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## **PRO COMP SUSPENSION**

**52230BX-1**

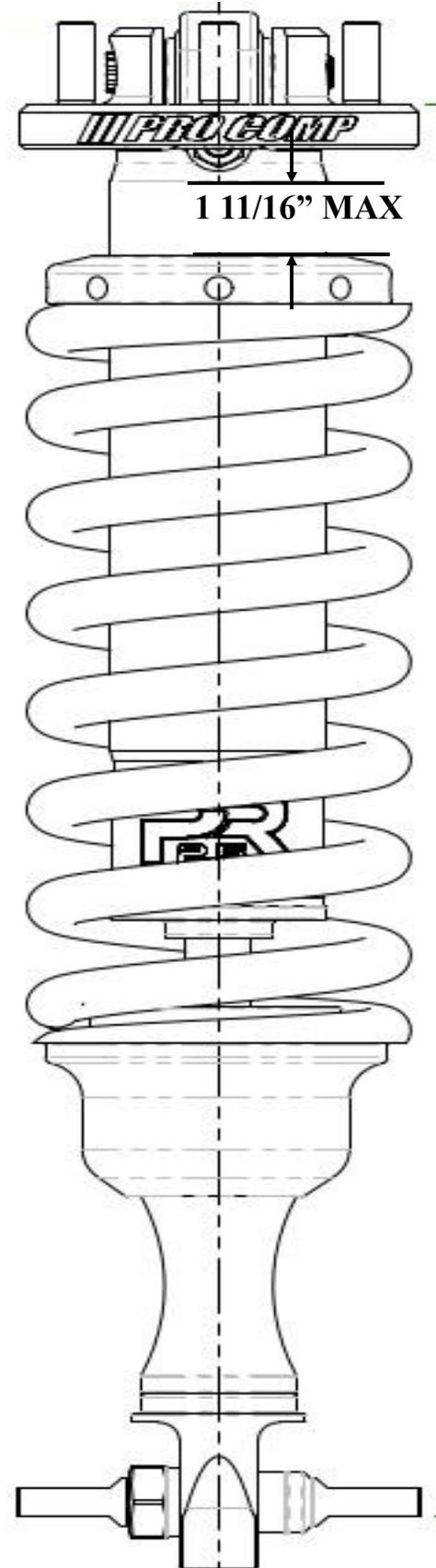
**2019 Ford Ranger 1"- 2.75" Front 2.5" Coilover Kit**

This document contains very important information that includes warranty information and instructions for resolving problems you may encounter. Please keep it in the vehicle as a permanent record.

Part #	Description	Qty.
52230BX-1	2019 FORD RANGER1"- 2.75" FRONT 2.5" COILOVER KIT	1
90-40981-00003	PC 2.5 CO DVR RNGR	1
90-40981-00004	PC 2.5 CO PAS RNGR	1
90-60809	<b>HARDWARE PACK:</b>	1
43F275HC8I	7/16"-20 X 2 3/4" HEX BOLT Gr. 8	4
43RWHDI/IMP	7/16" ASTM HARDENED FLAT WASHER	4
43RWHDI/USS-IMP	7/16" USS HARDENED FLAT WASHER	4
43FNNLUI	7/16"-20 TOPLOCK NUT GRADE C ZINC	4
90-6317	<b>HARDWARE PACK:</b>	1
43FNG8I	7/16" GR. 8 HEX NUT	6
43RLSRZ	7/16" SAE FLAT WASHER	6
43RWHDI/IMP	7/16" SPLIT LOCK WASHER	6

**TECH NOTES:**

- If exceeding 2.25" of lift, an aftermarket control arm is required.
- These Pro Comp Pro Runner shock assemblies come factory charged to 150 PSI. Releasing nitrogen pressure may lead to shock malfunction and reduced ride quality. Failure caused by low nitrogen pressure is not covered under 4WP warranty.
- The Pro Comp Pro Runner 7/16" bar pin mounting bolts orientation is important for ground clearance.
- These Pro Comp Pro Runner shock assemblies are fully rebuildable and serviceable.
- If the studs on the mounting hat are a tight fit, then the slots in the OE bucket must be drilled out using a 7/16" drill bit.
- Preload adjuster dimension from the top of the thread to the top of the coil adjuster:
  - Driver side = 1 1/16"
  - Passenger side = 9/16"
  - Do not exceed 1 11/16" of adjustment or coil bind will occur.



**MAXIMUM WHEEL AND TIRE SIZE CHART**

**52230BX-1 & 62182: 17" X 8.5" w/35mm offset 285/70/R17**

**Optional Equipment Available from your Pro Comp Distributor!**

**4WD/2WD 2019 Ford Ranger Big Tire Kit: 62182  
4WD/2WD 2019 Ford Ranger Rear Block Kit: 65151  
2019 Ford Ranger 0-1" Rear 2.5" Shock Kit: 52230BX-2**

Also, Check out our outstanding selection of **Pro Comp** tires to compliment your new installation!

## Introduction:

- ◆ **This installation requires a professional mechanic!**
- ◆ We recommend that you have access to a factory service manual to assist in the disassembly and reassembly of your vehicle. It contains a wealth of detailed information.
- ◆ Prior to installation, carefully inspect the vehicle's steering and driveline systems paying close attention to the tie rod ends, ball joints, wheel bearing preload, pitman and idler arms. Additionally, check steering-to-frame and suspension-to-frame attaching points for stress cracks. The overall vehicle must be in excellent working condition. Repair or replace all worn or damaged parts!
- ◆ Read the instructions carefully and study the illustrations before attempting installation! You may save yourself a lot of extra work.
- ◆ Check the parts and hardware against the parts list to assure that your kit is complete. Separating parts according to the areas where they will be used and placing the hardware with the brackets before you begin will save installation time.
- ◆ Check the special equipment list and ensure the availability of these tools.
- ◆ Secure and properly block vehicle prior to beginning installation.
- ◆ ***ALWAYS*** wear safety glasses when using power tools or working under the vehicle!
- ◆ Foot pound torque readings are listed on the Torque Specifications chart at the end of the instructions. These are to be used unless specifically directed otherwise. Apply thread lock retaining compound where specified.
- ◆ **IT IS ADVISABLE THAT YOU HAVE HELP AVAILABLE WHEN INSTALLING THIS KIT. SOME COMPONENTS ARE HEAVY AND AWKWARD. AN ADDITIONAL SET OF HANDS IS GOOD INSURANCE AGAINST INJURY!**
- ◆ *Please note that while every effort is made to ensure that the installation of your Pro Comp lift kit is a positive experience, variations in construction and assembly in the vehicle manufacturing process will virtually ensure that some parts may seem difficult to install. Additionally, the current trend in manufacturing of vehicles results in a frame that is highly flexible and may shift slightly on disassembly prior to installation. The use of pry bars and tapered punches for alignment is considered normal and usually does not indicate a faulty product. However, if you are uncertain about some aspect of the installation process, please feel free to call our tech support department at the number listed on the cover page. We do not recommend that you modify the Pro Comp parts in any way as this will void any warranty expressed or implied by the Pro Comp Suspension company.*
- ◆ Pro Comp Suspension products are gas-filled and are highly pressurized. Never place any Pro Comp Suspension product in a vise or use a clamp on any Pro Comp Suspension product. Never apply heat near any Pro Comp Suspension product, and never attempt to open or repair any Pro Comp Suspension, in order to prevent serious bodily injury or death. Any attempt to misuse, misapply, modify or tamper any Pro Comp Suspension product voids any warranty and may result in serious bodily injury or death.
- ◆ **DO NOT** use impact tools for loosening or tightening fasteners. This may destroy the bolt threads.
- ◆ Suspension springs are **PRELOADED!** The suspension spring must be compressed with the assistance of an appropriate strut vise and spring compressor. The top mount must not be removed until the preload pressure is no longer present and the spring can be moved by hand, **or serious bodily injury or death may result.**
- ◆ After installing any Pro Comp Suspension product, the caster and camber must be checked and/or adjusted to comply with the vehicle manufacturers specifications. Also, the (load dependent) brake compensator and the anti-lock brake system must be checked and/or reset to comply with the vehicle manufacturers specifications. Also the headlight aim must be checked and adjusted.
- ◆ Reuse the original equipment components only if they are in good condition. Otherwise replace them with new components. Never remove the slight film of oil on the piston rod and seal.
- ◆ All mounting fasteners for struts must be securely tightened before tension is placed on the suspension system. Make sure that the bump stop and dust cover are correctly and properly fastened.
- ◆ When replacing other brands, Pro Comp Suspension shock absorbers should always be installed as a set. Installation of shock absorbers, struts and cartridges requires special tools and expert knowledge. Accordingly, installation of all Pro Comp Suspension products must be performed by a qualified suspension specialist.
- ◆ All Pro Comp Suspension products must only be used for the specific, intended application as indicated in the application guide. **Any use of any Pro Comp Suspension product other than for it's intended use may result in serious bodily injury or death.**

## FRONT INSTALLATION:

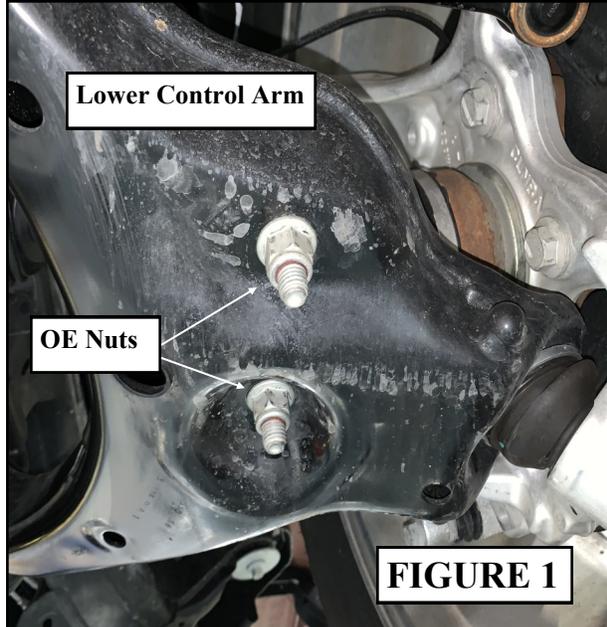
1. Measure the vehicle from the center of the hub to the fender lip and record this measurement below.

2. Be sure you are working on a level  
LF: \_\_\_\_\_ RF: \_\_\_\_\_

LR: \_\_\_\_\_ RR: \_\_\_\_\_

surface. Block the rear tires and raise the front of the vehicle. Support the frame with jack stands.

3. Remove the front wheels.
4. Work on one side of the vehicle at a time.
5. Remove the (2) OE lower strut nuts from the lower control arm. See FIGURE 1.
6. Apply a mark on the OE cam bolt

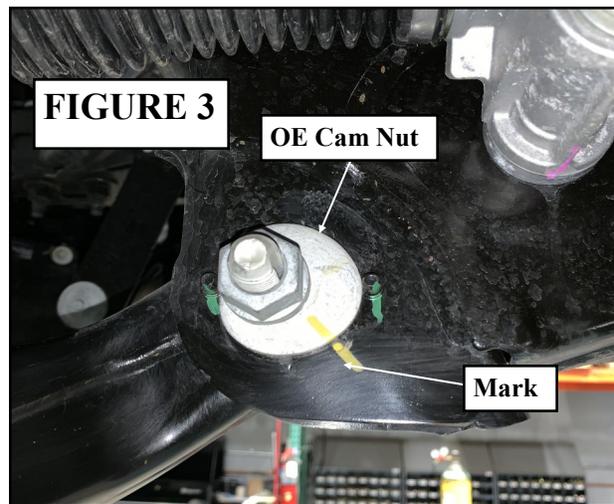
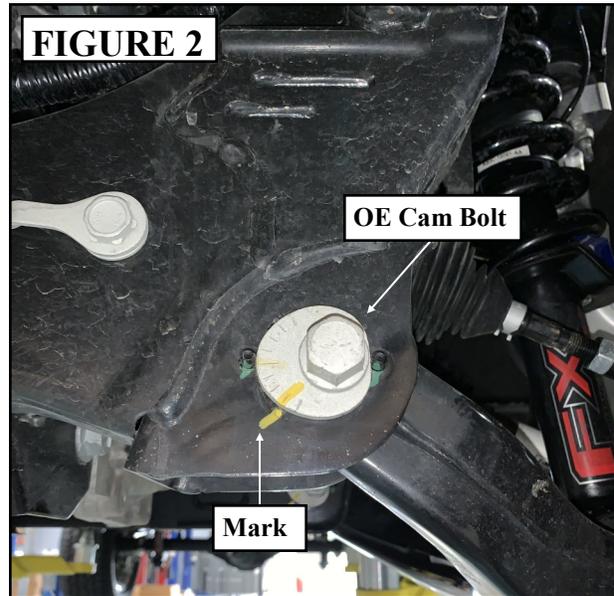


and crossmember. Repeat for the OE cam nut and crossmember. See FIGURES 2 and 3.

**NOTE:** The marks will be used

*as a reference to reinstall the cam bolts and nuts in the same position.*

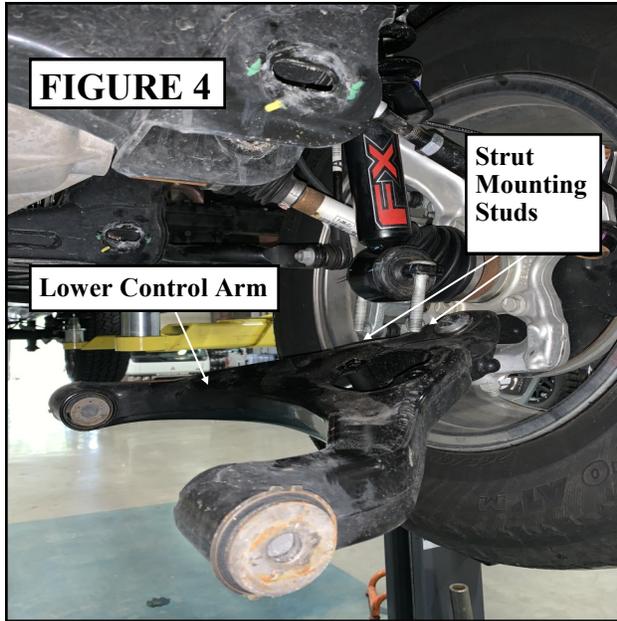
7. Support the lower control arm with



a floor jack and remove the (2) OE lower control arm cam bolts. Carefully lower the lower control arm to disengage the OE lower strut studs from the lower control arm. See FIGURE 4.

**NOTE:** Be sure to loosen the axle nut so the inner axle does not come apart when installing.

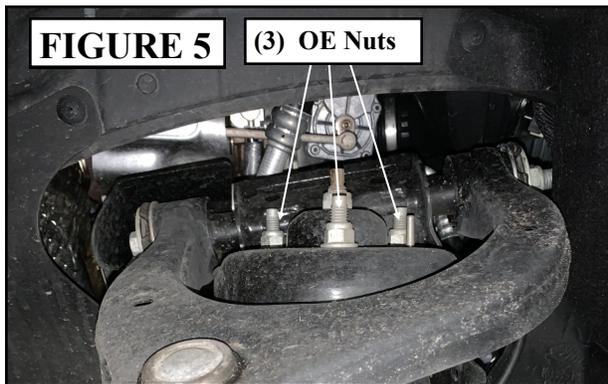
8. Remove the (3) OE upper strut nuts



securing the strut assembly in place. See FIGURE 5.

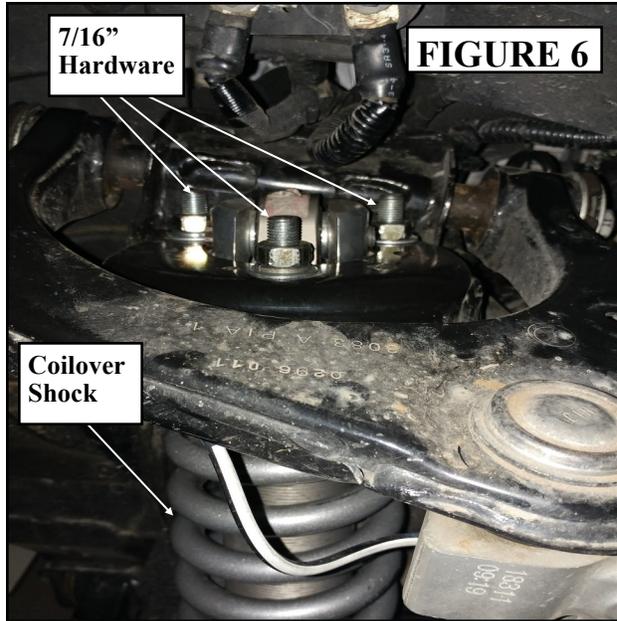
**IMPORTANT!: DO NOT remove the center coil spring retaining nut. Coil is under extreme pressure**

9. Remove the strut assembly from the

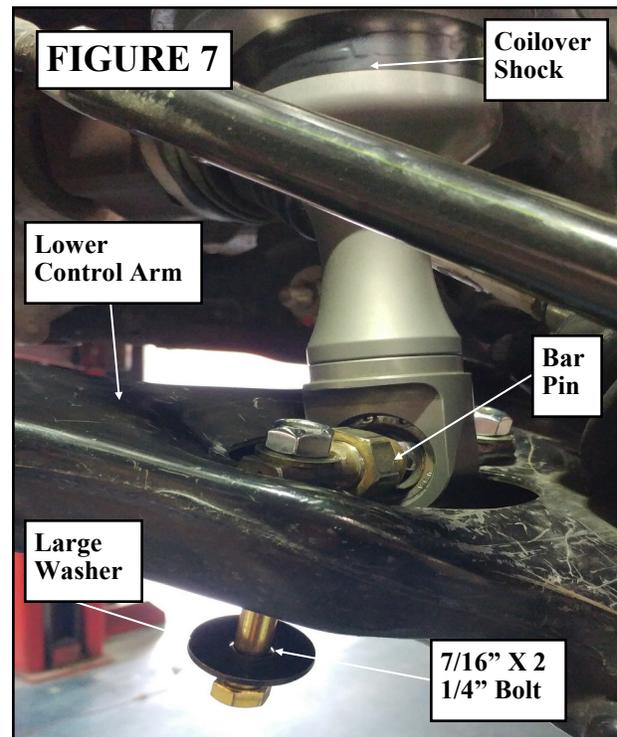


vehicle.

10. Install the coilover into the strut tower and secure using the provided 7/16" hardware from pack (90-6317). Torque the 7/16" hardware to 45 ft./lbs. See FIGURE 6.



11. Fasten the coilover bar pin to the lower control arm inserting the supplied 7/16" X 2 3/4" bolts into the A-Arm from the bottom. Be sure the large washer is installed on the bottom of the A-Arm. Torque to 60 ft-lbs. See FIGURE 7.





12. Use a floor jack to raise the lower control arm into the frame mounting pockets. Secure using the previously removed **OE** cam bolts and nuts. Be sure they are reinstalled in the same position as before removal.

***NOTE: Do not torque OE cam hardware until the vehicle is back on the ground.***

13. Torque previously loosened axle nut to manufacturer's specifications.
14. Repeat steps 5 through 13 on the remaining side of the vehicle.
15. Install the front tires/wheels and lower the vehicle onto the ground. Torque lug nuts to manufacturer's specifications.
16. Torque the lower control arm cam

bolts to manufacturer's specifications.

17. After installation of the coilover shocks, be sure to have the vehicle aligned and also realign the headlights.
18. After 100 miles, re-check all newly installed hardware for proper torque.
19. After every off-road use, re-check all hardware for tightness.

Use this only as a guide for hardware without a called out torque specification in the instruction manual.

<b>Bolt Torque and ID</b>						
<b>Decimal System</b>			<b>Metric System</b>			
All Torques in Ft. Lbs. Maximums						
Bolt Size	Grade 5	Grade 8	Bolt Size	Class 9.8	Class 10.9	Class 12.9
5/16	15	20	M6	5	9	12
3/8	30	45	M8	18	23	27
7/16	45	60	M10	32	45	50
1/2	65	90	M12	55	75	90
9/16	95	130	M14	85	120	145
5/8	135	175	M16	130	165	210
3/4	185	280	M18	170	240	290

<p>1/2-13x1.75 HHCS</p> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">D</div> <div style="border: 1px solid black; padding: 2px;">T</div> <div style="border: 1px solid black; padding: 2px;">L</div> <div style="border: 1px solid black; padding: 2px;">X</div> </div>	<p>M12-1.25x50 HHCS</p> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">D</div> <div style="border: 1px solid black; padding: 2px;">T</div> <div style="border: 1px solid black; padding: 2px;">L</div> <div style="border: 1px solid black; padding: 2px;">X</div> </div>
<p><b>Grade 5    Grade 8</b>                  (No. of Marks + 2)</p>	<p><b>P</b></p>
<p>G = Grade (Bolt Strength)                  D = Nominal Diameter (Inches)                  T = Thread Count (Threads per Inch)                  L = Length (Inches)                  X = Description (Hex Head Cap Screw)</p>	<p>P = Property Class (Bolt Strength)                  D = Nominal Diameter (Millimeters)                  T = Thread Pitch (Thread Width, mm)                  L = Length (Millimeters)                  X = Description (Hex Head Cap Screw)</p>





## The PRO COMP PROMISE WARRANTY

At Pro Comp, we know you have many choices when selecting products to personalize your vehicle. You should demand nothing but the highest quality available and have total confidence that the products you selected are the best in the industry. It is for these reasons that Pro Comp Suspension products are backed by the best warranty in the industry...the Pro Comp Promise!

Pro Comp promises that its products will last a lifetime or we will replace it free of charge. It's that simple! Because of our commitment to quality and manufacturing excellence, we are able to stand behind our products. FOREVER.

It is Pro Comp's Promise that if one of our suspension products breaks not due to misuse, neglect or vandalism, we will replace it. Whether you are the original purchaser or not, you can be assured that we will make it right. The Pro Comp Promise covers all suspension products including shocks and steering stabilizers. Buy Pro Comp Suspension today and enjoy it for the rest of your life!

That's our Pro Comp Promise!

## Notice to Owner, Operator, Dealer and Installer:

Vehicles that have been enhanced for off-road performance often have unique handling characteristics due to the higher center of gravity and larger tires. This vehicle may handle, react and stop differently than many passenger cars or unmodified vehicles, both on and off-road. You must drive your vehicle safely! Extreme care should always be taken to prevent vehicle rollover or loss of control, which can result in serious injury or even death. Always avoid sudden sharp turns or abrupt maneuvers and allow more time and distance for braking! Pro Comp reminds you to fasten your seat belts at all times and reduce speed! We will gladly answer any questions concerning the design, function, maintenance and correct use of our products.

Please make sure that the Dealer / Installer explains and delivers all warning notices, warranty forms and instruction sheets included with Pro Comp product.

Warranty and Return Policy:

Pro Comp warrants its full line of products to be free from defects in workmanship and materials for the life of the product. Pro Comp's obligation under this warranty is limited to repair or replacement, at Pro Comp's option, of the defective product. Any and all costs of removal, installation, freight or incidental or consequential damages are expressly excluded from this warranty. Pro Comp is not responsible for damages and / or warranty of other vehicle parts related or non-related to the installation of Pro Comp product. A consumer who makes the decision to modify his vehicle with aftermarket components of any kind will assume all risk and responsibility for potential damages incurred as a result of their chosen modifications. Warranty coverage does not include consumer opinions regarding ride comfort, fitment and design. Warranty claims can be made directly with Pro Comp or at any factory authorized Pro Comp dealer.

IMPORTANT! To validate the warranty on this purchase please be sure to mail in the warranty card.

Claims not covered under warranty

\* Parts subject to normal wear; this includes bushings, bump stops, ball joints, tie rod ends and heim joints.

\* Finish after 90 days.

\* Damage caused as a result of not following recommendations or requirements called out in the installation manuals.

Pro Comp MX Series coil-over shocks are considered a serviceable shock with a one-year warranty against leakage only. Rebuild service and replacement parts will be available and sold separately by Pro Comp. Contact Pro Comp for specific service charges. Pro Comp accepts no responsibility for any altered product, improper installation, lack of or improper maintenance or improper use of our products.

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<b>PLACE</b> <b>WARRANTY REGISTRATION</b> <b>NUMBER</b> <b>HERE:</b> _____
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