



[9110-05-P]

## **DEPARTMENT OF HOMELAND SECURITY**

### **Transportation Security Administration**

#### **Explosives Detection Canine Recommended Standards**

**AGENCY:** Transportation Security Administration, DHS.

**ACTION:** Notice; Recommended Standards.

**SUMMARY:** The Transportation Security Administration (TSA) is publishing this notice to provide recommended technical, medical, and behavioral standards for explosives detection canines. TSA is recommending these standards to assist transportation stakeholders in evaluating canines to be purchased for purposes of an explosive detection canine team to screen individuals and property in the public areas of airports in the United States. The recommended standards provided through this notice are consistent with the standards TSA requires for canines to be purchased for purposes of TSA's explosive detection canine programs.

**FOR FURTHER INFORMATION, CONTACT:** CTC Resolution Team, Canine Training Center, Office of Training and Development, Transportation Security Administration, U.S. Department of Homeland Security; e-mail to [CTC\\_ResolutionTeam@tsa.dhs.gov](mailto:CTC_ResolutionTeam@tsa.dhs.gov) (NOTE: Address requires underscore, “\_”, between “CTC” and “Resolution.”)

#### **SUPPLEMENTARY INFORMATION:**

##### **I. Background**

TSA recognizes that canines successful at explosives detection in active and dynamic transportation environments are a specialized product. There is a clear

distinction that separates these canines from the typical pet population or canines used/trained for tasks in a more controlled and repeatable environment. This specialization is even more pronounced in canines used to search individuals who may be wearing hidden improvised explosive devices.

Both TSA and Congress recognize that a successful explosive detection canine begins with a canine that meets certain technical, behavioral, and medical standards before training begins. Section 1927 of the TSA Modernization Act,<sup>1</sup> requires TSA to establish a working group composed of canine experts to develop standards and recommendations for the breeding and training of canines capable of detecting explosives, and to develop recommendations on how TSA can engage other stakeholders to further the development of domestic canine breeding capacity and training.

To meet this requirement, TSA and the Department of Homeland Security's Science and Technology (S & T) Directorate identified partners in law enforcement, academia, and the working canine vendor community.<sup>2</sup> This working group met several times to develop the standards required by section 1927. TSA consulted with the working group and its work on breeding standards when posting a Blanket Purchase Agreement (BPA) for explosive detection canines for TSA, published in December 2019 (Notice ID 70T02018Q9NOTD408).<sup>3</sup>

Section 1928 of the TSA Modernization Act requires TSA to enhance the supply of canines for purchase by TSA and transportation stakeholders by publishing these

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<sup>1</sup> Division K, Pub. L. 115–254 (132 Stat. 3186; Oct. 5, 2018).

<sup>2</sup> The working group included representatives from the TSA Canine Training Center (CTC), Auburn University, DHS S&T Directorate, National Police Canine Association, American Kennel Club, Superior Tactics, Arete Canines, Penn Vet Working Dog Center, and Johns Hopkins University Applied Physics Laboratory.

<sup>3</sup> Documents related to this BPA are available at the following website: <https://beta.sam.gov/opp/2bd9fcadb432426eb4782d6d08b267a2/view>.

behavior, medical, and technical standards with the expectation that they may be used by transportation stakeholders in purchasing third-party explosives detection canines to be eventually certified by appropriate authorities for the screening of individuals and property, including detection of explosive vapors among individuals and articles of property.<sup>4</sup> The statutes requires the standards made available under section 1928 for transportation stakeholders to be based on the standards developed under section 1927.

TSA is providing the following recommended standards for transportation stakeholders to apply when purchasing canines for an explosive detection canine program. The recommended standards are consistent with TSA's requirements for explosive detection canines, as stated in the BPA,<sup>5</sup> with modifications to make them more relevant to TSA's transportation stakeholders.

TSA encourages transportation stakeholders to use these recommended standards when purchasing canines intended to provide an explosive detection canine team capability for purposes such as enhancing security within the public area of airports. For purposes of these standards, potential transportation-stakeholder purchasers are referred to as "procurers" and any breeders or other persons offering canines for purchase are referred to as "vendors."

This notice neither addresses nor identifies specific companies or organizations to be used by transportation stakeholders to certify explosives detection canine teams. To the extent the notice refers to certification,<sup>6</sup> TSA recognizes that there are numerous

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<sup>4</sup> *Id.* at § 1928(a).

<sup>5</sup> For more detailed information on the standards, TSA encourages transportation stakeholders to review the additional documentation in the BPA *See supra* n. 3.

<sup>6</sup> *See, e.g.*, the United States Police Canine Association, North American Police Working Dog Association, and the International Police Working Dog Association.

organizations that conduct certifications of canine teams, including certification for explosive detection capabilities, and encourages transportation stakeholders to become familiar with their certification requirements. The notice also assumes that not all dogs presented by a vendor for purchase will meet the needs of the procurer and that a procurer using these recommended standards will have individuals qualified to assess and evaluate canines to determine whether they meet the standards.

The contents of this notice do not have force and effect of law and are not meant to bind the public in any way. This notice is intended only to provide clarity to the public regarding existing requirements under the law or agency policies.

## **II. Standards**

*A. Technical Standards.* TSA recommends that transportation stakeholders apply the following technical standards when procuring canines for an explosive detection canine team capability.

1. Identification. — The vendor should ensure that all potential candidate canines should have a permanent identification in the form of an implantation a microchip before being presented for potential purchase. In general, TSA recommends that the microchip meet International Organization for Standardization (ISO) standards. The vendor and subsequent procurer should consistently use this microchip ID as the legal marker on all radiographs for purposes of medical requirements and evaluation. The microchip should be clearly identifiable as associated with the specific canine in all medical and training records.

2. Breed. — Canines should be of one of the following sporting breeds: Labrador Retrievers, Flat Coated Retrievers, Vizslas, and German Shorthaired/Wirehaired Pointers.

3. Age. — All canines presented for training should be between 12-36 months of age at the time of delivery.

4. Sex (surgical altering). — Males and females may be procured reproductively “intact.”

5. Immediate disqualifiers for assessment acceptance. —

(a) Canines previously screened or evaluated by the procurer within the previous 30 days.

(b) Canines previously determined by the procurer to have disqualifying behavioral or medical characteristics in past evaluations. This disqualification should include any canine previously eliminated from the TSA program or other federal, state, or local program based on behavior or medical characteristics.

(c) Any canine showing signs of fear, shyness, retreating, or avoidance behaviors (people and environment), noise sensitivity (to include the potential for gunfire), submissive urination, or refusal to negotiate objects.

(d) Aggression. — Any canine with a clear history of aggression or showing aggressive behavior toward human beings or other animals, as defined by the SWGCANINE guidelines (<https://swgcanine.fiu.edu/>), as well as toward items and equipment in and around the testing area should not be accepted.

(e) Forced training. — Evidence, as determined by the evaluators, that the canine has been subjected to forced fetch, electronic collar training, or the use of some form of compulsion in an effort to force a canine to pick up or retrieve an object.

(f) Disease or Injury. — Canines that are injured, displaying potentially infectious disease, or are considered overweight or underweight should not be accepted for assessment. Previously medically declined canines with medical records displaying treatment and recovery from injury or disease may be assessed.

(g) Medical disqualifications (*see* Medical Requirements).

(h) Falsification identified in any of the deliverable records.

6. Cumulative Disqualifiers. — The following behaviors, although not an all-inclusive list, are often cumulative in nature and may constitute a failure:

(a) Loss of interest in the reward object.

(b) Failure to pursue thrown reward object.

(c) Visual rather than olfactory search behavior.

(d) Weak or interrupted search behavior.

(e) Displays a lack of physical stamina.

(f) Failure to accept being placed in sit position.

(g) Failure to return to active/effective search behavior after being placed in sit position.

(h) Strong tendency to scratch, claw or bite objects in the environment, to include reward/odor, while searching.

(i) Excessive interest in distracting odors or stimuli or preoccupation with scent-marking.

(j) Failure to follow presentations.

(k) Overreliance on presentations or encouragement from the evaluator/handler to maintain productive search behavior.

(l) Repeated disruption of search behavior due to inability to ignore distractions. During the search, the canine should be expected to tolerate close contact with one or more persons that may speak to or touch the canine, make noise, or use objects in the environment to provide strong visual and auditory stimuli.

(m) Frustration demonstrated by barking or other vocalizations.

(n) Repetitive open mouth searching as opposed to sniffing behavior during a search.

(o) Canines requiring excessive amounts of praise to perform tasks. The emphasis is for a canine with strong independent search abilities.

(p) Repetitive immature behaviors.

*B. Medical Standards.* TSA recommends that transportation stakeholders apply the following medical standards when procuring canines for an explosive detection canine team capability.

1. In general, all canines should be in excellent health with no acute or chronic disease or condition, which could either hamper their ability to perform, or would be excessively costly to treat. At the time of evaluation, each canine should be medically able to enter training/certification events.

2. Medical Screening of Radiographs of Candidate Canines. — Vendors should submit diagnostic quality film or digital radiographs, at no cost to the procurer, for non-binding evaluation of elbow, lumbar spine and hip conformation. Minimum data imprinted (“flashed”) permanently on the radiograph/digital image at the time of exposure should include canine identification (name, tattoo/brand number, if assigned,

and microchip number), whelping date, the facility at which they were taken, and date of examination. Date of radiographic examination should be no greater than 4 months (120 days) prior to evaluation of the canine. Following initial radiographic screening, vendors should be notified if radiographs for any canine they intend to present are not of sufficient diagnostic quality and should need to be repeated prior to scheduled arrival. Canines may be rejected upon initial arrival examination if their radiographs should not be submitted before scheduled arrival, or are inadequate for evaluation until repeat radiographic submissions are of satisfactory diagnostic quality.

3. Veterinary staff supporting the procurer of canines for explosive detection should examine all canines that have passed the initial behavioral selection process. This evaluation should include complete physical examination; collection of blood for routine testing; and possibly, anesthesia and radiographs of the hips, elbows, lumbar spine or other areas based on examination, even if imaging has been performed previously by the vendor. Laboratory availability may affect the procurer ability to perform specific tests. However, the laboratory minimum database should include: blood urea nitrogen, blood creatinine, serum electrolytes, blood glucose, packed cell volume, and total solids. Screening for infectious diseases/organisms such as T. Cruzi, Leishmania sp, Lyme disease, or other diseases/organisms depending on origin of the canine may be necessary as determined by the veterinarian. The veterinarian should assess abnormalities to determine the presence of acute or chronic disease processes that may have long-term medical care implications for the canine. If further evaluation is warranted, tests should be completed at the discretion of the veterinarian or the canine should be determined to be unacceptable. The following areas should be evaluated closely; most, but not all,

disqualifying features are noted. A canine that has been presented once for consideration for purchase and that has been disqualified for medical reasons should not be resubmitted for consideration unless the vendor can document that the medically disqualifying condition has been corrected.

(a) Gait. — All canines should display normal mobility at a walk and run. Canines should be disqualified for any gait abnormality which could affect the canine's ability to perform normal explosive detection canine duties.

(b) Skin and Coat. — Skin and coat should be healthy in appearance, displaying no evidence of chronic dermatitis, allergies, infections, injuries or marked external parasite infestation (e.g., mange, fleas, etc.). A matted, unthrifty hair coat may not be grounds for disqualification but should raise concern about the canine's general health.

(b) Teeth and Jaws. — Canines should have normal dentition and dental occlusion. Canines should be rejected if they have brachygnathism (undershot jaw) or prognathism (overshot jaws) if the veterinarian feels the condition should adversely affect eating or handling of the reward. All four canine teeth should be present and not be weakened by notching, enamel hypoplasia or excessive wear. Teeth should not have more than 1/3 inch of the tip missing or have pulp cavity exposed. Oral infection or excessive periodontal diseases should be grounds for disqualifying a canine and broken teeth or excessively worn teeth may be disqualifying.

(d) Heart and Lungs. — Heart sounds, rate and rhythm should be normal (e.g., no murmurs, arrhythmia, etc.). In general, the cardiovascular and respiratory system should be normal at rest and upon exercise.

(e) Limbs and Joints. — Any condition of the bones, joints or muscles that might hamper or restrict the normal performance of duty is grounds for disqualification. Examples include:

(i) Hip dysplasia and elbow dysplasia. A malformation of the hip and elbow joints, respectively, which usually results in degenerative joint disease, arthritis and chronic lameness. Radiographic evidence of hip dysplasia or elbow dysplasia or degenerative joint disease, as determined by the veterinarian, should disqualify a canine.

(ii) Fractures, which are unhealed, should be disqualifying. Healed fractures resulting in significant bone or joint conformation changes or lameness should be disqualifying.

(iii) Ligament damage, osteoarthritis, etc., of the limb joints is generally disqualifying.

(iv) Transitional vertebrae of the caudal lumbar spine, lumbosacral junction or sacrum should be disqualifying. Asymmetric pelvic attachment is also disqualifying.

(f) Nervous System and Basic Senses. — Any defect in the nervous system, to include the basic senses of vision, hearing and sense of smell, should be considered disqualifying. Examples include, but are not limited to, opacities of

the cornea, eyelid deformities, cataracts, retinal degeneration, chronic otitis, acute or chronic rhinitis/sinusitis and spinal disease.

(g) Heartworms. — All canines submitted for purchase should be free of heartworm infection (*Dirofilaria immitis*). The presence of heartworm infection should be determined by using a heartworm antigen test. A negative heartworm concentration test (filtration or Knott's) is not sufficient evidence to declare the canine heartworm-free.

(h) Intestinal Parasitism. — Infection with intestinal parasites (roundworms, hookworms, tapeworms, etc.) may not be disqualifying, depending on the level of infection and the overall condition of the canine. Presence of intestinal parasites is, however, an indication of poor care and should raise concern about the canine's general health.

(i) External Parasitism. — Presence of fleas, ticks, lice, mange mites or ear mites may not be disqualifying, depending on the amount of infestation, the degree of associated skin disease, and the overall condition of the canine. Presence of external parasites is, however, an indication of poor care and should raise concern about the canine's general health.

(j) Immunization. — All canines presented should have been vaccinated within the previous 12 months for rabies, canine distemper, canine adenovirus (TYPE 2), coronavirus, parainfluenza, parvovirus and leptospirosis. All canines should also have been vaccinated for Bordetella within the previous 6 months (but no less than 1 month prior to presentation); preferably via the modified live oral or intranasal forms but the killed subcutaneous injectable version is also

acceptable. Records of all vaccination administration should be copied from a legal veterinary medical record and signed by the licensed veterinarian responsible for administration of the vaccinations. A rabies vaccination certificate, with individual canine identification (name, tattoo, brand or microchip #) should be provided for all canines. This documentation facilitates health certificate preparation, if the canine is to be returned to the vendor.

(k) Socialization. — All canines presented should be socialized to medical examinations. Canines that cannot be properly examined due to poor socialization should be rejected. Rejected canines may be represented after behavior has been modified to allow medical examination.

(l) Reproductive and Urinary System. — Any congenital or conformational abnormality is disqualifying, if the defect requires long-term medical treatment or results in a shortened working life of the canine. (e.g., cryptorchidism is not disqualifying unless the retained testicle results in medical complications not treatable by simple orchiectomy. A juvenile vulva resulting in urine scalding is disqualifying.)

5. Veterinary Medical Facilities. — Before submitting a canine for evaluation by the procurer, the vendor should have canines examined by a veterinary facility that can provide diagnostic quality hip, elbow, and lumbar spine radiographs/digital images (under sedation/anesthesia), and an examination room capable of supporting ophthalmology and cardiology examinations, and laboratory support to do basic serum chemistries. The vendor should provide radiographs of candidate canines for evaluation that have been completed no more than four (4) months prior to evaluation of the canine

(images performed at time of examination should be acceptable). The radiographs should meet the minimum identification requirements of paragraph A (1) above.

5. Common Medically-Disqualifying Conditions. — The following list is provided as a helpful guide and example to all vendors presenting canines and is not intended to be a complete list.

- (a) Hematological abnormalities consistent with severe parasitism, infection, or metabolic disease.
- (b) Poor body condition, either emaciation or obesity.
- (c) Severe periodontal disease.
- (d) Severe, non-resolving or intractable otitis externa or dermatitis.
- (e) Radiographic signs of hip or elbow dysplasia or radiographic evidence of degenerative joint disease.
- (f) Transitional vertebrae of the caudal lumbar spine, lumbosacral junction or sacrum should be disqualifying, as is the presence of any degenerative change in the lumbar spine (such as arthritis). Asymmetric pelvic attachment is also disqualifying.
- (g) Previous musculoskeletal injury, which has or may lead to degenerative joint disease or conformational abnormality.

*C. Behavioral Standards.* TSA recommends that transportation stakeholders apply the following behavioral standards when procuring canines for an explosive detection canine team capability.

1. Whenever possible, the procurer should offer a demonstration to vendors before placement of an order for canines, to observe a canine being taken through the

assessment areas with the procurer's evaluator, demonstrating how each assessment will be performed. Vendors should be allowed to be present during testing events providing they receive prior approval from the procurer, and remain in an observation capacity throughout the assessment.

2. The vendor should have prepared the canine sufficiently to be resilient to the stress associated with the procurement process. This should include, but not be limited to, transport in canine trailers/vehicles, handling by strangers, unfamiliar kennel environs, veterinary care (in muzzle), and unfamiliar assessment environments.

3. The canine(s) general assessment should begin as soon as the canines are provided to the procurer's evaluators and continue until canines are accepted or disqualified. This includes observations made by all persons handling or observing the canine during the assessment period. The assessment should conclude at acceptance or disqualification.

4. Canines presented by the vendor for purchase should have a high level of environmental confidence and sociability to be deployed in an active, high paced and dynamic environments. If the vendor presents the canine as completely trained, it should be trained and ready for any required validation/certification necessary for deployment in public areas of an airport, including any odors determined appropriate by the certifying organization.

5. Vendors should be expected to prepare the canine to meet any required certification standards. The procurer should evaluate trainability during the assessment, but trainability should not outweigh other deficiencies in the assessment criteria. The procurer should make it clear to the vendor/handler that excessive use of praise or

motivational rewards should not be used as a means to assist the canine with a specific socialization, environmental stability or search assessments. Searching ability with effective olfactory acuity should be self-driven for the canine and independent from the handler's input.

### **III. Conclusion**

Explosives detection canines are a proven deterrent and effective detection technology when well-trained and deployed consistent with their training. The need to increase security in airports both at the checkpoint and in public areas drives the need for TSA to identify options for increasing the availability and use of canines. When effectively training and deployed, adding the deployment of explosive detection canine teams to security measures can successfully address vulnerabilities and emerging threats.

Dated: March 16, 2020.

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