

HYDRAULIC HOSE 100R6 - Single Fiber Braid, Rubber Covered Hose**1. SCOPE**

This specification contains the dimensions and performance requirements for 100R6 type hoses used in hydraulic assemblies for tractors and farm equipment.

2. APPLICATIONS

This specification is originally release to cover hoses for use with petroleum based hydraulic oils. These hoses will also be compatible with water based hydraulic fluids. The hose operating temperature ranges for petroleum based fluids is in the range of -40° to +100°C (-40° to +212°F). If operation exceed the +100°C temperature, this will reduce the life of the hose.

3. RELATED STANDARDS

SAE J 517-95 section 18

4. REQUIREMENTS

4.1 Hose construction shall be of an inner tube of oil resistant synthetic rubber, and one braided ply of suitable textile yarn, and an oil and weather resistant synthetic rubber cover.

4.2 Dimensions and tolerance applicable to a given hose is listed in Table 1. Specification requirements for a specific hose is listed in Table 2. The concentric requirements for a given hose shall be listed in Table 3.

4.3 QUALIFICATION TESTS

Hose which are to meet this specification requirements shall meet the following qualifications;

4.3.1 Dimensional check

The specific hose shall meet the dimension requirements listed in Table 1.

4.3.2 Proof Test

All test samples shall not leak at the proof pressure.

4.3.3 Change in Length Test

When a sample is tested, it shall not exceed +2% to -4% change in length when pressurized at operating pressure.

4.3.4 Burst test

Hose with a free length assembly of 460 mm (18.0 in) shall not leak or fail below the minimum burst pressure.

4.3.5 Leakage Test

300mm (12.0 in) free hose length assemblies shall not leak or fail at proof pressure. A minimum of two sample shall be tested.

4.3.6 Cold Bend Test

An assembly bent to the minimum bend radius shown in Table 2 and exposed to a temperature of -40°C (-40°F) shall not exhibit no cover cracks or leakage.

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					 NEW HOLLAND		ENGINEERING SPECIFICATION	
							FRAME 1	OF 3
							PART NUMBER	
							86557065	
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Materials / Elastomers**FNHA-2-G-105.00****4.3.7 Oil Resistance Test**

The volume change in the entire hose construction (inner tube and cover) shall be within the range of 0% to +100%.

4.3.8 Ozone Resistance Test

Test samples shall be subjected to a environment comprised of air and a partial pressure of 50 mPa (50 parts ozone per 100 million parts of air at standard atmospheric conditions) at an ambient temperature of 40°C (104°F). The specimens shall not show evidence of cracking or deterioration when viewed with a seven- power magnification while still in stress condition. The exposure time for this test is 70 hours. A minimum of two samples shall be tested.

4.4 Infrared Spectrophotometry

New Holland at its option, may conduct infrared analysis of material/parts supplied to this specification. The curves established for initial approval shall constitute the reference standard and shall be kept on file at New Holland Inc.. All samples shall produce curves that corresponds to the reference standard when tested under the same conditions as those on the master curve.

4.5 The shelf life of this product shall be 4 years maximum.

5. APPROVAL OF MATERIALS

Materials defined by this specification must have prior approval by the responsible Materials Engineering Activity. Suppliers desiring approval of their materials shall first obtain an expression of interest from the affected Purchasing, Design, or Materials Engineering activity. Upon request, the supplier shall submit to the affected Materials Engineering activity its own laboratory report to the specification (test results, not nominal values), the material designation and code number, and test specimens for New Holland evaluation. Upon approval, the material will be added to the Engineering Materials Approved Source List.

6. SUPPLIER'S RESPONSIBILITY

All materials supplied to this specification shall be equivalent in all characteristics to the material upon which approval was originally granted. Prior to the making of any changes in the properties, composition, construction, color, dimension, processing, or labeling of the material originally approved under this specification, the supplier shall notify Purchasing and the affected Materials Engineering activity of the proposed changes and obtain the written acknowledgment of the Material Engineering activity. Test data, test samples, and a new identification code are to be submitted with the request.

TABLE 1 - DIMENSIONS AND TOLERANCE FOR HOSE 100R6

Hose ID size in	Hose Dash Size	Hose ID Basic mm	Hose ID Basic in	Hose ID Tolerance Plus mm	Hose ID Tolerance Plus in	Hose ID Tolerance Minus mm	Hose ID Tolerance Minus in	Hose OD Max mm	Hose OD Max in	Hose OD Min mm	Hose OD Min in
3/16	-3	4.8	0.188	0.6	0.025	0.3	0.010	11.9	0.469	10.3	0.406
1/4	-4	6.4	0.250	0.6	0.025	0.3	0.010	13.5	0.531	11.9	0.469
5/16	-5	7.9	0.312	0.6	0.025	0.3	0.010	15.1	0.594	13.5	0.531
3/8	-6	9.5	0.375	0.6	0.025	0.3	0.010	16.7	0.656	15.1	0.594
1/2	-8	12.7	0.500	0.8	0.030	0.3	0.010	20.6	0.812	19.0	0.750
5/8	-10	15.9	0.625	0.8	0.030	0.3	0.010	23.8	0.938	22.2	0.875
3/4	-12	19.0	0.750	0.8	0.030	0.3	0.010	27.8	1.093	25.4	1.000



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