

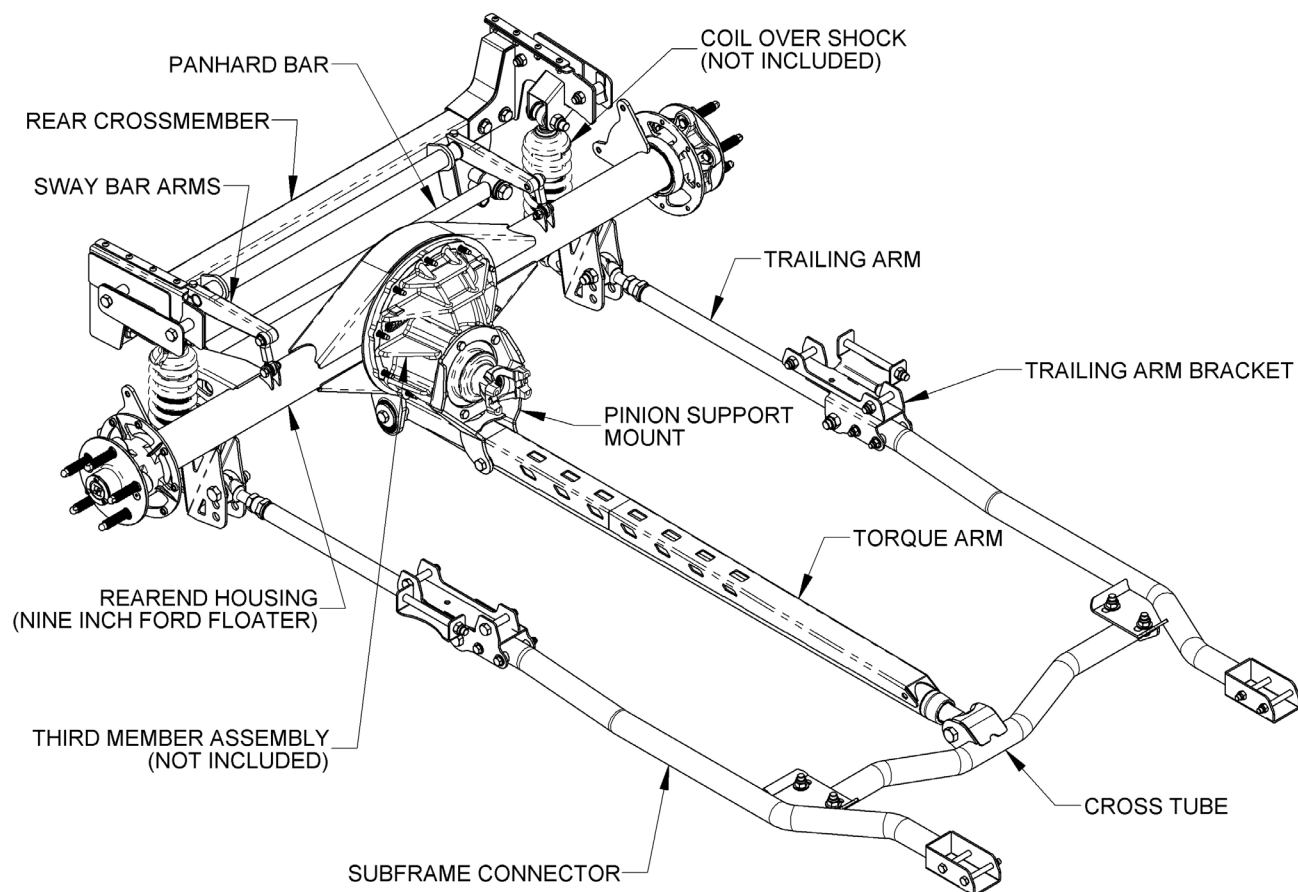
INSTRUCTIONS

© 2024, Speedway Motors, Inc.

SPEEDWAY
motors®

916-16267 - Torque Arm Rear Suspension: 1962-67 Chevy Nova

Kit Contents		
Qty	Part #	Description
2	916-16267.1	Rearend Assembly, Nova Torque Arm
2	916-16267.1	Rear Crossmember, Nova Torque Arm
1	916-17081.7	Panhard Bar, Torque Arm
1	916-16267.101	Subframe Connectors and Cross Tube
2	916-16267.103	Trailing Arms and Brackets, Nova Torque Arm
2	916-16769.103	Torque Arm
2	916-16267.105	Hardware, Subframe Connectors
1	916-16769.105	Hardware, Trailing Arms
1	916-16769.106	Hardware, Torque Arm
1	916-16267.104	Hardware, Rear Crossmember
1	916-16769.108	Hardware, Panhard Bar
1	916-16769.109	Hardware, Shock Mount
1	350-402	Sway Bar, Rear
1	350-029.2	Floater Components

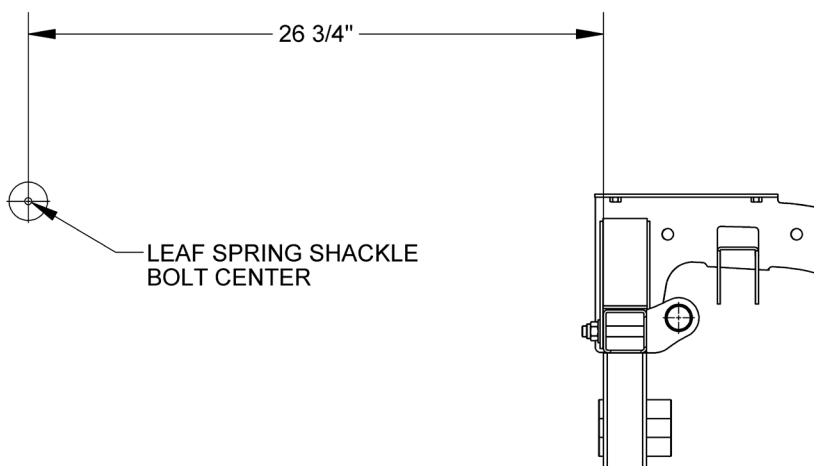
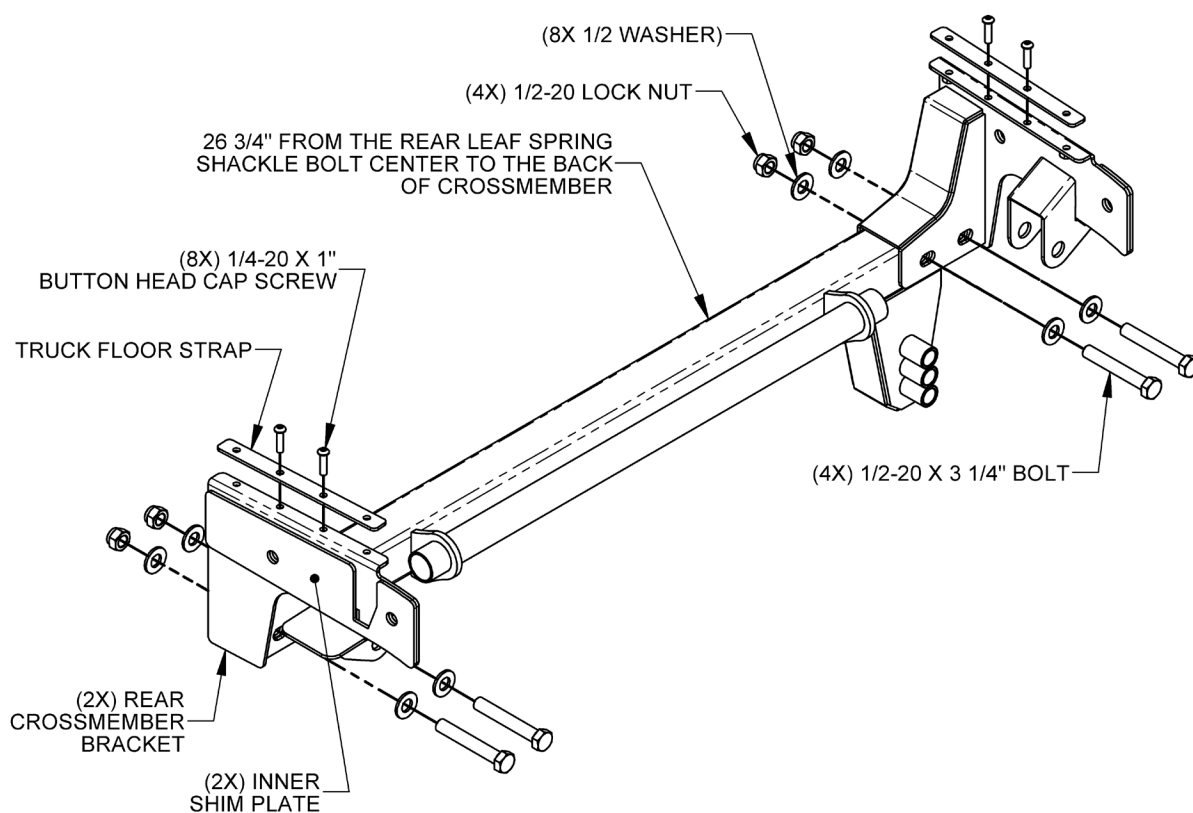


INSTRUCTIONS

© 2024, Speedway Motors, Inc.

SPEEDWAY
motors®

- 1. Remove Rear Suspension:** Raise the car and support it with jack stands or a lift. Remove; the exhaust, drive shaft, rear end, and all rear suspension components including the rubber bump stops. Remove fuel lines, brake lines, and E-brake cables from bottom of car.
- 2. Positioning Rear Crossmember:** Loosely bolt rear crossmember together using the four supplied 1/2"-20 x 3-1/4" bolts, washers and lock nuts as shown below. The rear crossmember assembly will sit between the factory frame rails and against the floor of the car. The inner shim plates are to be placed between the rails and the rear cross member brackets. The rear crossmember should be 26-3/4" from the factory rear leaf spring shackle bolts. Clamp the crossmember securely in place.



INSTRUCTIONS

© 2024, Speedway Motors, Inc.



3. Removing the front leaf spring hangers:

- Using a cutoff wheel cut the leaf spring hangers off flush with the frame rail.



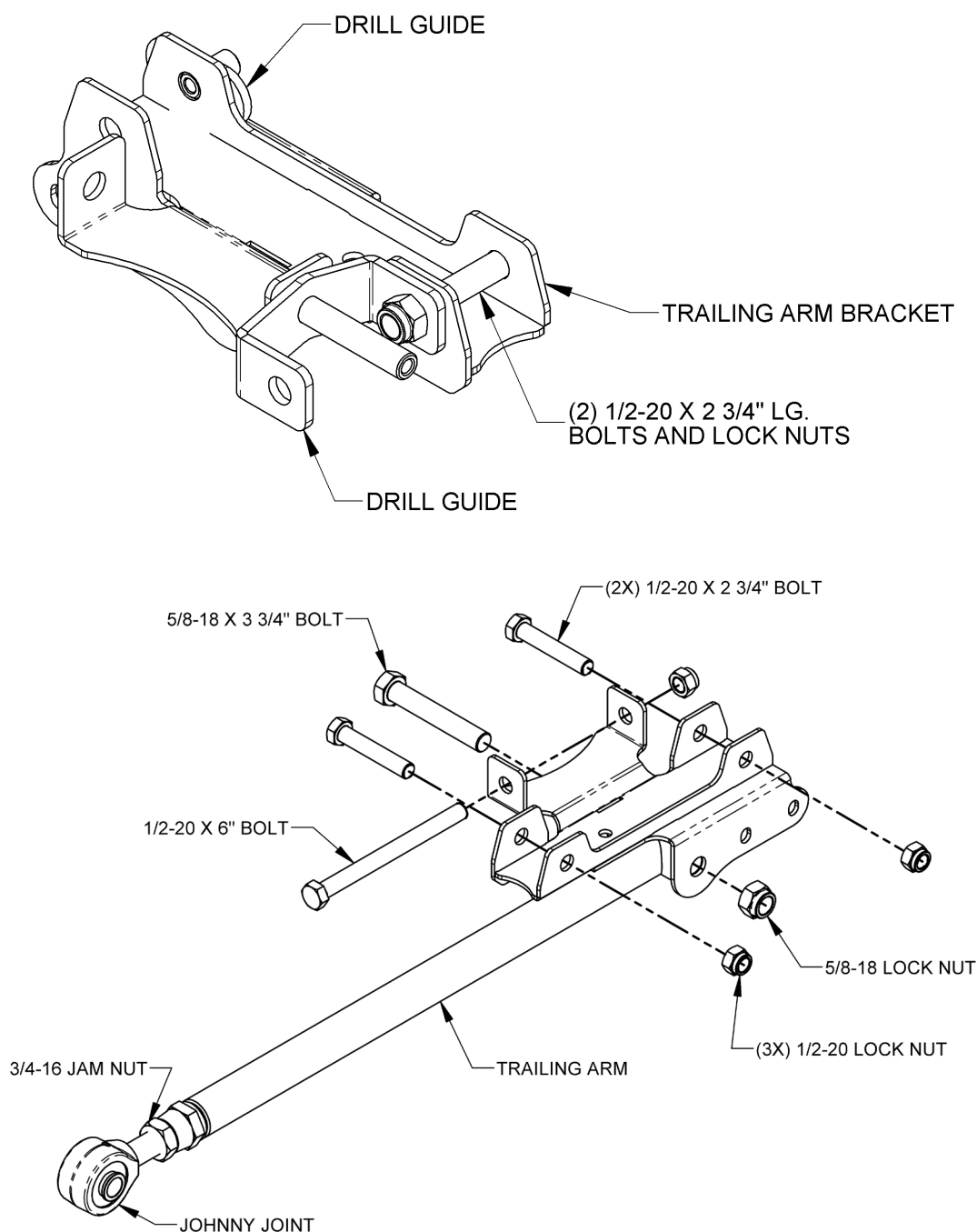
4. Installing Trailing Arms and Mounts:

- Drilling mount holes:
 - i. Slip the trailing arm mounts over the frame rail and clamp into place.
 - ii. Clamp drill guide into front frame hole and drill with 1/4" drill bit.
 - iii. Repeat with rear frame hole.
 - iv. Enlarge both holes to 1/2".
 - v. Secure trailing arm mount the supplied 1/2"-20 x 2-3/4" bolt and nuts in front frame hole.
 - vi. Clamp the other drill guide into the rear hole with the supplied 1/2"-20 x 2-3/4" grade 8 bolt and nuts.
 - vii. Drill through the understructure using a 1/4" drill bit.
 - viii. Remove the drill guide and enlarge the hole to 1/2".
 - ix. Repeat on opposite side

INSTRUCTIONS

© 2024, Speedway Motors, Inc.

SPEEDWAY
motors®



- **Bolting in the mounts and trailing arms:**

- i. Bolt the trailing arm mounts using the supplied 1/2"-20 x 2-3/4" grade 8 bolts, 1/2"-20 x 6" bolts and nuts.

- **Bolting in the trailing arms:**

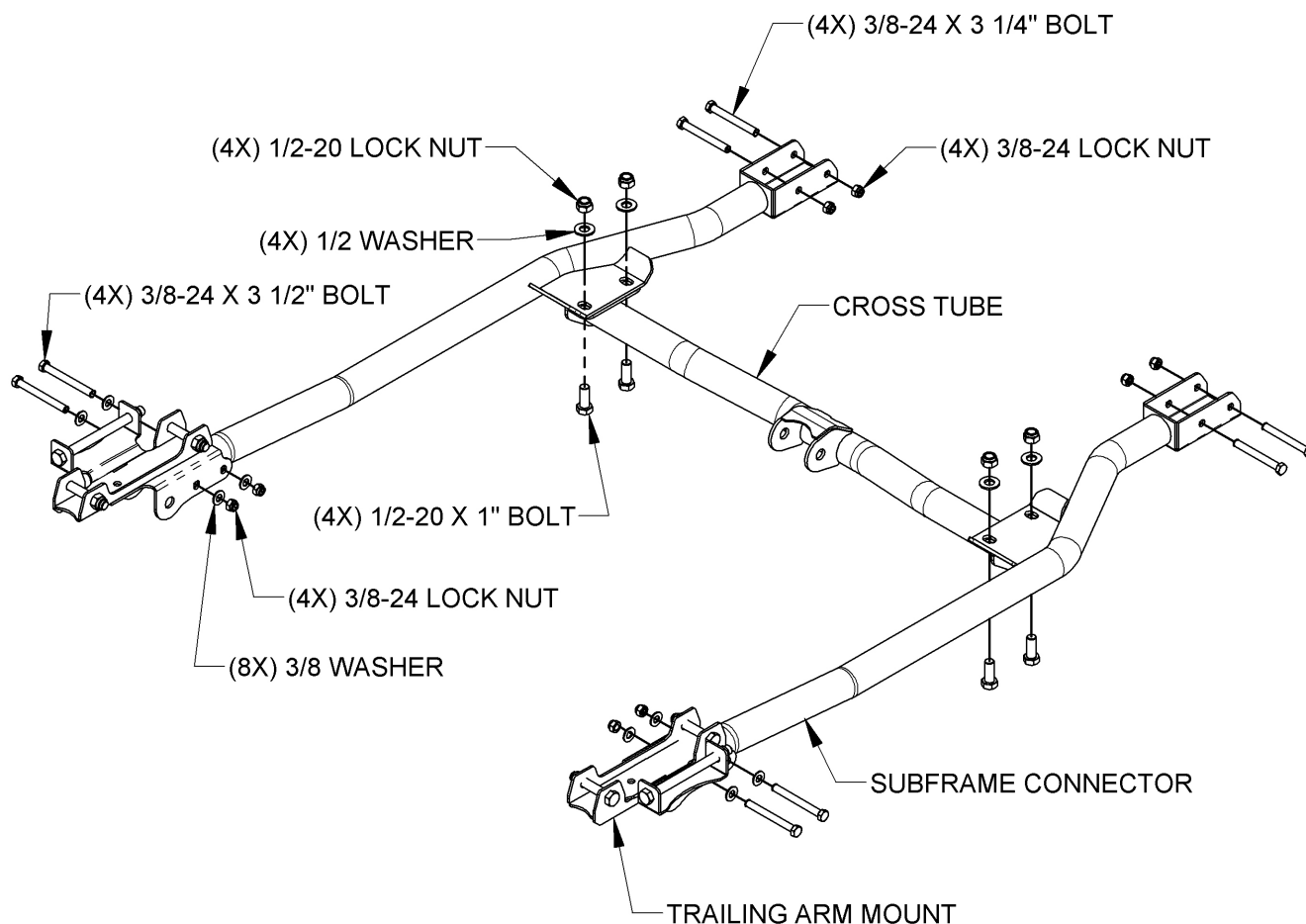
- i. Assemble trailing arms leaving the jam nut loose. Center to center dimension should be 23-7/8" as a starting point. Bolt the trailing arms into the mount using the supplied 5/8"-18 x 3-3/4" bolt and lock nut as shown above.

INSTRUCTIONS

© 2024, Speedway Motors, Inc.

SPEEDWAY
motors®

- 5. Installing Cross Tube and Subframe Connectors:** Mount the subframe connectors to the trailing arm mounts with the supplied 3/8-24 x 3-1/2" bolts, washers and lock nuts. Push the front of the subframe connector against the bottom of the frame rail and clamp. Bolt in the cross tube us the supplied 1/2-20 x 1" grade 8 bolts, washers and nuts. Verify the front of the subframe connector is against the bottom of the frame and drill through the frame rail using a 3/8" drill bit. Connect the front of the subframe connector using the supplied 3/8-24 x 3-1/4" bolts and lock nuts.



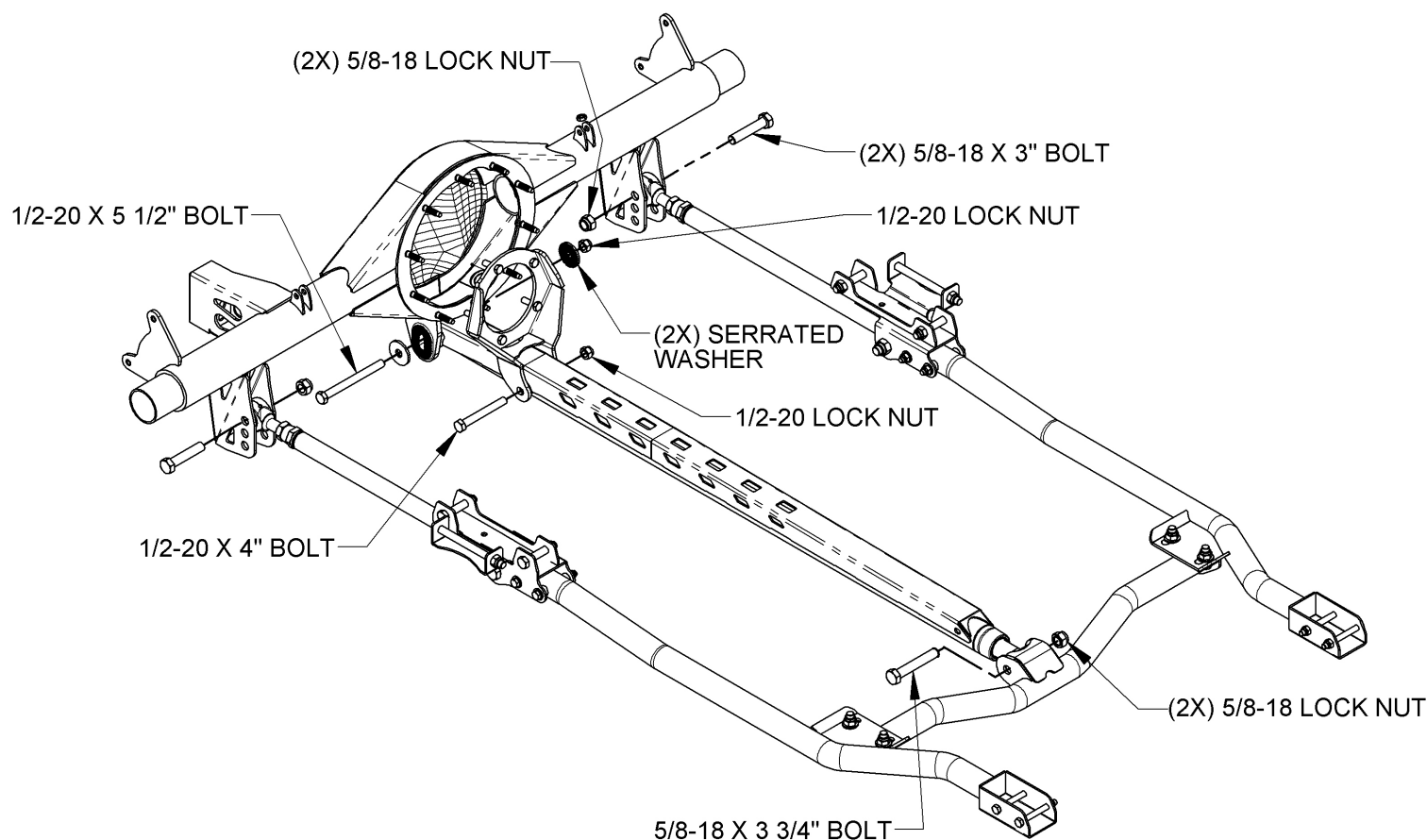
- 6. Rearend Housing Install:** Install third member assembly into rearend housing. Remove the 3/8 bolts attaching the pinion support to the third member carrier housing. Attach the pinion support mount onto the pinion support using the supplied 3/8"-16 x 1-1/4" bolts. Apply thread lock and torque to 26 ft-lbs. Place the rearend housing on stands under the car at the approximate ride height location. Attach the trailing arms using the supplied 5/8"-18 x 3" bolts and lock nuts. Arms should be approximately level at ride height.

INSTRUCTIONS

© 2024, Speedway Motors, Inc.

SPEEDWAY
motors®

- 7. Installing the Torque Arm:** Press the wiper seal into the groove at the end of the torque arm. Slide the torque arm pivot into the end of the torque arm. Attach the torque arm to the housing using the supplied 1/2"-20 x 5-1/2" bolt, serrated washers and lock nut. Attach the torque arm to the pinion support mount using the supplied 1/2"-20 x 4" bolt and lock nut. Attach the torque arm pivot to the cross tube using the supplied 5/8"-18 x 3-3/4" bolt and lock nut.

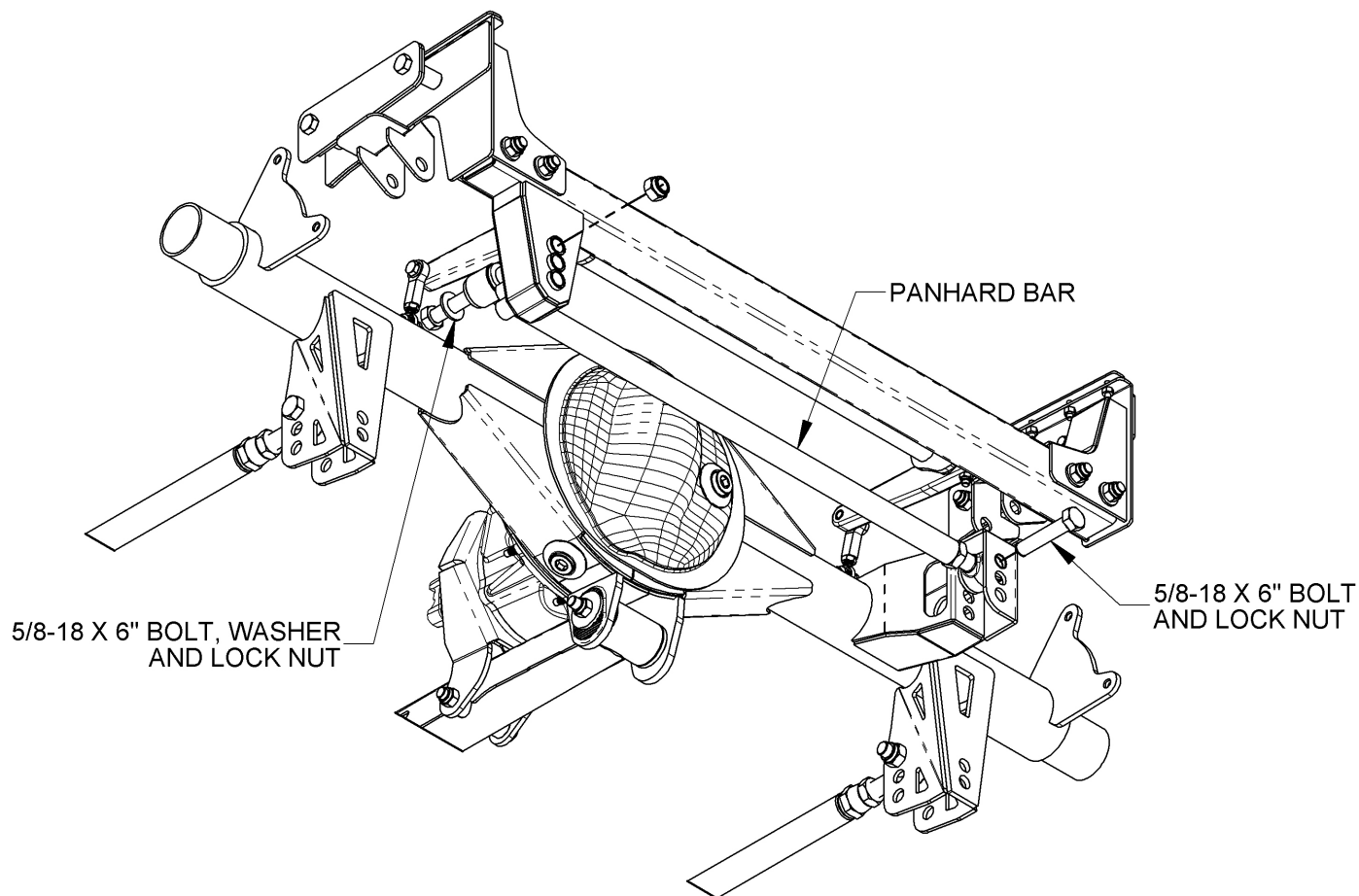


- 8. Installing the Panhard Bar:** Assemble panhard bar leaving the jam nut loose. Center to center dimension should be 30" as a starting point. Attach the panhard bar to the rearend housing using the supplied 5/8"-18 x 3" grade 8 bolt and lock nut. Attach the panhard bar to the rear cross member using the supplied 5/8"-18 x 6" bolt, washer and lock nut.
- NOTE:** There are three possible locations for each end of the panhard bar. Use the mounting holes that make the panhard bar level with the ground at ride height. This will vary depending on ride height.

INSTRUCTIONS

© 2024, Speedway Motors, Inc.

SPEEDWAY
motors®



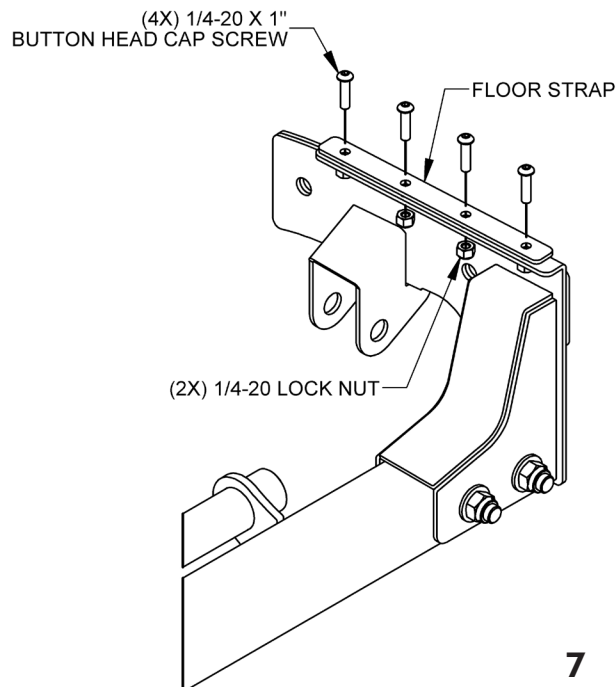
9. Check Alignment and Clearances:

At this point to cycle the suspension through its travel and check for any clearance issues.

10. Drilling for Rear Crossmember:

• Trunk Floor Strap Holes

- Remove components, leaving crossmember securely clamped.
- Starting on one side, drill the 2 inner strap holes with 1/4 x 12" lg. drill bit from the underside of the car.
- Install strap with 1/4-20 x 1" cap screws on center holes.
- Mark the two outer hole locations to be drilled later.
- (Repeat on opposite side)



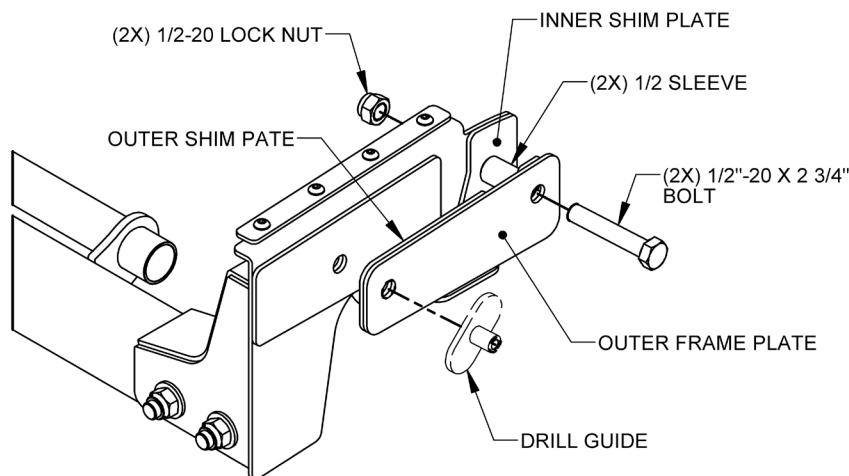
INSTRUCTIONS

© 2024, Speedway Motors, Inc.



• Crossmember Frame Holes

- i. Clamp drill guide into front hole and drill with 1/4" drill bit.
- ii. Secure outer frame shim and frame plate using the supplied 1/2"-20 x 3" bolt and nuts in front two holes. The bottom edge of these should rest on the piece that runs under the frame rail.
- iii. Clamp drill guide into the rear hole of the outer plate and clamp to the frame. Drill with 1/4" drill bit.
- iv. Enlarge the hole to 1/2".
- v. (Repeat on opposite side)
- vi. Unbolt outer frame plate and lower crossmember.
- vii. Enlarge only the outer four holes of the frame rail to 3/4".
- viii. Insert the 1/2" sleeve, trim to fit.
- ix. Drill the four remaining trunk floor strap holes.
- x. Install crossmember with 1/4"-20 x 1" cap screws, floor straps, and nuts.
- xi. Install 1/2"-20 x 3" bolts, washers, sleeves, outer frame plates and lock nuts.
- xii. Tighten



INSTRUCTIONS

© 2024, Speedway Motors, Inc.

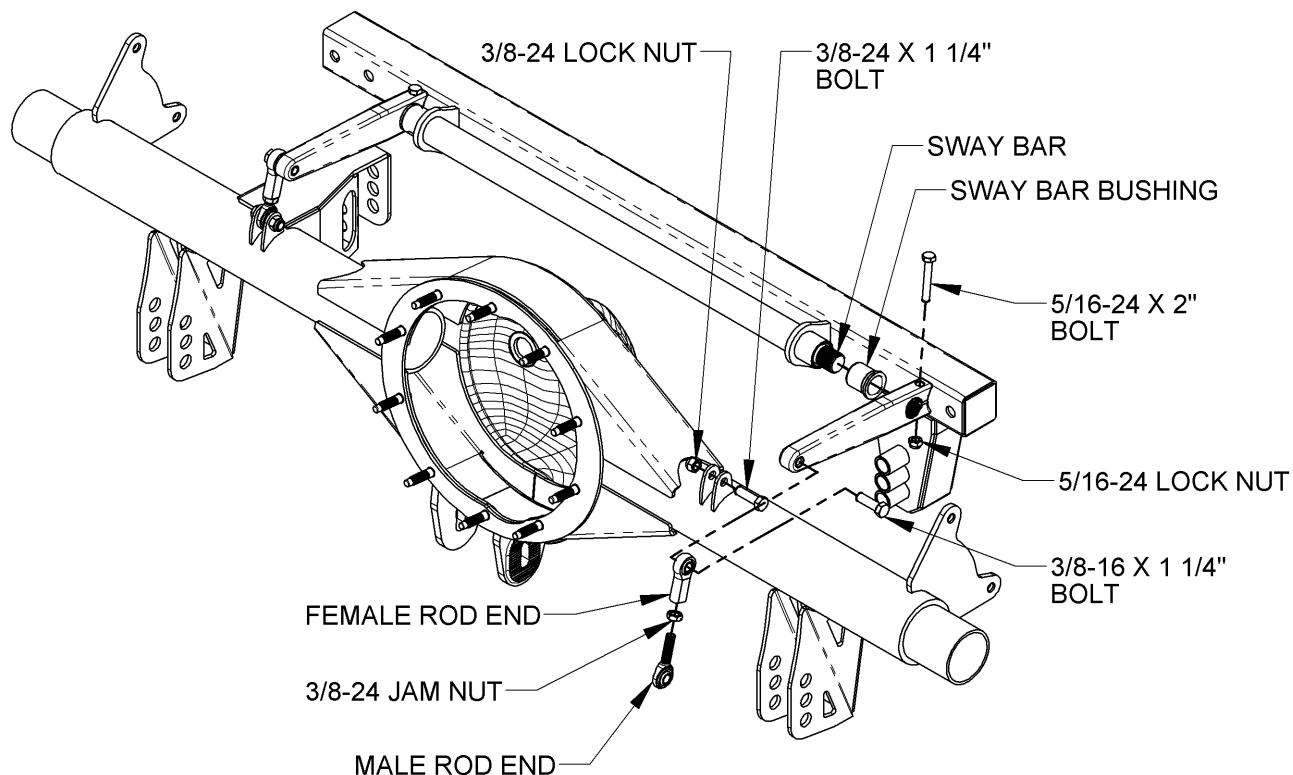


- 11. Re-Assemble:** Reinstall the panhard bar, rear end, and torque arm to the car. Tighten the subframe bushing bolts and cross tube bolts. Jack the rearend to approximate ride height. Square the rearend by adjusting the length of the trailing arms. Once the rearend is squared, tighten bolts for the trailing arms and trailing arm mounts. Adjust panhard bar length to center the rearend. Tighten panhard bar hardware after centered. Tighten the torque arm pivot hardware. Adjust the pinion angle by lowering or raising the rear torque arm bolt within the slot. Once you have reached your desired pinion angle, tighten the remaining torque arm hardware.
- 12. Install Sway Bar:** Press the sway bar bushings into the sway bar housing on the crossmember by lightly tapping them into place with a rubber mallet (be sure the bushings are going in straight). With the bushings in place, slide the sway bar into the housing. Slide one of the torsion arms onto the splined portion of the sway bar so it sits flush with the end of the bar. Install the 5/16-24 x 2" bolt and lock nut onto the arm and tighten to 20 ft-lbs. Install one of the male rod ends onto the outside of the arm using a 3/8-16 x 1-1/4" bolt. Now thread the jam nut and female rod end onto the male rod end leaving roughly 1/4" of threads showing. Attach the female rod end to the rear end housing using 3/8-16 x 1-1/4" bolt and lock nut. Torque both bolts to 35 ft-lbs. Assemble the opposite side in the same manner. Note: Once the vehicle is fully assembled and sitting on level ground, it is a good idea to disconnect one side of the sway bar links and adjust the length of the rod ends until there is no pre-load and the holes line up perfectly.

INSTRUCTIONS

© 2024, Speedway Motors, Inc.

SPEEDWAY
motors®



13. Now is a good time to fully assemble the rear end by installing hubs, axles, and brakes.

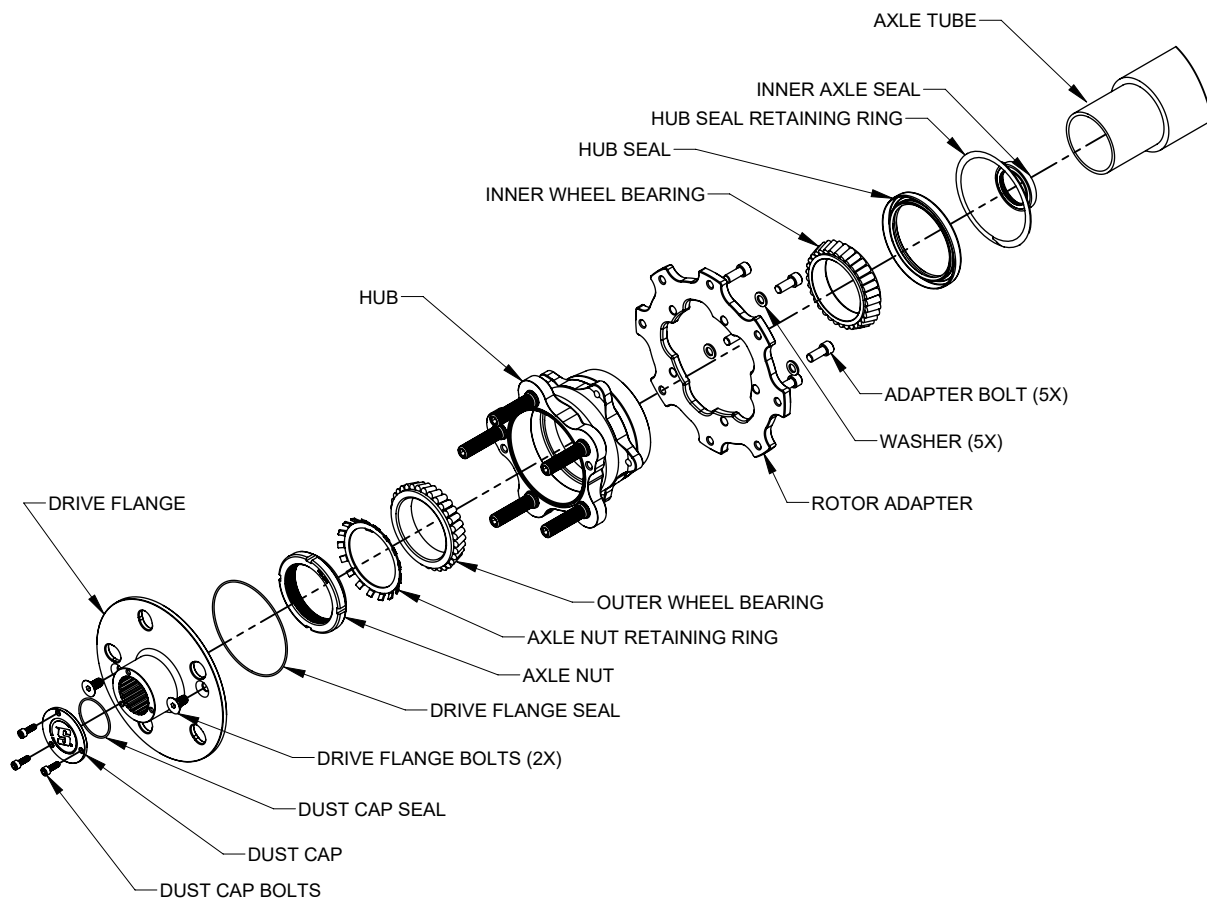
Note: This can also be done after installing the housing into the car.

- Assemble the hub as shown below. Be sure to pack the wheel bearings with high quality grease. Do not over torque the axle nut! The hub should spin freely with zero endplay. To achieve this, assemble the hub as shown. Tighten the axle nut and spin the hub a dozen or so rotations. Now back the axle nut off 2 full turns. Then tighten the axle nut until it just starts to get snug. At this point the hub should spin freely with little to no resistance, and there should be no endplay in the bearing. Bend the tab on the lock ring into the groove on the axle nut. This will prevent the axle nut from loosening.

INSTRUCTIONS

© 2024, Speedway Motors, Inc.

SPEEDWAY
motors®

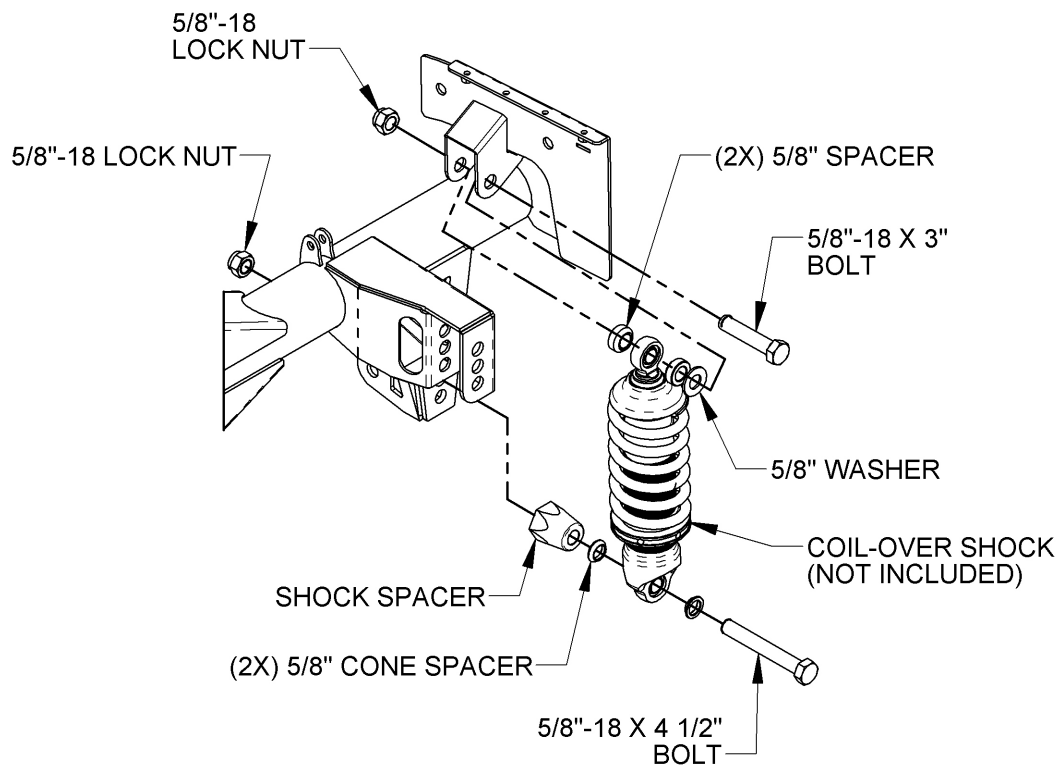


- 14. Install the coil-over shocks:** To install the shock, first use a 5/8"-18 x 4-1/2" bolt, spacers and nylon lock nut to secure the lower end of the shock to the rear end housing as shown. The remaining 5/8"-18 x 3" bolts, spacers, washer and nylon lock nuts are used to install the top of the shocks into the rear crossmember. Note: This kit is designed to use 4" stroke shocks with a compressed length of 10"-11" and an extended length of 14"-15". Shock ends should be 5/8" bearings with a mounting width of 9/16". For recommended part numbers, please visit our website or contact one of our tech experts.

INSTRUCTIONS

© 2024, Speedway Motors, Inc.

SPEEDWAY
motors®



15. Re-install: Drive shaft, fuel lines, brake lines, exhaust, etc.... Bleed the brakes. Fill the rear end with fluid. Install wheels and tires. Grease trailing arm johnny joints and torque arm pivot.

16. Alignment:

- Lower the car onto the ground and check for desired ride height. Adjust ride height if necessary by raising the car and spinning the adjusting collar on the coil-over.
- Once the ride height has been set, lower the car onto the ground and make sure the rear end is centered in the car body.
- Now that the ride height is set, check your rear end alignment. Adjust if necessary. **NOTE:** This is difficult to do accurately and a professional alignment is recommended. This method will get you close enough to drive the car to an alignment shop.