EASA	AIRWORTHINESS DIRECTIVE			
X	AD No: 2007- 0263 Date: 03 October 2007			
No person may operate an aircraft, to which an Airworthiness Directive applies, except in accordance with the requirements of that Airworthiness Directive unless otherwise agreed with the Authority of the State of Registry.				
Type Approval H	older's Name: Type/Model designation(s):			
ATR - GIE Avions	de Transport Régional ATR 42-200, 42-300 and 42-320			
TCDS Number: EASA A.084				
Foreign AD: Not applicable				
Supersedure: This AD supersedes EASA AD 2007-0112 issued on 27 April 2007.				
ATA 32	Main Landing Gear –Side Brace Assembly – Inspection / Modification / Replacement			
Manufacturer(s):	ATR - GIE Avions de Transport Régional (formerly AEROSPATIALE – AERITALIA, AEROSPATIALE – ALENIA, AEROSPATIALE ATR– ALENIA, EADS ATR – ALENIA)			
Applicability:	ATR 42-200, 42-300 and 42-320 aircraft models, all serial numbers, unless MLG side brace assemblies Part Number (P/N) D22710000 with suffix "-9" are installed <u>on both sides</u> , as specified in ATR Service Bulletin (SB) ATR 42-32-0092 (ATR modification No. 8463).			
Reason:	One ATR 42-300 experienced a collapse of the Right (RH) Main Landing Gear (MLG) when taxiing, caused by failure of the side brace assembly. Investigations revealed a crack propagation that occurred from a corrosion pit, in a very high stressed area of the upper arm. Dimensions of the corrosion pit were lower than the minimum defect size that can be detected by usual inspection means used during landing gear overhaul. The superseded EASA Airworthiness Directive (AD) 2007-0112 was issued to require repetitive inspections on affected high stressed areas on MLG side brace assemblies for crack detection and to replace the affected side brace assembly if any defect was found. Since the issuance of AD 2007-0112, a modification of side brace upper arm has been developed as terminating action. However, production non-conformity of the inspection tool was discovered. In order to correct the discrepancy of the initial tool, new inspection tool components have been manufactured and the Service Bulletin (SB) Messier Dowty 631-32-191 has been updated to revision 2 accordingly. This directive mandates re-inspection of MLG side brace assemblies previously inspected i.a.w. revision 1 of the Messier Dowty SB 631-32-191 and reduces the inspection interval initially proposed in AD 2007-0112 in order to maintain the same level of confidence.			

	For the reasons stated above, this new AD: - retains partially the requirements of AD 2007-0112 which is superseded			
		 requires Eddy Current inspections to be done with the corrected tool kits a instructed in Messier Dowty SB 631-32-191 Rev 2. 		
		 requires re-inspection at a reduced interval of all affected MLG side brace assemblies previously inspected with the defective tool kits. 		
		- requires as terminating action of this AD, installation of new side braces		
Effective Date:	17 October 2007			
	<u>Note 1</u> : Unless otherwise specified, the Flight Cycles (FC) and times indicated in this directive must be interpreted as Total Cycles Since Overhau (TCSO) or time since overhaul (TSO) and as Total Cycles Since New (TCSN or time since manufacture for side brace assemblies that have not undergon any overhaul yet.			
	INSPECTIONS OF THE SIDE BRACE ASSEMBLIES			
	1. For MLG side brace assemblies P/N D22710000 without suffix "-9".			
	1.1 For MLG side brace assemblies NOT previously inspected per <u>Revision 1 of Messier Dowty SB 631-32-191</u> ,perform the first Eddy current inspection in accordance with the accomplishment instructions of Messier Dowty SB 631-32-191 Revision 2 at thresholds given in Table 1:			
		Table 1		
	For MLG Side Brace Assembly with TCSN or TCSO on 11 May 2007 [effective date of AD 2007- 0112]	after 11 May 2007 do the initial Eddy current inspection		
	More than 8 000 FC	Within the next 500 FC		
Compliance:	Between 5 000 and 8 000 FC	Within the next 1 000 FC or before accumulating 8 500 FC, whichever occurs first		
	Less than 5 000 FC	Within the next 2 000 FC or before accumulating 6 000 FC, whichever occurs first.		
	<u>Note 2</u> : Prior to the inspection, it is necessary to disconnect the hydraulic pip from the MLG side brace unlocking actuator. Refer to ATR Technical Instruction No.ATR42-07-01 for aircraft preparation, hydraulic pipe disconnection and reconnection, and for subsequent landing gear normal extension and retraction functional tests.			
	1.2 For MLG side brace assemblies previously inspected per revision 1 of Messier Dowty SB 631-32-191, within the next 1 000 FC from the last inspection or within the next 200 FC after the effective date of thi AD, whichever occurs later, perform an Eddy current inspection of MLG side brace assemblies in accordance with the accomplishmer instructions of Messier Dowty SB 631-32-191 Revision 2.			
	1.3 After accomplishment of § 1.1 or 1.2 of this AD, repeat at intervals not to exceed 2 600 FC, the Eddy current inspection of the MLG side brace in accordance with the accomplishment instructions of Messier Dowty SB 631-32-191 Revision 2;			

	1.4 If any defect is found on the side brace assembly during the inspections as required by § 1.1, 1.2 and 1.3 of this AD, replace the affected side brace within the compliance times given in Table 2:		
	Table 2		
	If the depth of detected defect is:	Replace the side brace:	
	More than 0.3 mm	Before next flight	
	From 0.15 mm to 0.3 mm	Within the next 200 FC after the detection date	
	<u>Note 3</u> : Indications less than 0.15 mm (half of the calibration signal) are considered as not significant. MODIFICATION / RE-IDENTIFICATION OF THE SIDE BRACE ASSEMBLIES		
	R42 MRBR task 321000-01 or 321000- iated brace assemblies for restoration) b, but not later than: 3.5 years (ref. Note 1), whichever occurs as incorporating MESSIER DOWTY SB ER DOWTY Service Letter (SL) 631-32-		
		assemblies P/N D22710000 without the accomplishment instructions of Bulletin 631-32-194;and	
	 2.2 Modify and re-identify (by adding after modification a suffix "-9" to P/N D22710000) the MLG side brace assemblies as indicated in the accomplishment instructions of the MESSIER DOWTY Service Bulletin 631-32-194. FURTHER INSTALLATIONS OF THE SIDE BRACE ASSEMBLIES 		
	 Before 31 December 2015, replace any remaining unmodified MLG side brace assembly P/N D22710000 without suffix "-9" with assemblies P/N D22710000 with suffix "-9" in accordance with the accomplishment instructions of Service Bulletin ATR42-32-0092. 		
	 After 31 December 2015, no person shall install MLG side brace assembly P/N D22710000 without suffix "-9" on any ATR 42-200, 42-300 and 42-320 series aircraft. 		
	Service Bulletin ATR 42-32-0092 original issue;		
	Messier Dowty SB 631-32-191 revision 2, SB 631-32-194 and 631-32-072, original issues		
Ref. Publications:	Messier Dowty Service Letter No 631-32-139		
	ATR Technical Instruction No. ATR42-07-01 original Issue.		
	Any later approved revision of these documents is acceptable		
	 If requested and appropriately substantiated, EASA can accept Alternative Methods of Compliance for this AD. 		
Remarks:	 This AD was initially posted as PAD 07-129 for public consultation on 09 August 2007 and re-submitted to consultation as PAD 07-129R1 until 21 September 2007. The Comment Response Document can be found at 		

3.	http://ad.easa.europa.eu Enquiries regarding this AD should be referred to the AD Focal Point - Certification Directorate, EASA. E-mail: <u>ADs@easa.europa.eu</u>
4.	For any question concerning the technical content of the requirements in this AD, please contact: ATR - GIE Avions de Transport Régional, Continued Airworthiness Service, 1, allée Pierre Nadot - 31712 Blagnac cedex France, Tel.: +33 (0)5 62 21 62 21 - Fax: +33 (0) 5 62 21 67 18; Email: <u>continued.airworthiness@atr.fr</u>