPORT (916) 388-0288 IF YOU NEED ASSISTANCE.

INSTALLATION GUIDE



5754-AFX-0

Billet-Aluminum Spindles, Stock-Height, 1-1/2" Taller



Description: Direct replacement billet-aluminum spindles for '67-72 GM vehicles (A-, F-, and X-body). For use with brakes that attach to OEM-style disc brake mount locations. Requires 5855-XXX steering arms. Minimum wheel size of 15 to 18" is required, depending on wheel width.

Applications:

Model	Year
Apollo	'73-74
Buick Special	'67-72
Camaro	'67-69
Chevelle	'67-72
Cutlass	'67-72
El Camino	'71-72

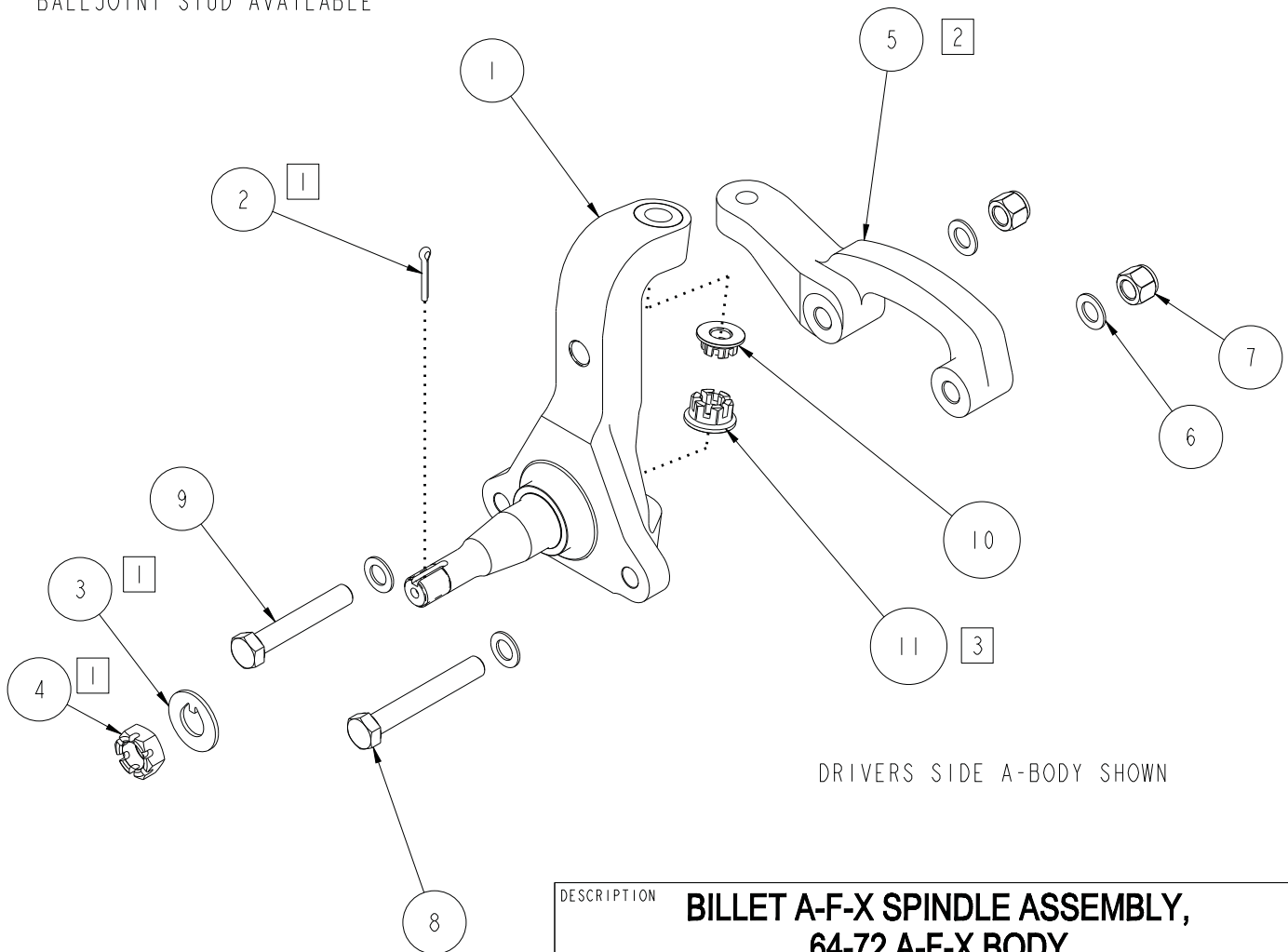
Model	Year
F85	'67-72
Firebird	'67-69
Grand Prix	'69-72
Malibu	'67-72
Monte Carlo	'70-72
Nova	'68-74

Model	Year
Omega	'73-74
GMC Sprint	'71-72
Tempest	'67-72
Ventura II	'71-74

ITEM	QTY	PART NO.	DESCRIPTION
1	1	7964-5001	SPINDLE ASSEMBLY, AFX, NO DROP, 1.250 x .750 SHAFT
2	1	3145.156-1.00	COTTER PIN, 5/32 x 1
3	1	2019	SPINDLE WASHER $\varnothing 1\ 1/2$ x $\varnothing 3/4$.105 THICK, .180 x .110 KEY TANG
4	1	3630	SPINDLE NUT, 3/4-20 CASTLE STYLE
5	1	7964-5017	STEERING ARM, DRIVER, BSI A-BODY, AFX SPINDLE
6	4	3109-050-S-2-Y	AIRCRAFT WASHER 1/2 x .062 THICK
7	2	3101-050-13C	LOCKNUT 1/2-13, GRADE 5, NYLON INSERT, CLEAR ZINC
8	1	3100-050C3.50Y	HEX BOLT, 1/2-13 x 3 1/2, GRADE 8, YELLOW ZINC
9	1	3100-050C3.00Y	HEX BOLT, 1/2-13 x 3, GRADE 8, YELLOW ZINC
10	1	7964-5026	SLOTTED NUT, 1/2-20 UNF, FLANGED
11	1	7964-5010	SLOTTED NUT, 9/16-18 UNF, FLANGED

NOTES:

- 1 PART OF SPINDLE NUT KIT
- 2 PART OF STEERING ARM KIT
- 3 OPTIONAL 7964-5027 FOR 5/8-18 BALLJOINT STUD AVAILABLE



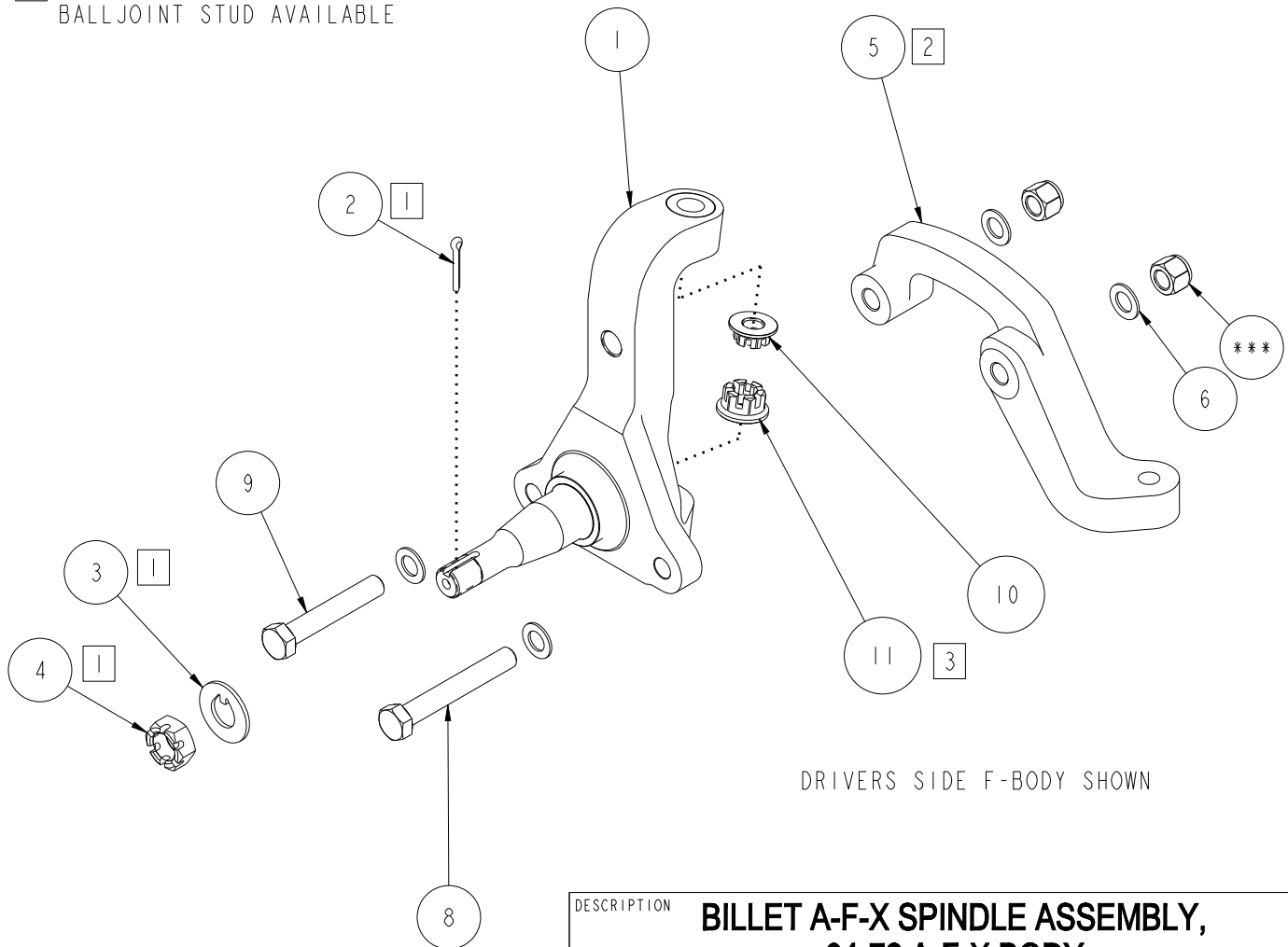
DRIVERS SIDE A-BODY SHOWN

DESCRIPTION	BILLET A-F-X SPINDLE ASSEMBLY, 64-72 A-F-X BODY	
<i>Chris Alston's</i> CHASSISWORKS INC. 8661 YOUNGER CREEK DRIVE SACRAMENTO, CA 95828 (916) 388-0288 FAX 388-0295	PART NO.	5754-AFX-0
	3/9/17	DWG: 7951-5754AFX0

ITEM	QTY	PART NO.	DESCRIPTION
1	1	7964-5001	SPINDLE ASSEMBLY, AFX, NO DROP, 1.250 x .750 SHAFT
2	1	3145.156-1.00	COTTER PIN, 5/32 x 1
3	1	2019	SPINDLE WASHER $\varnothing 1\ 1/2$ x $\varnothing 3/4$.105 THICK, .180 x .110 KEY TANG
4	1	3630	SPINDLE NUT, 3/4-20 CASTLE STYLE
5	1	7964-5019	STEERING ARM, DRIVER, Z28 F-BODY, AFX SPINDLE
6	4	3109-050-S-2-Y	AIRCRAFT WASHER 1/2 x .062 THICK
7	2	3101-050-20C	LOCKNUT, 1/2-20, GRADE 5, NYLON INSERT, CLEAR ZINC
8	1	3100-050C3.50Y	HEX BOLT, 1/2-13 x 3 1/2, GRADE 8, YELLOW ZINC
9	1	3100-050C3.00Y	HEX BOLT, 1/2-13 x 3, GRADE 8, YELLOW ZINC
10	1	7964-5026	SLOTTED NUT, 1/2-20 UNF, FLANGED
11	1	7964-5010	SLOTTED NUT, 9/16-18 UNF, FLANGED

NOTES:

- 1 PART OF SPINDLE NUT KIT
- 2 PART OF STEERING ARM KIT
- 3 OPTIONAL 7964-5027 FOR 5/8-18 BALLJOINT STUD AVAILABLE



DRIVERS SIDE F-BODY SHOWN

DESCRIPTION	BILLET A-F-X SPINDLE ASSEMBLY, 64-72 A-F-X BODY	
<i>Chris Alston's CHASSISWORKS INC.</i> 8661 YOUNGER CREEK DRIVE SACRAMENTO, CA 95828 (916) 388-0288 FAX 388-0295	PART NO.	5754-AFX-0
	1/5/17	DWG: 7951-5754AFX0

PARTS LIST

5754-AFX-0 - Billet-Aluminum Spindles, Stock-Height, 1-1/2" Taller

Qty	Part Number	Description
1	7950-5754AFX0	Spindle hardware bag
2	7964-5001	Spindle AFX stock-height

7950-5754AFX0 - Spindle Hardware Bag

Qty	Part Number	Description
2	3100-050C3.00Y	Hex head cap screw, 1/2-13 x 3", Grade 8, yellow zinc
2	3100-050C3.50Y	Hex head cap screw, 1/2-13 x 3-1/2", Grade 8, yellow zinc
4	3101-050-13C	Locknut 1/2-13, nylon insert, clear zinc
8	3109-050-S-2-Y	Aircraft washer, 1/2", yellow zinc
2	7964-5010	Slotted flange nut, 9/16-18
2	7964-5026	Slotted flange nut, 1/2-20

IMPORTANT - MUST READ

- The included flanged castle nuts must be used to secure the upper and lower balljoints. Use of OEM-style castle nuts without flange will result in failure of the balljoint to spindle connection.
- Some aftermarket lower control arms, including Chassisworks 5705-A10 and 5705-F10, use a 5/8-18 lower balljoint. This size castle nut is not included and must be purchased separately (Item 7964-5027; two required).
- NOT FOR USE WITH OEM UPPER CONTROL ARMS. Use of the stock upper control arm with any tall spindle will result in an extreme upper balljoint angle and possibly binding. This is unsafe and should be avoided.

INSTRUCTIONS

Remove OEM Components

CAUTION: Coil springs are under high tension. We recommend removal of the coil spring using a spring-compressor tool before removing the factory spindle. Follow the tool manufacturer's instructions for proper use of the spring compressor.

1. Raise the front end of car and secure with jack stands. Wheels must not be in contact with ground.
2. Remove wheels, making note of which side of vehicle they were removed from.
3. Remove brake system. Brake calipers can be secured to vehicle during installation without disconnecting brake lines.
4. Remove cotter pins at following locations: upper balljoint, lower balljoint, outer tie rod.
5. Loosen castle nuts at following locations: upper balljoint, lower balljoint, outer tie rod. Leave approximately three threads engaged to prevent the spindle or lower control arm from falling during next step.
6. Using pickle fork or similar tool separate the three joints.
7. Remove castle nut at outer tie rod and allow tie rod assembly to hang freely.
8. Remove castle nut at lower balljoint and allow lower control arm and strut rod to hang freely.
9. Remove castle nut at upper balljoint. Be prepared to catch the weight of the spindle as the castle nut is removed.
10. Remove steering arm from spindle.

Chassis/Component Inspection

With the spindle out of the way, this is a good time to inspect the remaining components and sheet metal for signs of wear or fatigue. Worn bushings, torn boots, and damaged balljoints or tie rods should be replaced before proceeding. Clean the area to remove any grease or dirt so the metal and welds are clearly visible. Look for cracks along the welds or tearing of the mounts in any way.

Installation

11. Bolt each steering arm to spindle using one 1/2-13 x 3" and one 3-1/2" screw with locknuts.
12. Place tapered hole of spindle upright onto upper balljoint stud and thread flanged castle nut onto stud. The stud should seat firmly with no looseness or rocking. Torque to 55-65 lb-ft for 1/2" stud; stop at lowest torque value.
13. From lowest torque value, tighten nut to nearest castle nut slot, if necessary to align with hole in balljoint stud.
14. Insert cotter pin and bend ends over flat against threads.
15. Insert lower balljoint stud into tapered seat of spindle and thread castle nut onto stud.
NOTE: Chassisworks lower A-arms (5705-XXX, 5733-XXX) requires use of 5/8-18 lower balljoint nuts (7964-5027).
16. Stud should seat firmly with no looseness or rocking.
Torque to 65-75 lb-ft for 9/16" stud; 75-90 lb-ft for 5/8" stud; stop at lowest torque value.
17. From lowest torque value, tighten nut to nearest castle nut slot, if necessary to align with hole in balljoint stud.
18. Insert cotter pin and bend ends over flat against threads.
19. Insert outer tie rod stud into tapered seat of steering arm and thread castle nut onto stud. Stud should seat firmly with no looseness or rocking. Torque to 40-45 lb-ft for 7/16" stud.
20. Insert cotter pin and bend ends over flat against threads.

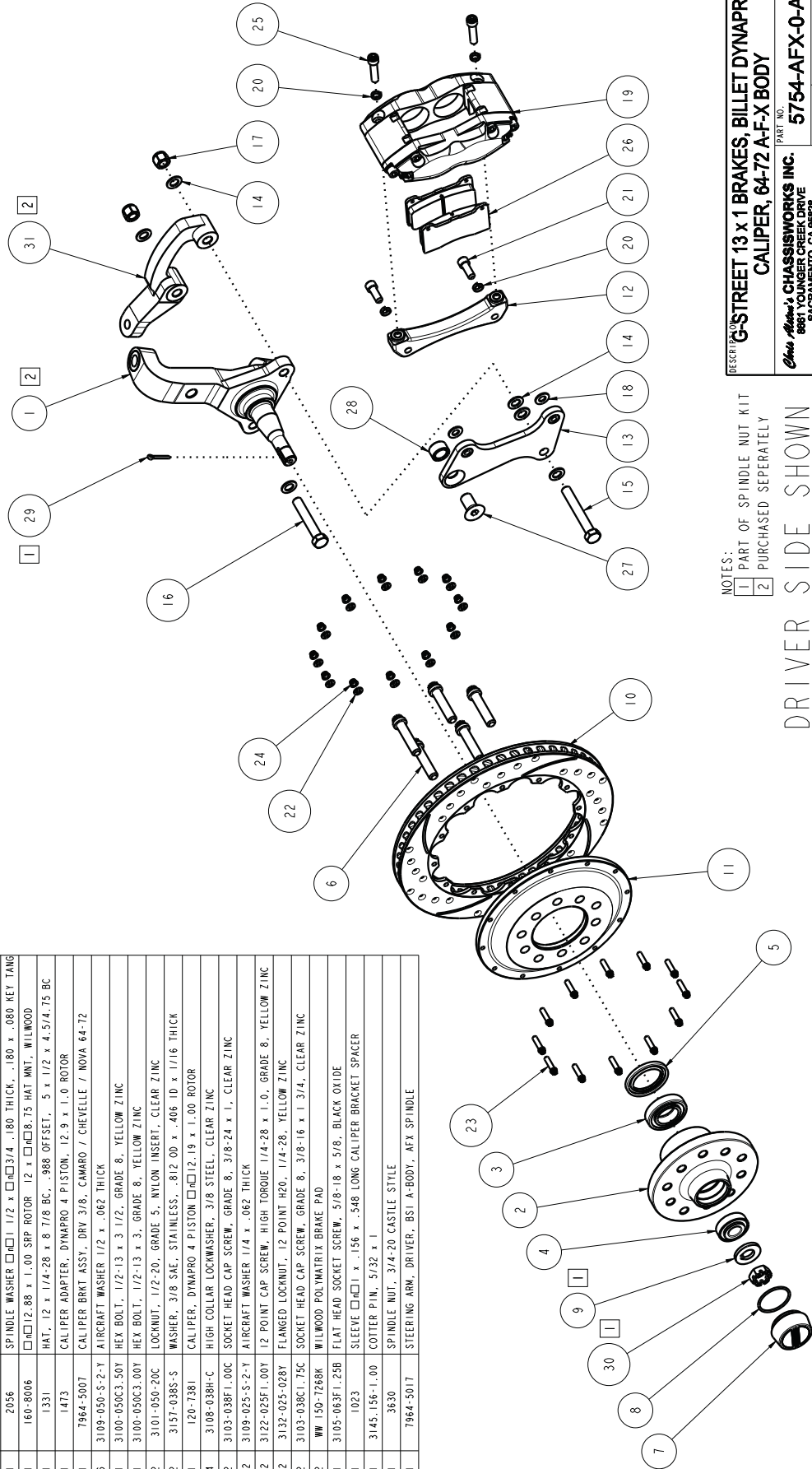
Check Suspension and Steering Travel

21. Complete spindle assembly and install shocks without springs. This allows you to easily move the suspension thru its full range of travel.
22. Position suspension at ride height and set alignment specifications.
23. Move the suspension to full drop position with shock completely extended. Turn the wheel full lock-to-lock and verify no suspension component runs out of travel or interferes with anything else.
24. Move the suspension to full bump position with shock completely collapsed. Turn the wheel full lock-to-lock and verify no suspension component runs out of travel or interferes with anything else.
25. Position the suspension halfway between full drop and full bump with shock positioned approximately a ride height. Turn the wheel full lock-to-lock and verify no suspension component runs out of travel or interferes with anything else.
26. Reinstall brake system.
27. Check all mounting hardware.
28. Lubricate balljoints and tie rods.
29. Install wheels to their original location and torque lug nuts.
30. Lower vehicle.

A-Body Application

Exploded view with optional 8333 brake kit - For reference purposes only.

ITEM QTY	PART NO.	DESCRIPTION
1	7964-5001	SPINDLE ASSEMBLY, AFX, NO DROP, 1.250 x .750 SHAFT
2	1317	HUB FOR CHASSISWORKS SPINDLE
3	3375-3376	TIMKEN BEARING, CUP-LM67010, CONE-LM67048
4	3377-3378	TIMKEN BEARING, CUP-LM11910, CONE-LM11949
5	3650	GREASE SEAL, 2.500 x 1.75 x .250
6	3130-050F2-25B	12 POINT CAP SCREW, 1/2-20 x 2 1/4, GRADE 8, BLACK OXIDE
7	1306	FRONT HUB CAP
8	3537	O-RING, HUB CAP 1.943 x 1.737 x .103
9	2056	SPINDLE WASHER □ 1/2 x □ 3/4, .180 THICK, .180 x .080 KEY TANG
10	160-8006	□ 12.88 x 1.00 SRP ROTOR 12 x □ 18.75 HAT MNT, WILWOOD
11	1331	HAT, 12 x 1/4-28 x 8 3/8 BC, .988 OFFSET, 5 x 1/2 x 4, 3/4, 75 BC
12	1473	CALIPER ADAPTER, DYNAPRO 4 PISTON, 12.9 x 1.0 ROTOR
13	7964-5007	CALIPER BRKT ASSY, DRVY 3/8, CAMARO / CHEVELLE / NOVA 64-72
14	3109-050-S-2-Y	AIRCRAFT WASHER 1/2 x .062 THICK
15	3100-050C3-50Y	HEX BOLT, 1/2-13 x 3, GRADE 5, YELLOW ZINC
16	3100-050C3-00Y	HEX BOLT, 1/2-13 x 3, GRADE 8, YELLOW ZINC
17	3101-050-20C	LOCKNUT, 1/2-20, GRADE 5, NYLON INSERT, CLEAR ZINC
18	3157-0385-S	WASHER, 3/8 SAE, STAINLESS, .812 00 x .406 ID x 1/16 THICK
19	120-7381	CALIPER, DYNAPRO 4 PISTON □ 12.19 x 1.00 ROTOR
20	3108-038H-C	HIGH COLLAR LOCKWASHER, 3/8 STEEL, CLEAR ZINC
21	3103-038F1-00C	SOCKET HEAD CAP SCREW, GRADE 8, 3/8-24 x 1, CLEAR ZINC
22	3109-025-S-2-Y	AIRCRAFT WASHER 1/4 x .062 THICK
23	3122-025F1-00Y	12 POINT CAP SCREW, HIGH TORQUE 1/4-28 x 1.0, GRADE 8, YELLOW ZINC
24	3132-025-028Y	FLANGED LOCKNUT, 12 POINT H20, 1/4-28, YELLOW ZINC
25	3103-038C1-75C	SOCKET HEAD CAP SCREW, GRADE 8, 3/8-16 x 1 3/4, CLEAR ZINC
26	WW 150-12686	WILWOOD POLYMATRIX BRAKE PAD
27	3105-063F1-25B	FLAT HEAD SOCKET SCREW, 5/8-18 x 5/8, BLACK OXIDE
28	1023	SLEEVE □ 1 x .156 x .548 LONG CALIPER BRACKET SPACER
29	3145.156-1.00	COTTER PIN, 5/32 x 1
30	3630	SPINDLE NUT, 3/4-20 CASTLE STYLE
31	7964-5017	STEERING ARM, DRIVER, BSI A-BODY, AFX SPINDLE



NOTES:
 1 PART OF SPINDLE NUT KIT
 2 PURCHASED SEPARATELY

DESCRIPTION: **G-STREET 13 x 1 BRAKES, BILLET DYNAPRO CALIPER, 64-72 A-F-X BODY**

PART NO. **5754-AFX-0-A10**
 Chassisworks Inc.
 8861 YOUNGER CREEK DRIVE
 SACRAMENTO, CA 95828
 (916) 366-0266 FAX 366-0266

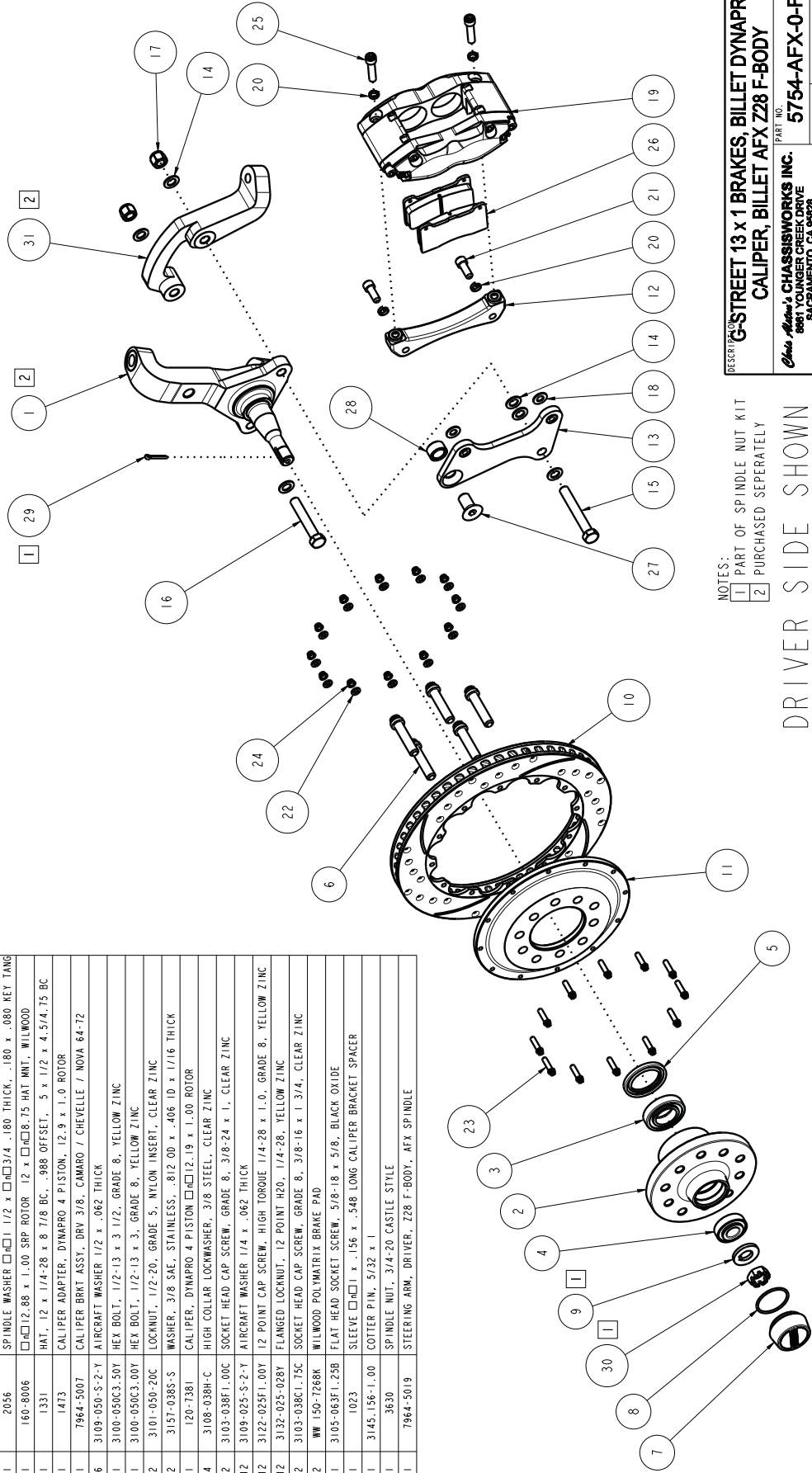
10/13/16 DWG: 5754-AFX-0-A10-031

DRIVER SIDE SHOWN

F-Body and X-Body Application

Exploded view with optional 8333 brake kit - For reference purposes only.

ITEM QTY	PART NO.	DESCRIPTION
1	7964-5001	SPINDLE ASSEMBLY, AFX, NO DROP, 1.250 x .750 SHAFT
2	1317	HUB FOR CHASSISWORKS SPINDLE
3	3375-3376	TIMKEN BEARING, CUP-LM67010, CONE-LM67048
4	3377-3378	TIMKEN BEARING, CUP-LM11910, CONE-LM11949
5	3650	GREASE SEAL 2.500 x 1.75 x .250
6	3130-050F2-25B	12 POINT CAP SCREW, 1/2-20 x 2 1/4, GRADE 8, BLACK OXIDE
7	1306	FRONT HUB CAP
8	3537	O-RING, HUB CAP 1.943 x 1.737 x .103
9	2056	SPINDLE WASHER □ 1/2 x □ 3/4 .180 THICK, .180 x .080 KEY TANG
10	160-8006	□ 12.88 x 1.00 SRP ROTOR 12 x □ 18.75 HAT WHT, WILWOOD
11	1331	HAT, 12 x 1/4-28 x 8 3/8 BC, .988 OFFSET, 5 x 1/2 x 4.5/4.75 BC
12	1473	CALIPER ADAPTER, DYNAPRO 4 PISTON, 12.9 x 1.0 ROTOR
13	7964-5007	CALIPER BRKT ASSY, DRV 3/8, CAMARO / CHEVETTE / NOVA 64-72
14	3109-050-S-2-Y	AIRCRAFT WASHER 1/2 x .062 THICK
15	3100-050C3-50Y	HEX BOLT, 1/2-13 x 3 1/2, GRADE 8, YELLOW ZINC
16	3100-050C3-00Y	HEX BOLT, 1/2-13 x 3, GRADE 8, YELLOW ZINC
17	3101-050-20C	LOCKNUT, 1/2-20, GRADE 5, NYLON INSERT, CLEAR ZINC
18	3157-0385-S	WASHER, 3/8 S4E, STAINLESS, .812 OD x .406 ID x 1/16 THICK
19	120-7381	CALIPER, DYNAPRO 4 PISTON □ 12.19 x 1.00 ROTOR
20	3108-038H-C	HIGH COLLAR LOCKWASHER, 3/8 STEEL, CLEAR ZINC
21	3103-038F1-00C	SOCKET HEAD CAP SCREW, GRADE 8, 3/8-24 x 1, CLEAR ZINC
22	3109-025-S-2-Y	AIRCRAFT WASHER 1/4 x .062 THICK
23	3122-025F1-00Y	12 POINT CAP SCREW, HIGH TORQUE 1/4-28 x 1.0, GRADE 8, YELLOW ZINC
24	3132-025-028Y	FLANGED LOCKNUT, 12 POINT #20, 1/4-28, YELLOW ZINC
25	3103-038C1-75C	SOCKET HEAD CAP SCREW, GRADE 8, 3/8-16 x 1 3/4, CLEAR ZINC
26	WW 150-1268K	WILWOOD POLYMATRIX BRAKE PAD
27	3105-063F1-25B	FLAT HEAD SOCKET SCREW, 5/8-18 x 5/8, BLACK OXIDE
28	1023	SLEEVE □ 11 x .156 x .548 LONG CALIPER BRACKET SPACER
29	3145.156-1.00	COTTER PIN, 5/32 x 1
30	3630	SPINDLE NUT, 3/4-20 CASTLE STYLE
31	7964-5019	STEERING ARM, DRIVER, Z28 F-BODY, AFX SPINDLE



NOTES:
 1 PART OF SPINDLE NUT KIT
 2 PURCHASED SEPARATELY

DESCRIPTION: **G-STREET 13 x 1 BRAKES, BILLET DYNAPRO CALIPER, BILLET AFX Z28 F-BODY**

PART NO. **5754-AFX-0-F10**
Chassis Works Inc.
 6661 YOUNGER CREEK DRIVE
 SACRAMENTO, CA 95828
 (916) 386-0286 FAX: 386-0286

1/4/17 DWG: 5754-AFX-0-F10-Z28

DRIVER SIDE SHOWN

ALIGNMENT

The vehicle must be professionally inspected and aligned prior to regular use.

While our spindle does duplicate the original spindle geometry, it is possible your original spindles may have been bent or damaged during their service life.

If a trailer is not available, your alignment will need to be somewhat close to final specs in order to safely drive your vehicle to the alignment shop. Visually determine if the front wheels look straight. They should not appear to “toe” (left to right) -in or -out. The outside of the wheels should be very close to vertical. A few degrees of negative camber (leaning in) is acceptable. Installed components, driver preference, and specific application will have a great affect on the correct settings for your vehicle.

Torque Specifications

Fastener Description	Location	Torque Value
Upper Balljoint Castle Nut (1/2")	Balljoint to Upper Spindle	55-65 lb-ft
Lower Balljoint Castle Nut (9/16")	Balljoint to Lower Spindle	65-75 lb-ft
Lower Balljoint Castle Nut (5/8")	Balljoint to Lower Spindle	75-90 lb-ft
Outer Tie Rod Castle Nut (7/16")	Tie Rod to Steering Arm	40-45 lb-ft

WARRANTY NOTICE:

There are NO WARRANTIES, either expressed or implied. Neither the seller nor manufacturer will be liable for any loss, damage or injury, direct or indirect, arising from the use or inability to determine the appropriate use of any products. Before any attempt at installation, all drawings and/or instruction sheets should be completely reviewed to determine the suitability of the product for its intended use. In this connection, the user assumes all responsibility and risk. We reserve the right to change specification without notice. Further, Chris Alston's Chassisworks, Inc., makes **NO GUARANTEE** in reference to any specific class legality of any component. **ALL PRODUCTS ARE INTENDED FOR RACING AND OFF-ROAD USE AND MAY NOT BE LEGALLY USED ON THE HIGHWAY.** The products offered for sale are true race-car components and, in all cases, require some fabrication skill. **NO PRODUCT OR SERVICE IS DESIGNED OR INTENDED TO PREVENT INJURY OR DEATH.**

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