NOSE WHEEL TIRE - INSPECTION/CHECK

EFFECTIVITY: ALL

1. General

   A. This section gives the procedure to do an inspection on the Nose Landing Gear (NLG) wheel tire for wear and general condition.

   B. The procedures in this section are given in the sequence below. The tasks identified with (♦) are part of the Scheduled Maintenance Requirements Document (SMRD).

TASK NUMBER	*DESCRIPTION*	*EFFECTIVITY*
32-49-04-200-801-A ♦	NLG WHEEL TIRE - INSPECTION	ALL

TASK 32-49-04-200-801-A
EFFECTIVITY: ALL

2. NLG WHEEL TIRE - INSPECTION

A. General

(1) This task gives the procedure to do an inspection on the tires of the Nose Landing Gear (NLG). This inspection is a visual examination for wear, damage and general condition.

(2) The AMM TASK 32-49-01-200-801-A/600 gives the procedure to do an inspection of the tires of the MLG.

(3) When you replace a tire, before you disassemble the wheel assembly, make a mark with chalk on the damaged area (protrusion, blister, tear, etc).

B. References

REFERENCE	*DESIGNATION*
AMM TASK 32-00-01-910-801-A/200	LG SAFETY PIN - INSTALLATION AND REMOVAL
AMM TASK 32-49-01-200-801-A/600	MLG WHEEL TIRE - INSPECTION
AMM TASK 32-49-05-000-801-A/400	WHEEL ASSEMBLY OF THE NOSE LANDING GEAR - REMOVAL
AMM TASK 32-49-05-400-801-A/400	WHEEL ASSEMBLY OF THE NOSE LANDING GEAR - INSTALLATION
AMM TASK 51-50-01-820-801-A/200	-

C. Zones and Accesses

Not Applicable

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

ITEM	*DESCRIPTION*	*PURPOSE*	*QTY*
Commercially available	Chalk	To mark the damage area	AR

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	*FUNCTION*	*PLACE*
1	Does the task	NLG

I. Preparation

SUBTASK 841-002-A

WARNING: MAKE SURE THAT THE AIRCRAFT IS IN A SAFE CONDITION BEFORE YOU DO THE MAINTENANCE PROCEDURES. THIS IS TO PREVENT INJURY TO PERSONS AND/OR DAMAGE TO THE EQUIPMENT.

(1) Prepare the aircraft for the inspection procedures.

(2) Make sure that the landing gear safety pins are installed (AMM TASK 32-00-01-910-801-A/200.

J. NLG Wheel Tire - Inspection (Figure 601) (Figure 602)

SUBTASK 212-002-A

WARNING: DO NOT GO NEAR THE AIRCRAFT TIRES WHEN THEY ARE HOT. IF IT IS NECESSARY TO MEASURE THE TEMPERATURE OF THE TIRES, GO NEAR THEM FROM THE FRONT. DO NOT GO TO THE TIRES FROM THE SIDE. THE HIGH TEMPERATURE CAN CAUSE AN EXPLOSION OF THE TIRES.

(1) Tire tread wear limits.

(a) A tire must be removed from service:

1 When the wear level of the tread reaches the bottom of any groove in 1/8 of the tire circumference or more.

CAUTION: DO NOT USE THE TIRES BEYOND THIS POINT. IF YOU DO NOT OBEY THIS PRECAUTION, DAMAGE TO EQUIPMENT CAN OCCUR OR CAN MAKE TIRES NOT TREADABLE AGAIN.

2 When you can see the tread reinforcing ply (top ply cord visible).

a The reinforcing ply in the tread area must not have the cord worn through or exposed more than 1/8 of the circumference of the tire, or not more than one inch wide.

NOTE: The tire can stay in service with the top ply cord visible, no longer than it is necessary to be brought back to a maintenance base and be replaced.

(b) Irregular wear of the tire can be caused by a landing gear not aligned. If you find irregular wear, the tire can be disassembled and turned in the opposite direction, if there is no fabric that can be seen. Do the check and correct the landing gear misalignment. Refer to AMM TASK 51-50-01-820-801-A/200.

(2) Tread cut limits

(a) Any tire cut (3) through no more than one ply, or less than 25.4 mm (1 in) long at an out station may continue a flight or series of flights until it reaches an airport where a tire change can be made. Refer to Figure 602, Sheet 1.

(b) Any cut (3) in the tire over 25.4 mm (1 in) long and more than 1 ply requires replacement prior to flight at any station. Refer to Figure 602, Sheet 1.

(c) Any tire with more than a 25.4 mm (1 in) long cut (3) or with the first ply cut will be replaced prior to departing the maintenance base. Refer to Figure 602, Sheet 1.

(d) Chevron cuts that involve the following:

1 Cuts extending completely across the tire from shoulder to shoulder.

2 Cuts extending completely across a rib and down to or through reinforcing plies.

3 Signs of any tread loosening due to an excessive number of adjacent cuts.

4 Chunking of tread pieces so that rubber down to the reinforcing plies is missing in a sufficient amount to cause the tire unbalance.

5 Tire chevron cut guide:

a When chevron cuts appear on a tire they can be used to indicate a properly inflated or under inflated tire. A properly inflated tire will have the chevron cuts on the center quarter of the tire tread area (exhibit 1 of the Figure 601) due to its round profile. A tire that is under inflated will have chevron cuts completely across the tread (exhibit 2 of the Figure 601) due to its flatter profile.

b When checking tire condition, observe the chevron cut patterns, if any. Tires which show a pattern similar to exhibit 1 are serviceable. Tires which show a pattern similar to exhibit 2 may be checked by maintenance for proper inflation pressure. Those tires within pressure limits or acceptable limits for reinflation may continue in service that day. Maintenance operational control should be notified to arrange for a tire change at termination. Tires below reinflation pressure limits should be removed.

(3) Open tread and sidewall splice. Refer to Figure 602, Sheet 1.

(a) An open tread and/or sidewall splice (4) which exceeds 3.2 mm (1/8 in) width, 3.2 mm (1/8 in) depth and extends across more than three ribs.

NOTE: An open splice generally indicates an unsatisfactory bond during the retread or manufacturing process. An open splice should not be confused with a slight feather edge opening at the splice, which is sometimes caused by talc dust or other foreign matter picked up by the edge of uncured stock when it is installed. The latter conditions are generally found on retreads rather than new treads and are a measure of the retreader's proficiency, rather than a tire defect.

(4) Examine the tire for protrusions. Protrusions along a given area of the tire are a sign of structural damage or separation (movement of plies or tread grooves). If you find protrusions, remove the tire.

(5) Examine the tires (2) of the NLG (Zone 711). Replace the wheel (1) if you find, on a tire (2), one or more of the conditions below (AMM TASK 32-49-05-000-801-A/400 and AMM TASK 32-49-05-400-801-A/400). Refer to Figure 602, Sheet 1.

(a) Impact break (5) rupture of the tire casing in tread or sidewall area. Refer to Figure 602, Sheet 2.

NOTE: Impact break usually from extremely hard landing or penetration by foreign object.

(b) Chevron cutting (6) which has caused: Refer to Figure 602, Sheet 2.

1 Damage to an area which is more than the footprint of the tread on the ground.

2 Damage which is more than the depth of the tread.

(c) A piece of tread has broken away (tread chunking (7)), if fabric is visible. Refer to Figure 602, Sheet 2.

(d) Bulges (8) in the tread or sidewall. Refer to Figure 602, Sheet 2.

(e) Unusual wear on the shoulders (9) of the tire (2). Refer to Figure 602, Sheet 2 and Figure 602, Sheet 1.

NOTE: Continuous operation of a tire at a pressure which is less than the correct pressure causes this wear to occur.

(f) Scores (10) across the tread in a radial direction. Replace the wheel (1) if this scoring (10) includes tread chunking (7), or gives an under-cut of a tread rib. Refer to Figure 602, Sheet 3 and Figure 602, Sheet 1, and Figure 602, Sheet 2.

(g) Cracks in a sidewall (11) where you can see the cords of the casing. Refer to Figure 602, Sheet 3.

NOTE: Random pattern of shallow sidewall cracks, usually caused by age deterioration, prolonged exposure to weather, or improper storage.

(h) Cracks in a tread groove (12) where you can see the cords, or it causes an under-cut of an adjacent tread rib. Refer to Figure 602, Sheet 3.

(i) A rib undercutting (13) which has caused: Refer to Figure 602, Sheet 4.

1 An extension of groove cracking progressing under the tread rib, or

2 Can lead to tread chunking, peeled rib or thrown tread.

(j) A peeled rib (14) resulting in a circumferential delamination of the tread rib, partially or totally, to tread reinforcing ply. Refer to Figure 602, Sheet 4.

(k) A thrown tread (15) which caused partial or complete loss of tread down to tread fabric ply or casing plies. Refer to Figure 602, Sheet 4.

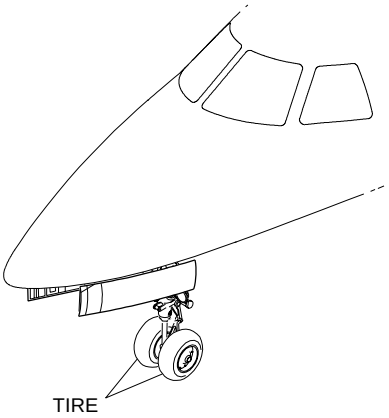
(l) Cut or snag (16) in a sidewall if the injury extends into fabric. Refer to Figure 602, Sheet 4.

NOTE: Penetration by foreign object on runways and ramps, or in shops or storage areas.

(m) Radial or circumferential crack (17) in a sidewall/shoulder area, if the cracking condition is down to fabric. Refer to Figure 601, Sheet 4.

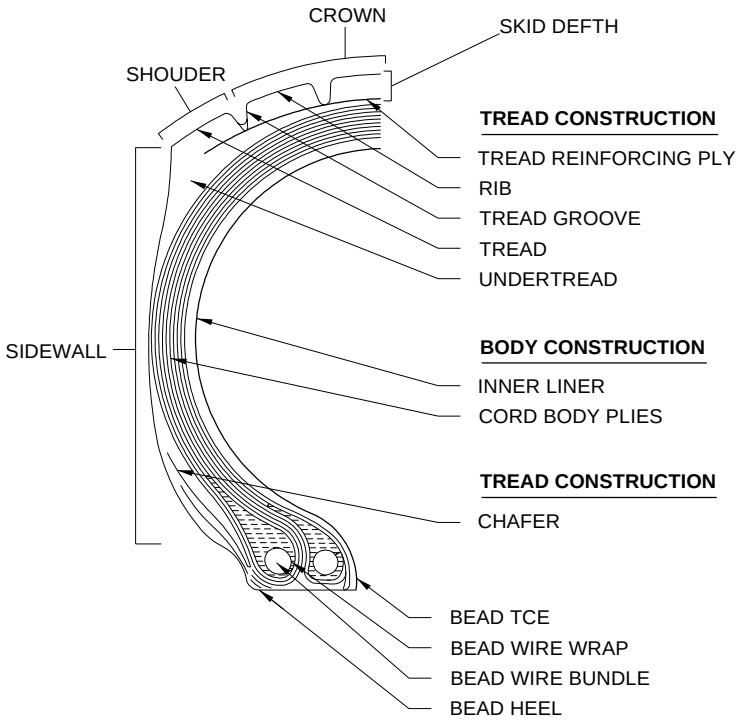
(n) Signs of contamination from materials such as hydraulic fluid, fuel, oil or grease.

EFFECTIVITY: ALL
NLG Wheel Tire - Inspection
Figure 601



DET. A

OPEN TREAD AND SIDEWALL SPLICE



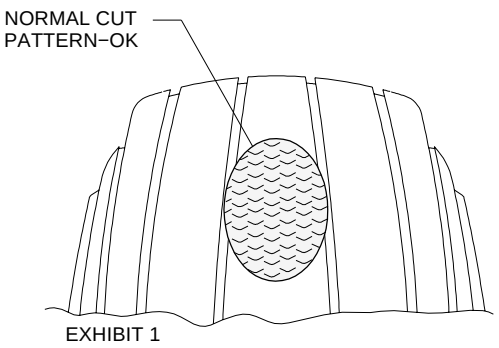


EXHIBIT 1

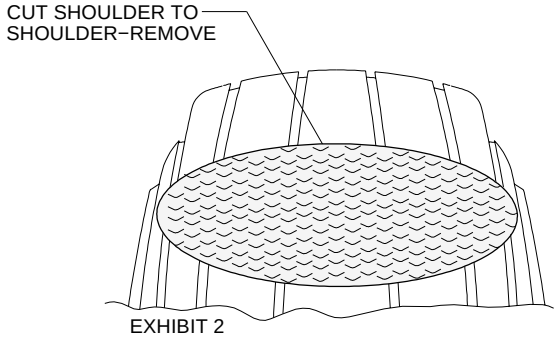


EXHIBIT 2

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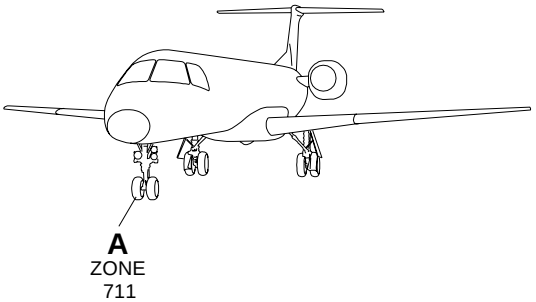
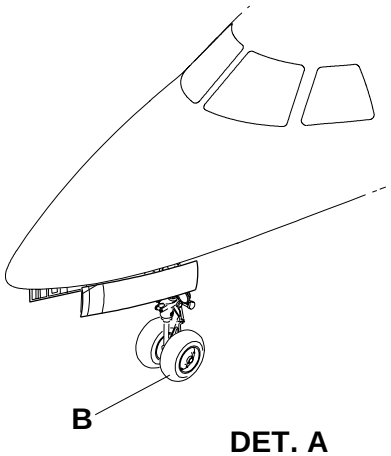
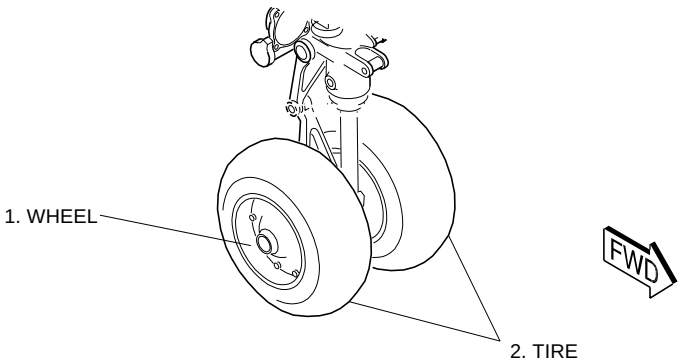
EFFECTIVITY: ALL
NLG Wheel Tire - Inspection
Figure 602 - Sheet 1

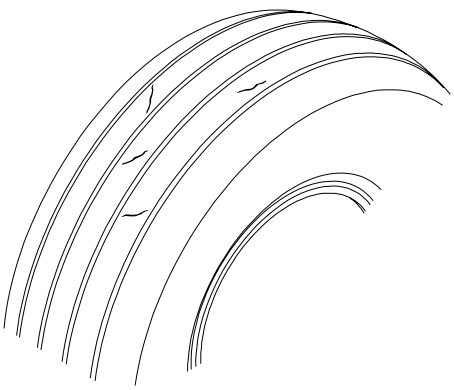




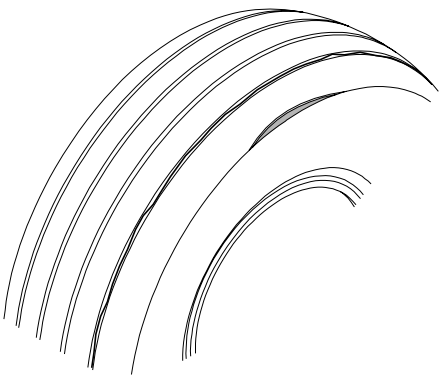
DET. A



DET. B



3. CUT DAMAGE



4. OPEN TREAD AND SIDEWALL SPLICE

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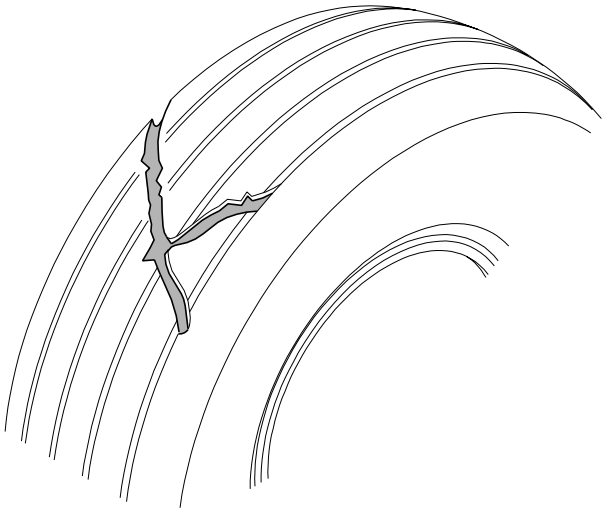
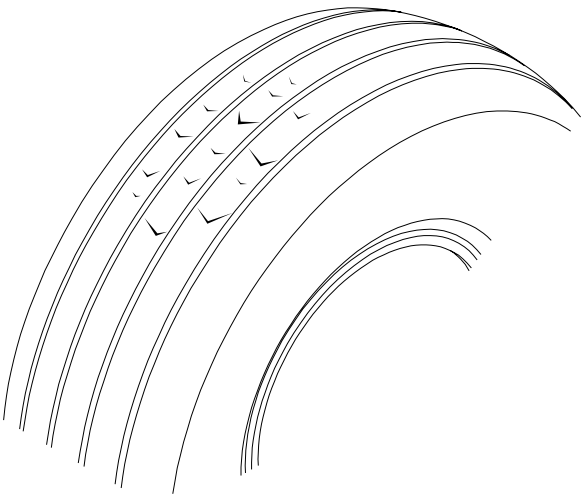
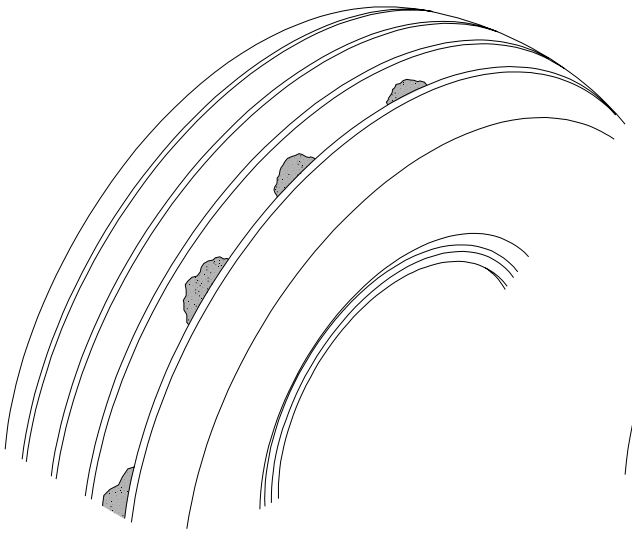
EFFECTIVITY: ALL
NLG Wheel Tire - Inspection
Figure 602 - Sheet 2



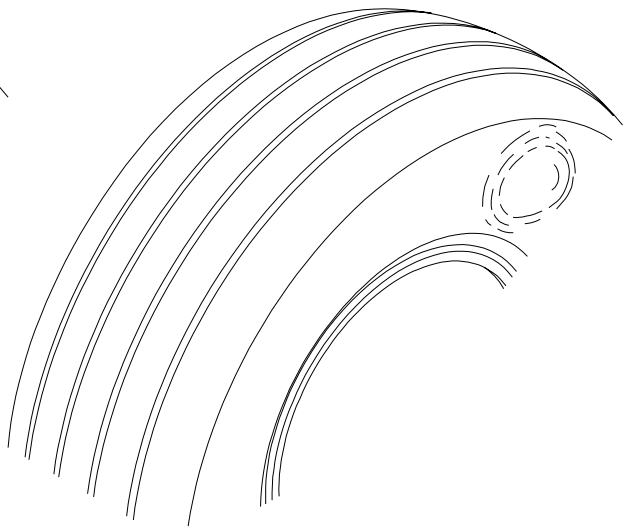
5. IMPACT BREAK



6. CHEVRON CUTTING



7. TREAD CHUNKING



8. TREAD OR SIDEWALL BULGE

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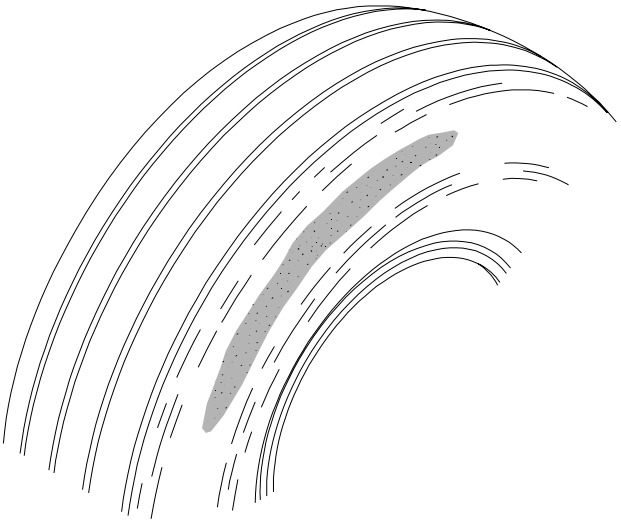
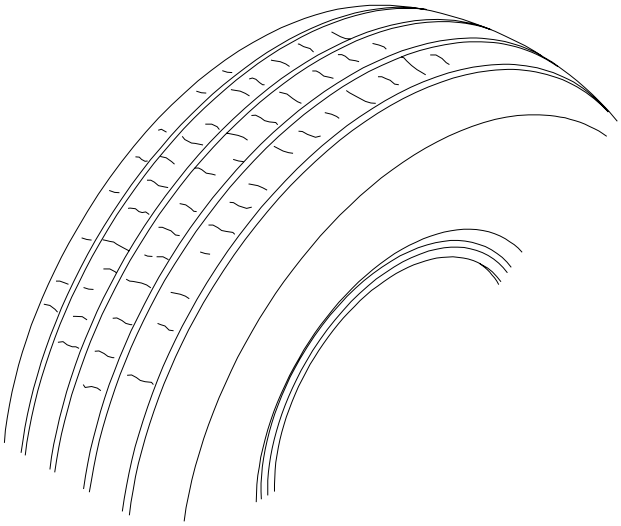
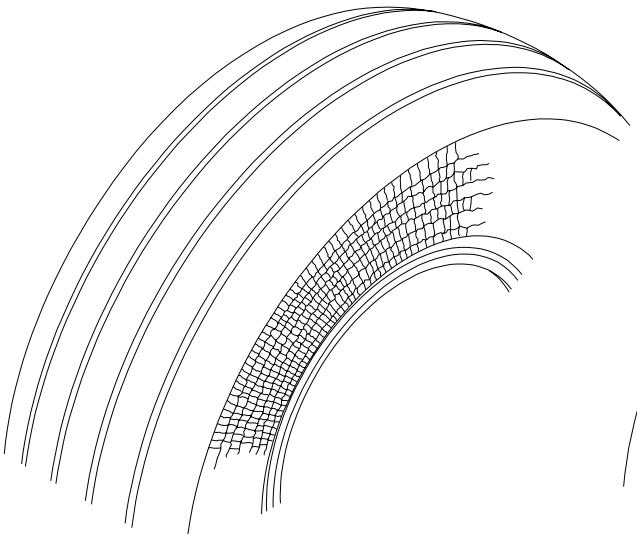
EFFECTIVITY: ALL
NLG Wheel Tire - Inspection
Figure 602 - Sheet 3



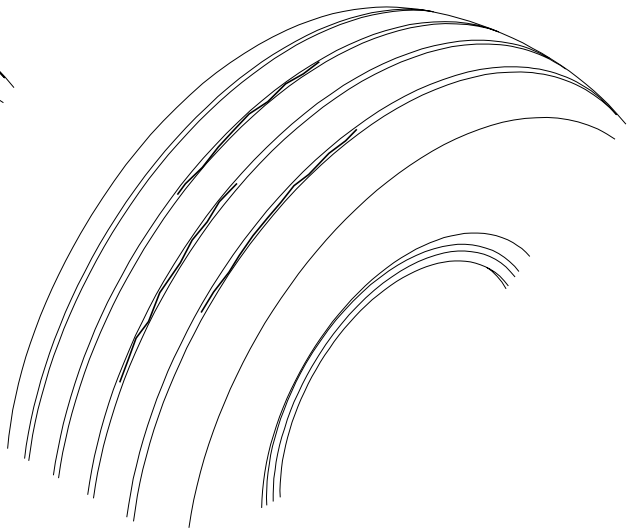
9. SHOULDER WEAR



10. SCORES ACROSS THE TREAD



11. SIDEWALL CRACKS



12. TREAD GROOVE CRACKS

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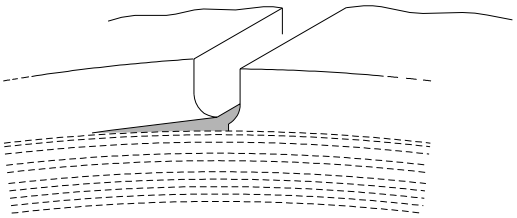
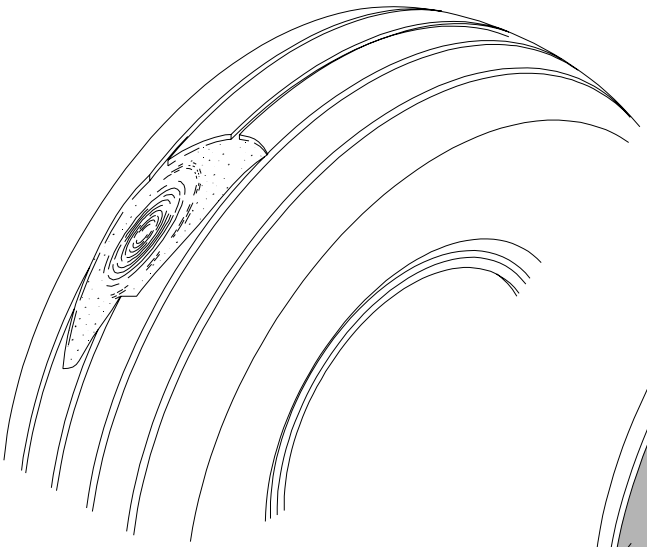
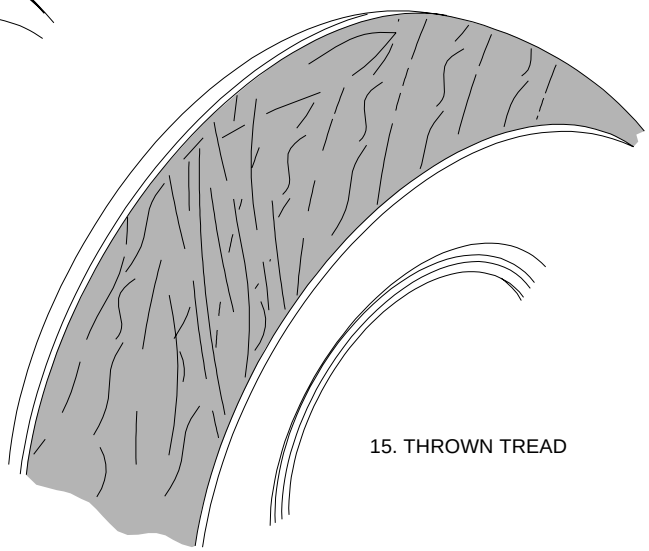
EFFECTIVITY: ALL
NLG Wheel Tire - Inspection
Figure 602 - Sheet 4



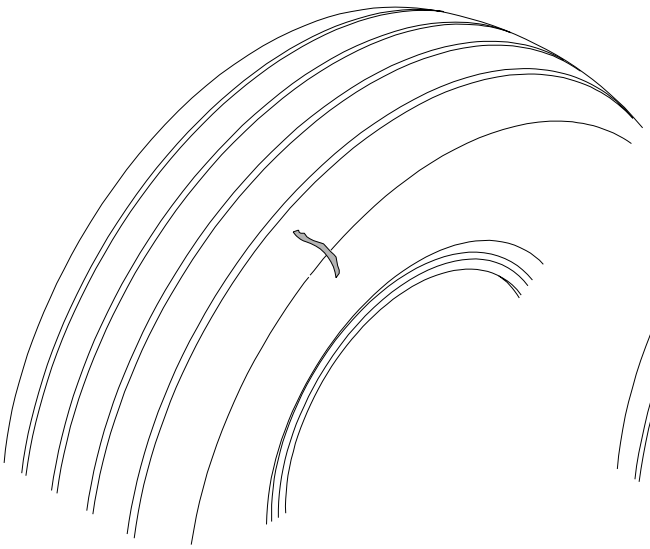
13. RIB UNDERCUTTING



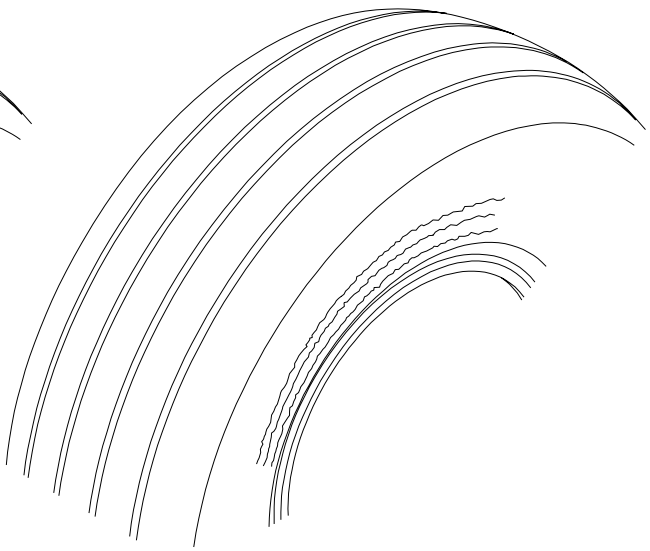
14. PEELD RIB



15. THROWN TREAD



16. CUT OR SNAG



17. RADIAL OR CIRCUMFERENTIAL CRACKS

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