

SIMPLY SUPERIOR.

4 DOOR MODELS J-KONTROL SUSPENSION SYSTEM

2018-2024 JEEP WRANGLER JL 4"

JSPEC1450A

GETTING STARTED

Read all warnings, instructions, notes and cautions before you begin the installation.



WHO SHOULD INSTALL THIS?

We recommend that this system be installed by a professional mechanic. The installer will need professional knowledge of special tools required for installation as well as assembly and disassembly procedures.

STAYING SAFE AND LEGAL

- If you fail to drive your lifted and modified vehicle safely it may result in serious injury or death.
- Exercise caution: A lifted vehicle is at greater risk for rollovers or loss of control, especially during abrupt maneuvers.
- Always wear your seat belt, reduce your speed and avoid sharp turns.
- Never operate your vehicle under the influence of drugs or alcohol.
- Consult local and state laws for the legality of your ride height.

BEFORE YOU BEGIN INSTALLATION

- Needed items: OE service manual for your vehicle, safety glasses, and any special tools as indicated in these instructions as well as the following tools: assorted metric and standard wrenches, hammer, hydraulic floor jack and a set of jack stands.
- Ride Height: Measure the initial ride height of your vehicle prior to installation. Final ride height may vary depending on the factory height of your vehicle.
- Tires and rims: Larger tire and rim combinations can increase leverage and cause additional stress to suspension, steering, and related components. When installing larger than OE tires and rims, the following components should be inspected for wear every 2500-5000 miles: ball joints, tie rod ends, wheel bearings, track bar bushings, pitman arm.
- Drive line vibrations: Some vehicles may experience drive line vibration after installation of this suspension system. Possible remedies for this include: tuning angles, replacement of slider on shaft, lengthening or truing of shaft, and/or replacing u-joints.
- Installation without a hoist: We recommend completing the rear alterations first if no hoist is available.

TRACTION CONTROL COMPLIANT

In an effort to reduce the risk of rollover crashes the National Highway Traffic Safety Administration (NHTSA) established the Federal Motor Vehicle Safety Standard (FMVSS) No. 126 requiring all new passenger vehicles under 10,000 lbs GVWR include an electronic stability control (ESC) system as standard equipment. Effective August 2012 this law requires aftermarket products to be compliant with these same standards.

VISIT 560PLUS.COM FOR MORE INFORMATION! THANK YOU FOR CHOOSING JSPEC SUSPENSION

TIRE FITMENT

SPORT, SAHARA MODELS & RUBICON MODELS

4" LIFT - 37x12.50 on 17x8 with 4.5-5" backspacing
Larger Tire than 37" can fit with this kit. Rubbing
will depend on bumper and fenders you are running.

SPECIAL TOOLS REQUIRED

Torque Wrench

Anti-Sieze Lube

JKS1696 or equivalent Jam nut wrench

Drill and Drill Bits

INSTALLATION TIME

Approximately 5-7 hours



BEFORE YOU BEGIN

- Kit comes standard with long travel capability shocks, aftermarket front driveshaft is required.
- Individual part instruction sheets are not needed for installation.
- Steering Correction system, like a drag link flip is required to be used with this system.
- It recommended to use a strong steering stabilizers. In our testing there a lot of variation between jeeps and how they react to Tire size, Lift heights, Factory steering components, Worn parts. Increasing Caster and Toeing in the tires can help but sometimes a strong stabilize is required to prevent steering wheel shimmy in some vehicles.

01. PRE-INSTALLATION

a. Measu	re from the center	of the wh	neel up to th	e bottom edge	of the wheel	opening.
	Drv		Pass			
Front						
Rear						

02. REAR DISASSEMBLY

TPMS ECU and parking brake cable relocation require bolt pack J129.

- Disconnect the track bar at the axle with the vehicle still on the ground using a 21mm socket. Save bolt and nut tab.
- Raise and support the vehicle with jack stands positioned in front of the lower suspension arm brackets. Remove the b.
- Remove the bolts holding the brake lines to the frame (10mm) [1]. C.



Remove the (2) bolts holding the TPMS ECU sensor to the rear crossmember (10mm) [2].

Note: Some models may not be equipped with a TPMS ECU in this location. No action is required in this case.

Relocate the sensor using the provided ¼" hardware in bolt pack J129. Using the provided cable clamp, insert the passenger side parking brake cable and rettach where the sensor was located using the original nut.[3].





- Rubicon models: Disconnect the locker wires from the differential. f.
- Remove "W" bracket securing both emergency cables (15mm). The bracket is located above the driveshaft and is not easily visible. The bracket will not be re-used.[4]

Note: some models may not be equipped with this bracket. No action is required in this case.



Remove the sway bar links from the axle and sway bar (18mm) [5]



Remove the rear inner fender liners by removing the 3 bolts (8mm) to gain access to the upper shock bolt [6].



Support the axle with a jack under the center of the differential and remove the shocks from the frame and axle (18mm), save hardware [7].



- Disconnect the parking brake cable at the wheel and axle. (NEED TO ADD PHOTO)
- Lower the axle enough to remove the factory springs. Note the orientation of the upper spring isolators. Make sure there is adequate slack on all brake lines.

03. REAR INSTALLATION

J-FLEX | J-LINK REAR LOWER CONTROL ARMS

Perform replacement control arm installation one at a time.

- Raise the axle housing back into position and support with a hydraulic jack. HINT: The axle housing should be evenly supported and the suspension at normal ride height. Do not attempt removal or installation with the suspension extended, or the axle drooped, as this will place tension on suspension arm mounting hardware.
- Remove the lower suspension arm bolt and nut from the axle housing bracket. Retain the original mounting hardware. b.
- Remove the bolt and flag nut from the chassis rail bracket. Retain the original mounting hardware.
- Remove the original lower suspension arm from the vehicle.
- Set the length of the lower control arms. -It is Recommended to start at 20-3/8".
 - O Determine the correct length for your application using factors such as:
 - Pinion Angle
 - Tire Clearance
 - Factory length is 19-3/4"
 - Max. length is 21-1/2"
 - O Set both control arms to the same length. Lengthening the lower arms will reduce pinion angle.
- Apply anti-seize lubricant to bolt threads of original mounting hardware.
- Mount the rubber bushing end of the control arm to the axle housing bracket. [8] Install the original mounting bolt and finger tighten the nut. DO NOT torque mounting hardware until instructed.



h. Mount the control arm to the frame bracket with the grease fitting up. Install the original mounting bolt and flag nut. Finger tighten the bolt. [9] DO NOT torque mounting hardware until instructed.



HINT: If mounting bolt is difficult to install due to misalignment of the control arm bushing with mounting bracket, either (1) adjust height of axle housing with hydraulic jack, or (2) move axle housing into position with a heavy-duty ratchet strap.

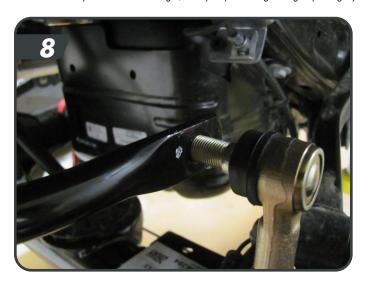
Repeat installation steps on opposite side of vehicle, then continue on to the upper arms.

COIL SPRINGS, SWAY BAR LINKS, BUMP STOPS

Rear bump stop spacers will require bolt pack J153

- Install the shorter pair of JSPEC coils springs with the tighter windings on top into the rear of the vehicle with the orientation similar to stock. The upper isolators have a locating pin that fits into a hole in the frame. Raise the axle to compress the springs enough to hold them in place.
- Set the length of the provided rear sway bar links with the booted joints to 12-1/2" between the ball stud centers and install to the outside of the sway bar and axle mount [7,8]. Torque to 72 ft-lbs.

Note: Sway bar hole will be tight, it may require being enlarged just slightly to get the stud to push through. A round file or rotary bit can be used.





Install the provided adjustable bump stop spacers on the axle using the existing holes in the axle bump stop pad. The bump stop system consists of one 2" bump stop block, and four 1/2" bump stop blocks. This allows for bumpstop height to be tuned specifically for your wheel and tire combination. The rear spring requires you to use the 2" block and all 4, ½" spacers on each side. Fasten the bump stop spacer to the axle with the appropriate length 5/16" bolts, nuts, and washers (Bolt pack J153). Torque bolts to 15 ft-lbs.

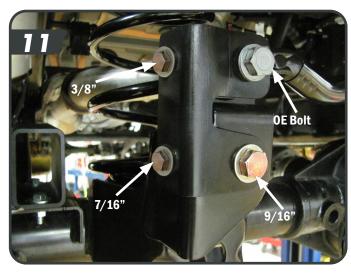


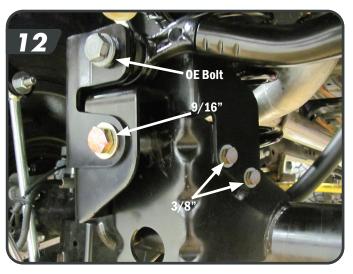
- d. The shocks come with the bushings and upper spacers pre-installed. The wide mount will be installed up, at the frame. Slide the shock up into the mount. The longer shocks will be used in the rear. JSPEC shocks will be installed body down, Fox shocks will be installed body up.
 - Tip: The bushings will have to compress slightly to get the shock in the mount, try walking the shock into place by tilting the shock back and forth against the spacers while pushing the shock up into place.
- e. Attach the shock to the frame and axle mount with the original hardware. Torque upper bolts to 74 ft-lbs and the lower bolts to 81 ft-lbs. Re-install inner fender liners.

TRACK BAR BRACKET

Rear track bar bracket and brace will require bolt pack J129 and the 1 5/8" long sleeve.

- f. Insert the provided 9/16" hardware first into the track bar bracket, then through the original track bar bolt hole using the provided 1-5/8" long sleeve located in the hardware box. [11]
- g. Secure the track bar brace to the track bar bracket with 3/8" hardware located in bolt pack J129.
- h. With the bracket and brace in position, mark the position of the 3 holes to be drilled. One ½" hole will be drilled below the 3/8" bolt holding the bracket and brace together, a ½" drill bit is used to provide clearance for the 7/16" hardware. Two 7/16" holes will be drilled adjacent to each other to secure the track bar brace to the axle. A 7/16" drill bit is used to provide clearance for the 3/8" hardware.



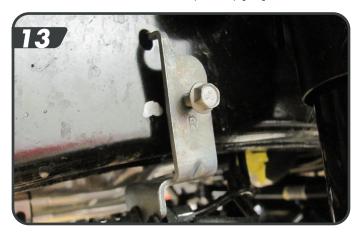


- i. Drill the holes and fasten the bracket to the axle with the provided hardware. Insert the provided sleeve in the OE track bar position.
- j. Tighten the 9/16" bolt to 130 ft-lbs; 7/16" to 59 ftlbs, and the 3/8" hardware to 37 ft-lbs [12]. The track bar will be re-installed with the vehicle on the ground.
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- k. Install brake line brackets to the axle. J178 (PICTURE)
- Reattach the brake line brackets to the frame using the factory hardware. Reconnect the emergency brake cables to the axle bracket and at the wheel locations.
- m. Rubicon models: Reattach the locker wire harness to the differential.
- Mount the tires and lower the vehicle to the ground.
- Install the rear track bar into the relocation bracket with the factory bolt.
 Tip: Use an assistant to push on the body of the vehicle to help align the track bar in the bracket.
- p. Torque the axle side track bar bolt to 74 ft-lbs plus 60 degrees.

04. FRONT DISASSEMBLY

- a. Disconnect the front track bar (21mm) from the axle. Save bolt and nut tab.
- b. Raise the vehicle and support the frame with jack stands behind the front lower control arm pockets.
- c. Remove the wheels.
- d. Disconnect the front brake line brackets from the frame rails (10mm) [13].



- e. Rubicon models: Disconnect the front locker wires from the differential.
- f. All models: Disconnect the front axle disconnect wiring harness and pull out the (2) push pins that mount the harness to the axle [14].



g. Disconnect the sway bar links from the axle and sway bar (18mm). Discard links, save lower hardware [15,16].





Remove the 4 bolts mounting the front driveshaft to the pinion flange (15mm). This is done to ensure the driveshaft does not bind when removing the coil springs. [17]

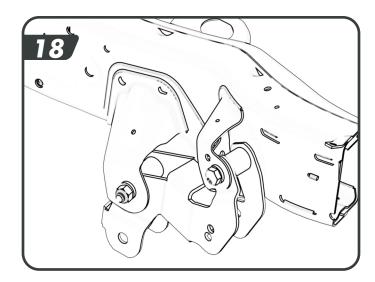


- Support the front axle with a hydraulic jack. Remove the front shocks from the vehicle using a 18mm socket for the top and 18mm socket and wrench on the bottom. Save lower hardware.
- Lower the front axle and remove the coil springs. As the axle is lowered, verify all brake and electrical wires have enough slack and the driveshaft doesn't bind.

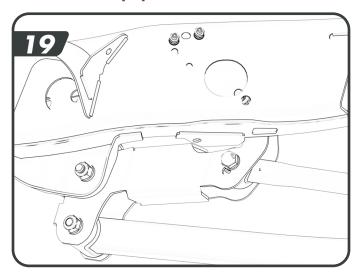
05. FRONT INSTALLATION

FRONT GEOMETRY CORRECTION BRACKET INSTALLATION

- Working on one side at a time, remove the upper and lower control arm mounting bolts at the frame. Loosen the bolts at the axle, but do not remove.
- b. Install the control arm drop brackets as shown using the factory hardware. [18] Torque the lower bolt to 103 ft-lbs plus 145 degrees. Torque upper bolt to 37 ft-lbs plus 135 degrees.



- c. Mount the lower control arm to the drop bracket using the provided 16mm hardware. Install the bolt from the outside in.
- d. Mount the upper control arm with the provided 12mm hardware. Install the bolt from the inside out. Use the upper hole for 2"-3.5" lifts and the lower hole for 4"+ lifts. [19]



Note: it may be easier to align the control arms to the mount by removing the opposite side upper control arm adn adjusting the axle with a hydraulic jack.

e. Repeat installation on other side of vehicle.

FRONT BUMP STOP & COIL SPRING INSTALLATION

Front bump stop spacers will require bolt pack J152

f. Place the provided bump stop extension inside one of the JSPEC front coil springs. Install the front springs with the bump stop extension [20]. Make sure the spring is seated properly in the axle mount and the top isolator hasn't moved from the stock position.

This kit includes an adjustable bump stop system that allows for bump stop height to be tuned specifically for your wheel and tire combination. The bump stop system consists of one 2" bump stop block, and four 1/2" bump stop blocks. F For the 4" kit, we recommend 3" of bump stop extension.



- Attach the bump stop extension to the axle through the hole in the center of the spring perch. Access to the nut can be obtained from the front of the spring perch. Another option is to remove the brake line bracket temporarily to gain access to attach the nut from the rear of the spring perch. Torque to approximately 29 ft-lbs.
- Repeat the spring and bump stop installation on the other side of the vehicle.
- Install the new shocks with the factory hardware. The shocks will be installed with the wide spacers up top and the bushing and sleeve in the bottom similar to the rear. JSPEC shocks will be installed body down, Fox shocks will be installed body up. Torque the upper bolts to 74 ft-lbs and the lower bolts to 81 ft-lbs.
- Install aftermarket drive shaft. Follow the manufactures installation procedure

QUICKER DISCONNECT INSTALLATION

Quicker Disconnects will require bolt pack J127

ALL MODELS

- Adjust the length of the quicker disconnects to 9 3/4" center to center. This is a good starting point and can be fine tuned once the vehicle is on the ground if needed.
- ١. Insert the longer sleeves into the upper bushing and slide the polyurethane spacer onto the upper sleeve so it will mount towards the swaybar.
- 2024 Models: Use the larger ID sleeves that will accommodate 14mm hardware
- Using the provided 12mm x 75mm bolts, washers, and nuts loosely fasten the sway bar links to the sway bar with the bolts going from the outside towards the frame [21].
- 2024 Models: Use the larger 14mm hardware found in bolt pack J172



NON-RUBICON MODELS

The passenger side mount will need to be cut to provide access for the disconnect post. Cut the mount off vertically just past the weld on the bracket [22]. This should be about 1-1/4" from the center of the hole.



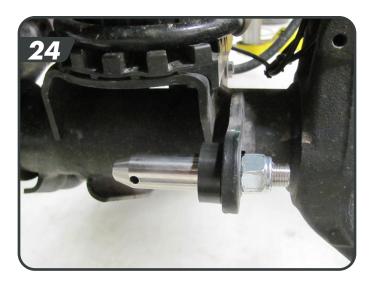
Install the shorter passenger side post on the side of the track bar mount at the sway bar link mount location with it pointing outboard [23]. Fasten with the $\frac{1}{2}$ " nylock nut and tighten to 64 ft-lbs.



Install the longer disconnect post on the driver side axle sway bar link mount with it pointing inboard [24]. Fasten with the ½" nylock nut and tighten to 64 ft-lbs. Tighten the post with the pin hole parallel to the ground. Slide the polyurethane spacer on the pin up against the axle tab.

Note: Apply a drop or spray of lubricant before threading on the nut. (Anti-seize, Oil, or Graphite all work)

Note: A small screwdriver or punch inserted into the pin hole will keep the post from turning as you tighten it.



The kit comes with disconnect retention brackets to hold the links when the links are disconnected. Install the retention brackets using the provided 5/16" bolts into the factory hole in the front of the coil bucket [25]. These are designed to slightly interfere with the edge of the coil bucket to hold them in place.



- Slide the ends of the disconnects over the retention bracket posts. Insert click pins to secure. These quicker disconnects can be more easily attached with the vehicle at ride height.
- Torque the quicker disconnect to sway bar mounting bolts to 79 ft-lbs.

RUBICON MODELS

Rubicon models have a factory electronic disconnect system. Follow these steps to solid mount your sway bar links.

- Set the sway bar into disconnect mode for ease of installation of the links to the axle.
- Locate the 1-1/4" sleeve and insert it into the passenger side disconnect bushing.

- Insert the ¼" thick spacer and disconnect into the original sway bar link location. It may be necessary to slightly open up the link opening for ease of assembly.
- Fasten the link to the axle with the original hardware. [26] Adjust the length as necessary to ensure the links do not bind at full droop, depending on the shocks being installed.



Install the remaning longer sleeve on the driver side and slide the polyurethane spacer onto the sleeve so it will mount towards the axle mount tab. Install the quicker disconnect to the inboard side of the axle tab with the original sway bar link hardware.

Note: If the link length was adjusted for the passenger side, match the length on the driver side link.

- aa. Torque the upper bolts to 79 ft-lbs and OE lower bolts to to 59 ft-lbs
- ab. Install the aftermarket drag link following the manufactures instructions.

FRONT ADJUSTABLE TRACK BAR

- ac. Adjust the length of the track bar to 34". This is a starting point, final adjustment can be made once the vehicle is on the
- ad. Disconnect the factory track bar from the frame side mount, save hardware.
- ae. Insert the non adjustable end of the new track bar into the frame mount with the clearance bend forward. Use factory hardware. Do not tighten at this time.

06. FINAL FRONT INSTALLATION STEPS

- Rubicon models: Reattach the locker wire harness to the differential.
- All models: reattach front brake line brackets to the frame and reattach front axle disconnect harness clips.
- Install the wheels and torque to the lug nuts to 130 ft-lbs.
- Lower the vehicle to the ground and bounce the vehicle to settle the suspension.
- Torque the front lower control arm bolts at the axle to 103 ft-lbs plus 145 degrees and at the frame bracket to 189 ft-lbs. Torque the upper control arm bolts at the axle to 41 ft-lbs plus 185 degrees and at the frame bracket to 79 ft-lbs.
- Attach the front track bar to the axle with the OE hardware. Have an assistance turn the steering wheel to aid in aligning the track bar bolt. Take measurements to check if the axle is centered. Make an adjustment to the track bar equal to half of the distance the axle is shifted to one side. Torque the frame side track bar bolt to 52 ft-lbs plus 115 degrees and the axle side track bar bolts to 52 ft-lbs plus 155 degrees.
- Verify tire clearance, trim the front bumper side trim pieces as shown if necessary on your model. [27]



- Double check all hardware for proper torque.
- Lubricate all grease zerk fittings using common wheel bearing grease or equivalent.
 - Caution: Rubber bushings must never be lubricated as doing so will impair performance and longevity.
- Have a front end alignment performed to center steering wheel. į٠
- Check all fasteners after 500 miles and at regularly scheduled maintenance intervals.

07. STICKER INSTALLATION

Sticker installation should be performed when the temperature is above 60° F.



- Clean the areas thoroughly with rubbing alcohol to remove any buildup.
- Carefully place the sticker in the desired location. b.
- Rub gently to secure, then press firmly for 30 seconds.

KIT CONTENTS

JSPEC1451	- 4" COI	L SPRINGS - STD	JSPEC145	0 - 4" MA	IN BOX KIT
Part No.	Qty	Description	H164 - bag	g kit - 4″ JL	. Box kit
034430R	2	4.5" Front STD Dual Rate Coil Spring		Qty	Description
ICDEC 1 4 E O	4// 601	L SPRINGS - STD		2	Quick Pin
				3	Offset Polyurethane Spacer
Part No.	Qty	Description CTD Day 10 Pt 10 P		1	03013 Stud w/ nut
034436R	2	4" Rear STD Dual Rate Coil Spring]	03017 Stud w/ nut
JSPEC1452	- 4" COI	L SPRINGS - HD]	02-05 Dodge 6in Kit ¼in Spacer
Part No.	Qty	Description		1	.750 x .134 x 1.255 DOM Sleeve
034433R	2	4.5" Front HD Dual Rate Coil Spring		3	.750 x .134 x 1.650 Rolled Sleeve
		, ,		1	$.8125 \times .120 \times 1.620$ DOM Sleeve - Tbar Brkt
JSPEC1458	- 4" COI	L SPRINGS - HD		2	.750 x 0.095 x 1.680 DOM Sleeve
Part No.	Qty	Description		1	1.00 x .125 x 1.360 DOM Sleeve
034438R	2	4" Rear HD Triple Rate Coil Spring]	Parking Brake Bracket DRV
IVC1441 - I	ELEV DI	EAR ADJUSTABLE LCA - FLEX JOINT		1	Parking Brake Bracket PASS
Part No.	Qty	Description	J127	Bolt	Pack - Quicker Disconnect Sway Bar Mt
A1017	2	Adjustable LCA - Rear		Qty	Description
AIUI7	2	Adjustable LCA - Redi		2	12mm-1.75 x 75mm bolt
JK\$1636 - J	-LINK RE	AR ADJUSTABLE LCA - RUBBER		2	12mm-1.75 x 75mm Prv Torque Nut
Part No.	Qty	Description		4	12mm flat washer
A1090	2	Adjustable LCA - Rear		2	5/16"-18 x 3/4" bolt grade 5
		· 		2	5/16"-18 prevailing torque nut
		AR ADJUSTABLE UCA - RUBBER		4	5/16" SAE flat washer - clear zinc
Part No.	Qty	Description			
A1096	2	Adjustable UCA - Rear	J129		Pack - JL Track Bar Bracket
JKS1666 - J	-FLEX RE	AR ADJUSTABLE UCA - FLEX JOINT		Qty	Description
Part No.	Qty	Description]	9/16"-12 x 3-1/2" bolt
A1063	2	Adjustable UCA - Rear]	9/16"-12 PRV torque nut
41005	2	Adjustable OCA Redi		2	9/16" SAE flat washer
JKS6201 - C	ONTROL	ARM CORRECTION BRACKETS]	7/16"-14 x 1" hex bolt
Part No.	Qty	Description		1	7/16" prevailing torque nut
03332	1	Control Arm Drop Bracket Outer plate-		2	7/16" SAE flat washer
DS				3	3/8"-16 x 1" hex bolt
03333	1	Control Arm Drop Bracket Outer plate-		3	3/8"-16 PRV torque nut
PS				6	3/8" SAE flat washer
J135	Bolt	Pack - Control Arm Correction Brackets		1	1/4"-20 x 3/4: hex bolt
	Qty	Description		1	1/4"-20 PRV torque nut
	2	16mm-2.00 × 100mm bolt		2	1/4" SAE flat washer
	4	16mm flat washer		I	Cable clamp - 1" dia.
	2	16mm-2.00 prevailing torque nut	J152	Bolt	Pack - Adj. Bump Stop Front- 4
	2	12mm-1.75 x 80mm bolt		Qty	Description
	4	12mm flat washer		2	3/8"-16 x 2.5" bolt
	2	12mm-1.75 prevailing torque nut		2	3/8"-16 x 3" bolt

KIT CONTENTS

	2	3/8"-16 x 3.5" bolt	03891	2	Modular Rear Bumpstop - 2"
	2	3/8"-16 x 4" bolt	03892	8	Modular Rear Bumpstop - ½"
	2	3/8"-16 x 4.5" bolt	03321	1	Rear Track Bar Bracket
	2	3/8″-16 serrated flange lock nut	03322	1	Bracket Brace
	2	3/8″ SAE washer	03065	2	Rear Sway Bar Link Assembly
J153	Bolt	Pack J153 - JL Adj. Bump Stop Rear- 4"	03315	1	Disconnect Brkt Tall DRV
	Qty	Description	03316	1	Disconnect Brkt Tall PASS
	4	5/16"-18 x 1-1/4" Socket Head Cap Screw	03371	1	Front Trackbar Mount
	4	5/16"-18 x 1-3¼" Socket Head Cap Screw			
	4	5/16"-18 x 2-1/4" Socket Head Cap Screw			
	4	5/16"-18 x 2-3¼" Socket Head Cap Screw			

Bolt Pack - Front TB Bracket J140

4

Qty	Description
1	9/16"-12 x 3" Bolt
2	9/16" SAE Flat Washer
1	9/16"-12 PRV Torque Nut
1	3/8"-16 x 1" Bolt
2	3/8" SAE flat Washer
1	3/8"-16 Prevailing Torque Nut
2	10mm-1.5 x 25mm Bolt
2	10mm flat washer

5/16"-18 x 3-1/4" Socket Head Cap Screw

5/16" serrated flange lock nut

5/16" SAE washer

J172 **Bolt Pack -14mm Sway Bar Link**

Qty	Description
2	14mm-2.00 x 80mm Bolt
2	14mm-2.00 PRV Torque Nut
4	14mm Flat Washer

Bolt Pack - Rear E-Brake Line J178

Qty	Description
2	$\frac{1}{2}$ "-13 x 1" Hex Bolt
2	1/2"-13 Prevailing Torque Nu
4	1/2" SAE Washer

JSPEC1450 - CONTINUED

Part No.	Qty	Description
03300	1	Front Adjustable Track Bar
03010	2	Sway Bar Disconnect - FML Long
03011	2	Sway Bar Disconnect - ML Long
3296-STN	2	Adjustable Bump Stop Block - 2"
3596	8	½" Stackable Bump Stop